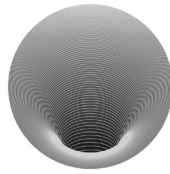




# General Secondary Education in Ukraine



## **W ROZDZIALE VI:**

*Oksana Bodnar*

Modern Determinants of Change Management in the System

of General Secondary Education in Ukraine ..... 145

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# Modern Determinants of Change Management in the System of General Secondary Education in Ukraine

## Abstract

The world's dynamic civilised space, marked by uncertainty and changes in the world order, directly affects the education system of Ukraine and has exacerbated the problem of developing the theory of change management. The purpose of the study is to identify the determinants in the field of change management in education in order to identify the factors that influence the development of an educational institution and to draw the attention of scientists and managers to intensify research on the impact of determinants on the quality of education. Based on the analysis of scientific sources, the basic and complementary determinants of change management in the field of general secondary education are identified; their essence, advantages and problems are revealed. Prospects for further research may include studying the determinants of the development of new forms of learning in the virtual educational space, identifying the strength and amplitude of the determinants' influence on the formation of the education management system; identifying the determinants that hinder the overall development of the education system and developing mechanisms to minimise their impact.

**Keywords:** determinants, determination, basic and complementary determinants, general secondary education, change management

## Współczesne uwarunkowania zarządzania zmianą w systemie szkolnictwa średniego ogólnokształcącego na Ukrainie

### Streszczenie

Dynamiczna, cywilizowana przestrzeń świata, naznaczona niepewnością i zmianami w porządku świata, bezpośrednio wpływa na system edukacji Ukrainy i zaostrza problem rozwoju teorii zarządzania zmianą. Celem badania jest identyfikacja czynników wpływających na rozwój instytucji edukacyjnej oraz zwrócenie uwagi naukowców i menedżerów na zintensyfikowanie badań nad wpływem determinantów na jakość edukacji. Na podstawie analizy źródeł naukowych zidentyfikowano podstawowe i uzupełniające determinanty zarządzania zmianą w obszarze ogólnokształcącego szkolnictwa średniego, ujawniono ich istotę, zalety i problemy. Perspektywy dalszych badań mogą obejmować badanie determinantów rozwoju nowych form uczenia się w wirtualnej przestrzeni edukacyjnej, identyfikację siły i amplitudy wpływu determinantów na kształtowanie się systemu zarządzania oświatą oraz identyfikację uwarunkowań utrudniających całościowy rozwój systemu edukacji i opracowanie mechanizmów minimalizujących ich wpływ.

**Słowa kluczowe:** determinanty, determinacja, determinanty podstawowe i uzupełniające, szkolnictwo średnie ogólnokształcące, zarządzanie zmianą

## Introduction

Dynamic processes of social development today are determined by constant changes that manifest themselves in all aspects of our society – demographic, economic, social, cultural, etc. Education is an industry that is constantly evolving. Programmes, technologies, concepts, and quality standards of education are constantly changing in line with the needs and demands of consumers of educational services. In the face of volatility and uncertainty, the education of each country is gaining new meaning as a factor of stability and integration of the interests of different groups of the population.

Against the backdrop of an unlimited flow of information, in the process of globalisation changes in the environment, the problem of effective development of educational institutions and quality satisfaction of the needs of all users of educational services is becoming more acute. The time for systematic and progressive development ended before the pandemic, which not only halted migration but also destroyed the natural process of population reproduction. At the same time, the war in Ukraine made it possible for the first time for humanity to feel that we all depend on each other. The fact that society develops in a non-linear fashion is confirmed by the war in Ukraine. The world has been divided into two opposing camps: those who support Ukraine and those who support the war. Educational systems operate in this chaos of contradictions and force majeure. Today, it has become important to understand the changes that have taken place in education and the determinants that have caused them.

Education management has undergone significant changes, including: redistribution of functions and powers between local governments and educational institutions; introduction of autonomy of educational institutions and strengthening of academic autonomy of teachers; introduction of new management ethics and principles of academic integrity; creation of systems for monitoring the effectiveness of management decisions and assessing their impact on the quality of educational services at all levels of government; use of foreign models of change management; development of e-governance etc.

However, a large number of changes are also observed in the educational process: the introduction of various forms of education (distance, family, external, etc.); increased use of information technology; development of self-management and self-management of pedagogical activity; crystallisation of the individual trajectory of cognition and personal development; focusing the attention of consumers of educational services on the objectification of the information content of educational institutions, etc.

All of this leads to the reform of the education sector in the world, and in Ukraine in particular. However, the driving changes in education do not appear spontaneously, everything in nature is interconnected, always conditioned by certain determinants.

## 1. The Essence and Types of Determinants in Education

When scientists study determinism, they mostly turn to philosophy, because everything in our lives has some reason for its occurrence and development. Philosophers believe that any event can be explained in terms of heredity or previous events. In a general sense, determinism is seen as a materialistic doctrine of the general causality of the phenomena of nature, society and thinking (Dictionary of the Ukrainian Language, 1070-1980). In foreign management, determinism is explained as the idea that „each event is caused by previous events and conditions in accordance with the laws of nature” and is true for the world only when, given a certain way in which things happen at a given time and the way they happen afterwards» (S.Hoefer, 2003).

The determination of human activity processes is studied by scientists in various fields of science. In particular, Ukrainian researcher S. Drobot argues that this concept of «determination» has a long history and philosophical basis, compares them to invisible fields, emphasises that their appearance is caused by contradictions and concludes that «despite the varieties of determinism, they all have a common feature – they assume that certain processes or events are interdependent, that is, depend on the influence of certain factors (causes, conditions) » (S. Drobot, 2018).

The principles of determinism in the logical space include three zones: the zone of description of what will happen; the zone of prediction of what will happen; and the zone of the inevitable course of events (V. Descombes, 1991).

Determinants are classified according to the following features: «controllability», «environment of functioning», «nature of influence», «priority», «method of influence» and «method of measurement» and are divided into *abstract and concrete; objective and subjective; economic, social, spiritual (cultural), legal, etc.; basic and auxiliary; permanent and temporary; controlled and uncontrolled; external and internal; stimulating and discouraging; direct and indirect impact determinants; basic, complementary determinants (information, technical and technological, organisational, etc.); current and strategic* (S. Drobot, 2018).

Identifying and understanding the essence of the determinants helps to predict the development of certain sectors of the economy. For example, Polish scientists

Sienkiewicz R. and Świeboda H., having identified the determinants of the information society development, managed to predict in 2006 the likely demand for professions in 2010-2013, emphasising that “competences useful in the workplace and other spheres of life may change, so some goals of education and training should also change (R. Sienkiewicz, H. Świeboda, 2006).

Identifying the determinants will contribute to understanding the essence of educational development strategies, including: investment in people and education; emphasis on the fields of science that study intelligence; strengthening the humanitarian component in education; education as a means of solving global problems; attention to partnership in the educational process; informatisation of educational

activities; support for the concept of lifelong learning and mobility; self-reflection on educational strategies and relevance (E. Antonchyk, 2022).

Therefore, in order to study and analyse any phenomenon, it is important to know what determinants require the use of change management mechanisms and how this can affect the education management system.

## 2. The Essence of the Concept of "Management" and Peculiarities of the Development of the Sphere of Education Management

Today, the concept of management in Ukrainian management not only has a lot of interpretations, but also studies with a comparative analysis of these interpretations. The concept of "management" is considered as: a special type of human activity in the context of changes in the internal and external environment (H. Yelnikova, 2009); sequential change of states, stages, stages of development, a set of managerial actions to achieve results (E. Pavliutenkov, 2011); complex structure, including spiritual and material processes (E. Khrykov, 2016); type of managerial activity that allows to distinguish one job from others; focus of educational activities on the managed object or environmental factors (O. Antoniuk, 2006); transformation of information into action (O. Moroz, 2013); activity aimed at acceptance of (decisions, organisation of control of the object of management and summing up the results on the basis of reliable information (V. Kryzhko, O. Bodnar, 2022).

The management of an educational institution is carried out in conditions of constant change and by establishing special links at different levels of the management structure. Today, the nature of these ties is changing from authoritarian pressure to interaction, coordination of external and internal motives of managers, there is a transition from management to self-management of the educational process at all levels, which is a fundamental feature of adaptive management (H. Yelnikova, 2009, p. 406). Therefore, the problem of developing a modern theory of change management, including the identification of its determinants, is relevant today.

The education management system has undergone particular changes in the context of quarantine and war. First of all, education managers at all levels faced the problem of informatisation and computerisation. This was an economic, social, and psychological challenge for Ukraine at the same time. It is known that Ukrainian education has not had sufficient funding in recent years. In 2023, during the war, the priority for funding was the armed forces of Ukraine, and UAH 156 billion was allocated to support the education system. Before the quarantine, at the beginning of 2020, there were 13,458 schools in the country, with expenditures of UAH 98.4 billion. There were 3,980,638 students enrolled. Expenditures per pupil were UAH 24,715 (Education expenditures, 2020: <https://mof.gov.ua/uk/thereform-of-education>; Ukraine's expenditures on education are presented on the website of the Ministry of Education and Science of Ukraine <https://mon.gov.ua/ua/news/derzh-byudzheta-na-2023-rik-vidatki-na-osvitanauku>).

Overall, the number of general secondary education institutions has decreased from 21,900 in 1991 to 14,870 in 2021; 12,976 at the beginning of 2023. As a result of Russia's armed aggression against Ukraine, 337 educational institutions were destroyed and 3,199 damaged as of the end of July 2023. The government approved the Concept of Security of Educational Institutions, which outlines its comprehensive strategic vision of creating a safe educational environment in educational institutions and organising equal, appropriate and safe conditions for education and teaching (Education and Science of Ukraine under martial law. Information and analytical collection, 2023).

In 2010, the Budget Code of Ukraine was adopted, which, in particular, declared new principles of the national budget system. One of them is the principle of subsidiarity, which is the establishment of a distribution of expenditures between the state and local budgets that allows for the provision of public services to be as close as possible to their direct consumers. Over time, this principle began to be implemented. We would like to point out that “financing of complete general secondary education is carried out at the expense of the state budget, including through the provision of educational subventions to local budgets, local budget funds and other sources not prohibited by law. It was also established that the distribution of educational subventions is carried out on the basis of a specially approved formula.” A significant increase in expenditures can be observed, but the focus of these expenditures is different: in 2021, the computerisation of institutions and the development of distance learning, and in 2022-2023, the preparation of shelters in educational institutions. As a result, we can note the increased attention of the Ukrainian government to the education sector: while in 1996, 4.95% of GDP was allocated to education, in 2023 it will be 6.85% of GDP (S. Londar, 2021).

Table 1 shows how education spending has changed since 2019, in particular in comparison with spending on general secondary education.

Table 1. Comparative Costs of Education

Costs and expenses	2019	2020	2021	2022	2023
General expenses	239 437millions hryvna		139,3 milliard hryvna	153,7 milliard hryvna	155 milliard hryvna
Ensuring fire safety				1,50 milliard hryvna	
Ensuring a safe environment	–	–	–	–	1,5 milliard hryvna
Expenditures on General secondary education	98 380milliard hryvna	98,4 milliard hryvna	121,9 milliard hryvna	145,3 milliard hryvna	142,8 milliard hryvna

Source: <https://mon.gov.ua/ua/news/-derzhbyudzheth-na2023-rik-vidatki-na-osvitu-ta-nauku>



As can be seen from the table, spending on creating safe conditions began to be allocated systematically only in 2023, in particular, they are focused on the construction of shelters for each educational institution.

Over the past ten years, the system of education management in Ukraine has changed. Although the priority for conceptual strategic decisions remains with the Ministry of Education and Science in the traditional hierarchical management ladder, the pole of school autonomy has strengthened, as enshrined in the Law of Ukraine «On Education», and local self-government has developed, with each territorial community usually having its own education department and methodological service. At the same time, these structures have lost their priority control function, and instead are supposed to provide pedagogical supervision of schools and comprehensive advisory support.

Thus, the classical styles of governance and management are losing ground in the dynamic process of change and are gradually becoming a thing of the past, as management cannot fully rely on the generalisation of past experience and requires new methodological guidelines. The style of subject-object management, which is characterised by pressure and coercion, is giving way to subject-subject management, which is characterised by self-organisation, support and mutual assistance. The described prerequisites and the arguments presented allow us to identify basic and complementary determinants in the field of change management of general secondary education institutions in Ukraine and in the global educational environment.

### 3. Basic Determinants in the Change Management System

From our point of view, the determinants of change management are active stimulators of the emergence of a new vector of management of general secondary education institutions as a resonance of changes in social, economic or other state processes. We divide the determinants of change management in general secondary education institutions into basic and complementary ones (Pict. 1).

One of the basic determinants of is *education virtualisation*. This concept has emerged relatively recently under the influence of quarantine restrictions and the search for new learning mechanisms. Virtualisation, according to the authors, should be carried out simultaneously with the information culture of the individual, and the emergence of smart objects, smart environments, smart devices, and smart resources is a component of the virtualisation of education (Y. Trach, 2018).

S. Lukashchuk notes that the virtualisation of education is a complex structured combination of different forms of education (full-time, part-time, distance), which is associated with the active development of information broadcasting and network communication (S. Lukashchuk, 2021).

Virtualisation in education is an important and relevant phenomenon that affects the learning process and the quality of knowledge acquired. This innovative technology, which is gaining increasing interest in scientific research, contributes to the creation of virtual educational environments that improve the accessibility, efficiency

and content of the learning process. Virtualisation in student learning allows for the creation of immersive, interactive and visually enriched learning environments that promote active student engagement in the learning process. This can increase their motivation levels, as virtual reality can provide learners with the opportunity to explore complex concepts through immersive experiences and visualisations. Virtual learning environments also facilitate the creation of simulations and virtual laboratories that allow learners to experiment and learn by doing, which contributes to a deeper understanding of the material. It is important to note that virtual reality can be particularly useful for educating students in scientific and technical fields, where hands-on skills are an important component of learning.

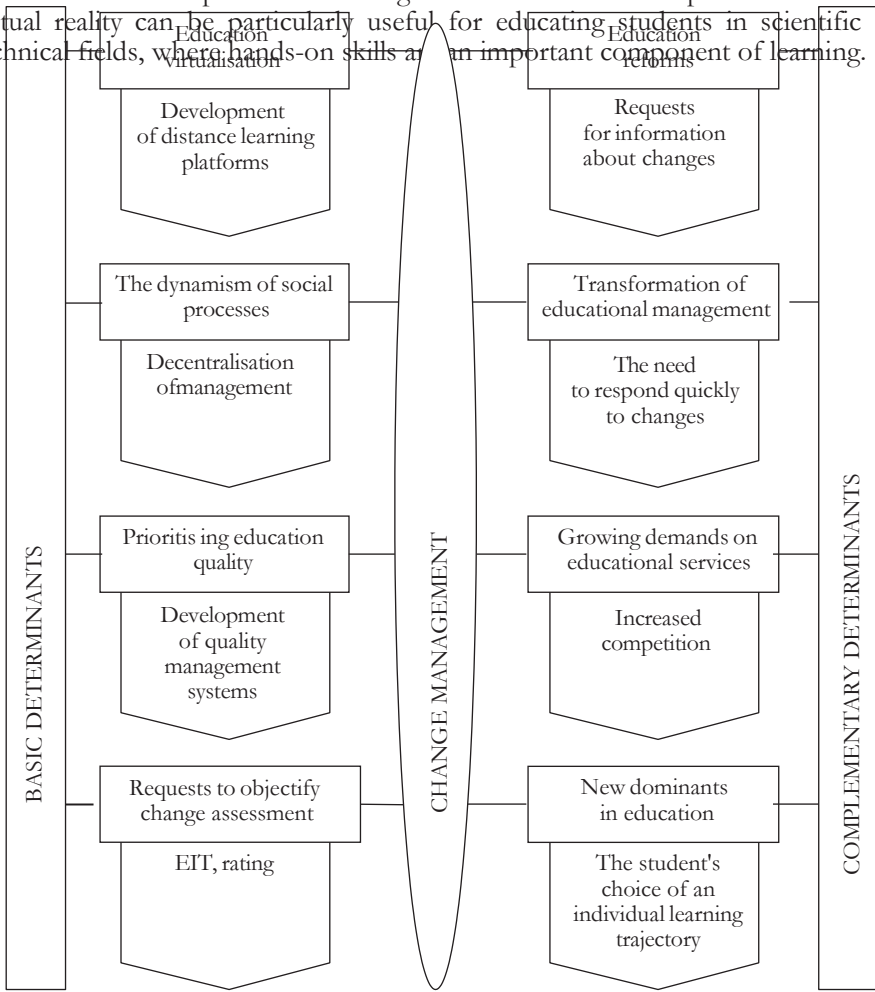


Figure 1. Determinants of Change Management in Education

Virtualisation makes it possible to create individualised curricula that take into account the needs and level of knowledge of each student. This will optimise the learning process and allow students to develop their full potential. Finally, virtualisation in education can expand the geographical accessibility of learning, providing the opportunity to receive quality education remotely, even for those living in remote or hard-to-reach regions.

Based on the analysis of articles on the issue of education virtualisation, it can be concluded that virtualisation affects the learning objectives, stimulates the emergence of a new paradigm of education, and expands the information field of knowledge. Subjectivity and intelligence become the dominant management factors, which strengthen the self-learning pole, reduce the time spent searching for information, and increase the role of visualisation in learning. But the most important consequence of education virtualisation is the active use of distance learning. Over the two years of quarantine, learning platforms such as Zoom, Skype, Google meet, BB, Moodle, etc. have become popular in Ukrainian education.

However, it should be emphasised that the virtualisation of education has negative impact factors, including: inhibition of students' communicative activity; weakening of students' response to life problems and avoidance of ways to solve them due to immersion in virtual space; separation from social groups; substitution of traditional, national and family values; reduction of teachers' influence on the formation and upbringing of students; physical inactivity in children's physical development; emergence of a blurred mentality, etc.

Changes caused by social needs, in particular the epidemiological situation in the world and the war in Ukraine, have directly affected the efficiency and quality of education, which are measured by the set of skills and knowledge that users of educational services acquire in the course of their activities. At present, distance learning has become a fundamental basis for reforming the educational process in Ukraine. According to the Law of Ukraine «On Education», distance learning is considered as “an individualised process of education, which takes place mainly through indirect interaction of participants in the educational process who are remote from each other in a specialised environment operating on the basis of modern psychological, pedagogical, information and communication technologies” (Law of Ukraine On Education, 2017).

The introduction of distance education into the practice of general secondary education institutions is seen as a pedagogical innovation that enables students to learn, develop their competencies and gain knowledge remotely from an educational institution at any convenient time.

Correspondence and distance learning should not be equated. Their main difference is that distance learning ensures systematic and effective interactivity and interaction between teacher and student. Distance learning is a new form of learning and, accordingly, distance education (both the result and the process) is a new form of education, although it cannot be considered as a completely autonomous system. Distance learning is based on the same goals and content as face-to-face learning, but the forms of material presentation and forms of interaction between the subjects

of the learning process are significantly different. The didactic principles of distance learning are similar to face-to-face learning, but differ in the specifics of their implementation (I. Adamova, T. Holovachuk, 2012).

Interactive telecommunication connects people in a learning group with the teacher. Most often, digital means of communication, such as email, are used. Regardless of the environment, interaction is essential for distance education, as it is for any education. Learners' and teachers' connections to learning resources are becoming less dependent on physical proximity as communication systems become more sophisticated and widely available.

Distance education, like any other form of education, creates a classroom, a society that includes students, teachers, and instructional resources such as books, audio, video, and graphic displays. Social networks promote the idea of building a team, a group, users of educational services create profiles, identify members with whom they share a connection, and create new communities of like-minded people. In distance learning, such a network can connect learners with each other and thus reduce their sense of isolation (Berg Michael S., 2016).

*The main value of distance learning* (besides the possibility of distance learning) is learning at your own pace, according to your own individual program, which contributes to the formation of the student's own development trajectory. But in reality, no known resource meets the needs of users of educational services. The main reasons for this are: the lack of educational resources that are fully and meaningfully filled, qualitatively structured and can potentially ensure the formation of the content of the necessary training program on the order of society; there is no educational environment that provides effective formation and administration of individual development programs for many students at the same time; there is no organizational, technological and regulatory system that ensures the development, updating and administration of relevant educational resources and the administration of the individual distance learning process itself for a large number of users at the same time; there is no distance learning teacher training system (Berg Michael S., 2016). Thus, distance learning requires additional methodical and technical support. In addition to the appropriate digital technologies, teachers need to develop their information and communication skills, and the administration of the educational institution should ensure the availability of a single platform that would take into account the interests of both teachers and students.

The next basic determinant is *the dynamism of social processes*. From the point of view of philosophy, dynamics is manifested in qualitative and quantitative changes through revolution, reform or modernisation. As is well known, the greatest changes are caused by revolution, which can occur at the level of the state (country) and result in systemic changes in the structure and status of the country. Recently, it has been said that a revolution can take place in individual objects: consciousness, education, economy, culture, etc. It is clear that everyone is experiencing revolutionary changes in technology. That is why it is often said that the third millennium is marked by a technological revolution. That is, the emergence and intensive development of information technology. Since education meets the needs of the labour

market, an important problem associated with the dynamism of social processes is the demand for new competencies in the face of change, including: *the ability to respond adequately to change, adapt quickly to it; develop the ability to quickly search for information; reduce and compress information arrays to maximum points of condensation; reorient and relearn; master complex tools, including those for managing subjects and processes.*

Accordingly, the heads of educational institutions should help teachers to develop new competences, in particular, to introduce them in each academic discipline and, accordingly, to use modern forms of control over the level of development of these competences, as well as to involve employers to clarify programme objectives.

Ukraine's aspiration to democratise society and improve the quality of life is linked to the decentralisation of power and adaptability to it, which involves the voluntary transfer of powers from the central to the local levels. Recent reforms in the education sector have strengthened decentralisation processes aimed at developing public-private governance, financing and optimising the school network with the establishment of hub schools in local communities.

«The root of public-private education management, as V. Andrushchenko noted, is in the deeply understanding and supportive interaction between the head of the educational institution, on the one hand, and its pupils or students, parents and the public, on the other. Without mutual understanding and support, willingness and ability to listen to each other's opinions, to take a step forward, the effectiveness of public administration is out of the question. It will drown in disputes, dirty accusations, and groundless insults. Each of the subjects of the educational process should be not only mentally and subjectively ready to participate in governance, but also objectively, theoretically and methodologically prepared for it» (O. Zaichenko, 2009).

The arguments in favour of decentralisation of education are based on the following principles: accessibility, efficiency, productivity and quality of educational services. Proponents of educational decentralisation argue that the transfer of powers will contribute to the efficient use of financial resources, rapid response to requests from representatives of territorial communities, autonomy of educational institutions and professional freedom of teachers (Y. Semeniuk, 2019). But at the same time, any social, political or financial transformations require not only certain changes, but also an appropriate change management system.

Scholars have different views on the implementation of decentralisation. However, they are convinced that «decentralisation is often accompanied by profound changes in the management of human, financial and material resources» (O. Mykhailovska, 2018). Thus, in practice, decentralisation of power is closely linked to the theory of change management.

The success of the functioning of the educational institution depends on the level of satisfaction of the needs of the community residents in quality education, the implementation of the tasks of specialized training that takes into account the requests, needs, interests and wishes of the school students as much as possible, the provision of the variable component for students of grades 1-11 with the re-

quired number of hours, the extensiveness of the network of extracurricular activities different directions, the availability of highly qualified pedagogical staff that will ensure the implementation of the principles of pedagogical partnership, the compliance of the material and technical base with modern requirements, the quality of transportation of students and teachers to the place of study and work, the effectiveness of cooperation between the school, the authorities and the community (N. Klokar, 2017).

Administrative and educational powers of change management are delegated to the level of the educational institution. It is decentralisation that contributes to the fact that, in order to implement the New Ukrainian School Concept, schools independently form educational programmes, draw up plans and curricula in accordance with secondary education standards. It should be emphasised that decentralisation, which strengthens autonomy, also implies a higher level of responsibility of the institution for the quality of education. The instruments of decentralisation in the context of changes include control over educational, financial and economic activities of an educational institution by its founders, appointment of a school head on a contractual basis, planning of the institution's development in accordance with the tasks of the internal quality assurance system. Decentralisation has led to the emergence of locally targeted management, local funding and local decision-making on community involvement in the education management process.

One of the important determinants of change management is the priority of education quality, which was declared in the National Doctrine of Education Development (2002). The priority of education quality has become a determinant of such changes in education management as: the emergence of EIT (external independent testing of students) as an instrument of state control over the quality of education; organisation of state services such as the National Agency for Quality Assurance in Education, the State Service for Quality Assurance in Education and its offices in each region; and involvement of Ukrainian schools in international PISA studies. Under the influence of this, the governing bodies of educational institutions began to develop internal quality assurance systems, and the results of the work of the internal quality service became the basis for the institutional audit of general secondary education in Ukraine.

Today, the concept of «quality of education» suffers from changes in content. While at the beginning of the 20th century, this concept referred only to the number of students studying at a sufficient and high level, i.e. with grades 4 and 5, today the concept of quality of education is being transformed under the influence of civilisation challenges. Despite the ambiguity of interpretation, today's understanding of education quality is that it means access to high quality education, including affordable prices for educational services, human resources and scientific and technical support of the educational process. Thus, the priority of education quality is also a determinant of change management, as it stimulates the development of different methodological approaches to researching education quality and diversifies the practice of ensuring education quality through the formation of various self-governance bodies, including internal quality services in each institution.

The next determinant is *the humanisation of education*. The main element of this is not the predominance of humanitarian disciplines, but the preference for the principles of human centrism, child centrism, the priority of subjectivity, and an individual approach to teaching and upbringing of students.

The effectiveness of education reform is unthinkable without such a determinant as *the demand for objectification of change assessment*. This determinant has three vectors of development: on the one hand, the state introduces changes and is interested in their objective assessment, primarily from educational institutions. Accordingly, the management system of each institution should respond to both the implementation of changes and their evaluation. For example, if during the implementation of the New Ukrainian School such problems as insufficient development of the professional competence of the teacher, unpreparedness of the parent community for rapid reform of the content of education in primary or secondary schools were identified, then the Ministry of Education and Science prepares a number of letters with explanations and additions, and educational institutions that have identified such problems can take into account such recommendations or solve them on their own.

The second vector is when an educational institution assesses the level of satisfaction of consumers of educational services with the changes it introduces. In this case, it can develop a comprehensive plan for responding to comments and solving problems. In order to strengthen the process of objectification in evaluation, the most important aspect is the fight against formalism. That is, no matter how complex the problems are from the point of view of consumers, it is not worth hiding behind formal solutions. An important element of objectification of change assessment is the availability of feedback: any solutions to overcome barriers to change management should be agreed with consumers of educational services and published on the websites of educational institutions, social pages or in information corners.

The third vector of objectification is the objectivity of assessing students' learning achievements. The importance of this component is emphasised by the fact that during the institutional audit of an educational institution, the level of objectivity of assessment is studied separately.

#### 4. Features of Complementary Determinants in Education

In addition to the basic determinants, there are also additional ones: *education reform, education transformation, growing demands on educational services and new determinants in learning*.

The first additional determinant is education reform. Foreign scholars point out that the internal factors that stimulate the reform process are formed by external factors: the demands of society for quality education (Dimmock C., Tan C.Y., Nguyen D., Tran T. A., Dinh T. T., 2021), which produce changes in the functioning of the institution from teaching methods to administrative processes aimed at updating the country's educational systems, which has been taking place over the past decades.

These changes include the creation of new educational standards, updating and revising curricula, content and teaching methods, didactic materials, textbooks, etc. One of the ways to update the content of education and align it with modern needs, integration into the European and global educational space is to focus curricula on the development of key competencies and the introduction of effective mechanisms for their acquisition (S. Ovcharenko, 2013). Today, the vector of education is aimed at promoting and understanding the concept of competences, which are formed on the basis of knowledge and learning skills and make it possible to apply them in practice.

Today, the state policy in the field of education and science is implementing reforms in the following areas: affordable and quality education; new Ukrainian school; modern vocational education; quality higher education and development of adult education; development of science and innovation. Each of them implements tasks aimed at achieving the goal of transforming Ukrainian education into an innovative environment in which students acquire the key competencies necessary for every modern person to be successful in life, which will directly affect the socio-economic and innovative development of the state (Reform of Education and Science. Government Portal, 2019).

The growing public demand for adequate information about changes in the context of education reform is due to the close attention of the parent community to the successes and problems of the functioning of the educational institution, since the quality of the educational process determines the level of students' academic achievement, their readiness for external independent evaluation and, in the future, the opportunity to choose the best higher education institution and, consequently, a guaranteed place in the labour market. It is the requests of the parent community that resonate with the measures and decisions taken at the regional and state levels on ways to develop educational institutions more effectively. Consumers of educational services receive information about changes in the activities of educational institutions from the websites of educational institutions, information portals of local governments, social networks, directly at meetings of various collegial governing bodies, the principal's report and from students themselves.

Today in Ukraine, there is a need to find new ways to influence state regulation of educational processes. Given the process of change in society, the primary task is to gradually decentralise. It is necessary to redistribute responsibilities at all levels of government: national, regional, and local, because the old reforms do not change the activities of public educational institutions. Transformational changes are needed in the system of accountability and subordination of educational institutions at the regional level (I. Zastrozhnikova, 2019).

Accordingly, the next complementary determinant is *the transformation of educational management*, as changes in the education sector directly affect management processes, which are adapted in accordance with the needs of society. The National Doctrine of Education Development states that the management system is aimed at forming state-public governance, the fundamental basis of which is the full involvement of society in decision-making in the management of general secondary educa-



tion institutions, taking into account regional characteristics, competitiveness and autonomy of educational institutions. As a result, new vectors for the development of management mechanisms in the context of change (transformation of education management) may be formed.

Analysing the scientific literature and regulatory documents, S. Knyshyk states that the current state of the education management system is characterised by the process of decentralisation, i.e. the transfer of a number of functions and powers from higher to lower governing bodies. State authorities develop the most general strategic directions, while local state executive authorities and local selfgovernment bodies direct their efforts to solve specific, financial, personnel, material, and organisational problems (S. Knyshyk, 2017).

The transformation of educational management in the process of change is an important factor in the development of general secondary education aimed at establishing communication channels, team decision-making, and the development of the autonomy of the educational institution. According to S. Paseka, the subject of educational management transformation is the theoretical, methodological and practical factors of functioning and management of educational institutions at the state, interstate, international and transnational levels (S. Paseka, 2013). Thus, this determinant affects the efficiency of the functioning of the educational institution, its autonomy, which is declared at all levels of public administration. The changes in social processes are actively reflected in the educational sphere, and therefore the final determinant of our model is the new dominants in learning: digitalisation of the educational process, the choice of an individual trajectory, new forms of learning (immersive learning).

The current literature suggests that the digitalisation of the educational process is associated with the rapid spread of the COVID-19 coronavirus pandemic and is deterministic in nature (L. Shchetinina, S. Rudakova, N. Danylevych, 2021).

Digitalisation has brought significant changes to both educational and management activities, as it is associated with the emergence of new products that can be adapted to educational management entities and consumers. On the one hand, digitalisation facilitates easier access to intellectual resources for educational managers and teachers, makes all activities of an educational institution transparent, reduces financial costs, and reduces the time spent on selecting intellectual sources, and on the other hand, it contributes to the social isolation of all participants in the educational process and limits their personal communication.

From our point of view, the most important advantage of digitalisation is free access to the choice of any form and content of education for both teachers and students. However, digitalisation, as a new trend in the development of educational processes, also generates digital inequality, and this is how the pattern is observed: the lower the level of digital competence of teachers or students, the greater the resistance to change. Therefore, in order to avoid digital inequality, the head of an educational institution should take care of systematic teacher training and introduce electives or special courses on the use of new digital products and the expansion of digital services in educational activities.

One of the most important changes that teachers and students need to adapt to is the choice of *an individual learning trajectory*, which in our model is referred to as a new dominant in education. This concept is not yet sufficiently researched in Ukrainian pedagogy. According to the Law «On Education» of 05.09.2017, an individual educational trajectory is interpreted as «a personal way of realising the personal potential of an education student» (Law of Ukraine On Education, 2017). Therefore, the organisation of the educational process in the context of change requires teachers to use new methods and technologies based on positive motivation to learn, taking into account the abilities, preferences and interests of students.

The formation of an individual learning trajectory provides students with new opportunities, such as: determining the content of studying subjects and integrated courses in educational fields, taking into account all cross-cutting lines; setting their own goals and planning their learning activities; choosing the best forms of learning; adapting curricula in accordance with the characteristics of the class and the capabilities of students; analysing the results of their own learning activities to understand the level of the formed groups of results in any educational field. Thus, the choice of an individual educational trajectory for a student contributes to the individualisation of learning and is an effective mechanism for the development of education in line with the demands of society for a highly qualified employee who will successfully realise himself or herself in the labour market.

Let us consider new forms of education caused by determinants and declared in the Law of Ukraine «On Education».

*The network form of education* is interpreted as «a way of organising the education of students, through which the mastery of the educational programme takes place with the participation of various subjects of educational activity that interact with each other on a contractual basis». Networked learning is a tool for effective coordination of collective interaction on a contractual basis between different entities to organise education.

*The individual form makes* it possible to master the curriculum in a special manner. According to the legislative framework of Ukraine, the following types of individual study are defined: external, family and pedagogical patronage, which makes it possible to organise study to meet the needs of users of educational services to the maximum extent possible.

*The external form*, which is not new in the practice of educators, allows students to independently learn all the necessary curriculum material remotely from the educational institution, but the development of the educational trajectory is assessed by school teachers during the annual certification. This form of study is relevant for those who study abroad and plan to obtain a Ukrainian certificate of general secondary education.

*The family or home-based form* of education is not yet sufficiently developed and substantiated among domestic scholars. However, it is popular abroad. The home-based form of education implies that parents or guardians are responsible for organising the student's educational process. They are also responsible for the formation

of competences in accordance with state requirements or standards. Assessment is carried out every six months or at the request of the parents.

*Pedagogical patronage* is an individual form of education with the involvement of teachers at all stages of the organisation of education and knowledge acquisition. The form of training is carried out with the active participation of teachers in accordance with the student's weekly workload: 10 hours – for students in grades 1-4; 14 hours – for students in grades 5-9; 16 hours – for students in grades 10-11. The class schedule must be agreed with parents or guardians. The form of study can meet the educational needs of students who are undergoing long-term treatment or are unable to attend an educational institution on a daily basis for health reasons. The educational process is carried out remotely, usually at home or in medical and rehabilitation facilities. In addition to using the infrastructure of the educational institution, students are also provided with support from the psychological and pedagogical service. Pedagogical patronage periodically allows students to join the student body during various educational activities.

*Inclusive form* of education is defined as an institutional form of education for people with special educational needs. However, if a student is unable to attend an educational institution for health reasons, parents or legal guardians may choose one of the forms of individual education or distance learning. The popularisation of inclusive education and its rapid development is driven by an alternative to the boarding school system: people with special educational needs receive education in general secondary education institutions rather than in special departments and are involved in all its social and cultural processes. The essence of inclusive education is that a student with special educational needs can study in any regular classroom, taking into account the recommendations of certain specialists and the level of support provided.

The inclusive form is not limited to the education of participants in the educational process only with a certain disease, as the Law of Ukraine «On Education» (2017) interprets the concept of «a person with special educational needs» as one who «needs additional permanent or temporary support in the educational process in order to ensure his/her right to education». Thus, such students may include internally displaced persons or refugee children with special language needs: all those in need of additional and temporary protection.

The result of the influence of the determinant «new dominants in education» is the annual updating of curricula; the emergence of new forms of education, integration of the content of academic disciplines (binary, multidisciplinary, case, stem lessons); introduction of new teaching methods borrowed from economic management (Swot analysis, design); and the multivariability of the field of teacher training: *information platforms (Vseosvita, Prometheus, Corsera, etc.); methodological platforms (Linguist, Na Urok, Vseosvita, Edera, Britishcouncil, Prometeuth, etc.); institutional offline training (institutes of postgraduate education), Centres of Excellence at higher education institutions and professional development centres); opening of regional innovative open institutions (e.g., Science Centres); implementation of foreign*

*management transformation in the management practice of educational institutions (use of Agile, Kanban, Scrum, Kaiser, ADCAR, RAEI, etc. change management models in management).*

## Conclusions

Today, the society of each country is experiencing the consequences of non-linear civilisational development, which necessitates the need for entire countries, institutions, and each individual to adapt to changes and find an adequate response to them. The education sector plays a global role in these processes. Ukraine's education system is currently living and developing in particularly difficult conditions. The consequences of the pandemic have not yet been fully overcome, and Russia's military aggression has forced a rapid reorientation of the education economy, adjusting all plans and strategies to further improve the quality of education and quality of life.

Changes in the education sector, including the introduction of new technologies, teaching methods, curriculum updates and professional development of teaching staff, require in-depth analysis and understanding of the key factors that influence the success of managing these changes. The identification of such determinants as "virtualisation of education" and "visualisation of education" allows managers to find ways to implement all reforms at the level of the educational institution. Focusing on the quality of learning ensures not only the provision of relevant knowledge, but also the development of competences, even more so for a full life in the modern world. Identifying this determinant allows us to create educational programmes that meet current requirements and promote personal development. A clear understanding of the determinants of "education reform" is critical for successful planning and implementation of changes that meet the current challenges and needs of society. The demand for the objectification of information is a determinant that is very important in the era of information overload and fake news, as it emphasises the need to develop students' critical thinking to objectively evaluate information. The educational system should respond to all challenges, teach students and all consumers of educational services media literacy and critical thinking.

Growing demands on educational services lead to the development of competition among educational institutions, which makes managers of educational institutions closely monitor changes to keep up with others and fight for students to choose their educational institution, as funding depends on it. All of the determinants presented in the article determine the essence and structure of changes in the educational process of each general secondary education institution. Understanding and addressing these determinants of change in education in Ukraine is key to creating an adaptive, modern and competitive education system that will effectively serve the needs of Ukrainian society and contribute to its progress and well-being. Prospects for further research include studying the determinants of the development

of new forms of learning in the virtual educational space, identifying the strength and amplitude of the influence of determinants on the formation of the education management system; identifying determinants that hinder the overall development of the education system and developing mechanisms to minimise the impact.

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