

## Organizational and Methodological Aspects of Training for the Digital Economy in the Context of Sustainable Development

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**Abstract:** The authors present the development of the educational process in the context of the implementation of sustainable development goals. Special attention is focused on the goal of “Ensuring inclusive and equitable quality education and encouraging lifelong learning opportunities for all.” The master’s program “Innovations in financial and economic education” implemented at the Minin University was chosen as the research object, on the example of which areas of professional activity and competencies that meet the goals of sustainable development are highlighted. The research identified organizational and methodological aspects that ensure the quality of training for the digital economy in the context of sustainable development. The paper presents an algorithm for implementing educational policy, considering the achievement of sustainable development goals, and highlights the main guidelines that ensure this task, namely: ensuring the quality of management of the personnel potential of an educational organization, improving educational programs, choosing areas of scientific research that meet contemporary development trends,

and understanding the role of students in terms of this educational agenda. The authors describe the stages of achievement of sustainable development goals and form a system of indicators to assess the achievement of sustainable development goals, which includes generally accepted indicators taken into account during accreditation and indicators formed by the university taking into account the specifics of activity and specific goals.

**Keywords:** methodological aspects, sustainable development, digital economy, accessible education

**JEL codes:** O1

The relevance of the research topic is conditioned by the current agenda for the realization of sustainable development goals, including in the field of education, and, above all, for ensuring the quality of education in the training of personnel for the digital economy.

The research aims to highlight the organizational and methodological aspects of training for the digital economy in the sustainable development context.

The study was carried out using the analysis of the state of the problem, mathematical statistics, etc.

The methodological tools have been tested on the following data:

- Federal information storage of education statistics “Monitoring of Education in the Russian Federation Unified Universal System”;
- Ministry of Education of the Russian Federation;
- All-Russian Center for the Study of Public Opinion;
- Information agency “Interfax” – Education.

The authors believe that the identified organizational and methodological aspects will ensure the quality of training for the digital economy in the context of sustainable development.

## **Materials and Method**

The mission of educational programs in the sustainable development agenda is focused on providing quality education that meets the modern level of leading universities through the implementation of innovative practice-oriented educational technologies, fundamental and applied research in the field of education and finance and economics, integrated into education systems.

The Sustainable Development Goals (SDGs) affect the organization of the educational process, require the active use of innovations and technologies in the educational process and training of personnel that meets the needs of the economy (Belski, 2022). Special attention should be paid to such a sustainable development goal as “Ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all.”

The main research task is to form a system of indicators characterizing the achievement of sustainable development goals in implementing educational programs that meet the modern demands of the digital economy.

The research was conducted based on data from educational programs implemented at the Minin University, including the master’s program “Innovations in financial and economic education.” Along with educational activities and scientific research, educational programs solve social problems of society, in particular, improving the financial literacy of the population of the Novgorod Region. This problem is realized indirectly through research and training (retraining) of personnel and directly through a wide range of volunteer, educational, social, and cultural activities (Table 1).

**Table 1**

Types and subjects of activity on the example of the educational program of the master’s program “Innovations in financial and economic education.”

Types of activity	Subjects of activity
Training (retraining) of personnel	- Teachers; - Representatives of educational organizations; - Representatives of financial and credit institutions.
Volunteering	- Student scientific association “Volunteers of financial education”; - Association of teachers of financial and economic disciplines.
Educational activities	Event participants: - Scientific and practical conferences, - Scientific and methodological seminars, - Olympics, - Thematic events (financial tests, competitions of student works), etc.

*Source:* Compiled by the authors

The implementation of master’s programs for the training of highly qualified personnel ensures that the need for personnel in the region and the industry as a whole is met in the long term.

The solution to this problem is carried out through the following:

- Monitoring of regional and national labor markets;
- Trends in the international labor market;
- Interaction with authorities, representatives of educational organizations and business. Entrepreneurs are being trained, ready to create and implement new products that are in demand on the market.

Requirements for graduates of master’s programs are determined based on the analysis of the needs of future employers.

Permanent partners in the implementation of master’s programs are as follows:

- Educational organizations of all levels of education;
- Financial and credit institutions;

- Public authorities, the federal tax service, the unified social fund, etc.;
- Commercial organizations, etc.

On the example of the master's program "Innovation in financial and economic education, we can distinguish the following competitive advantages of the master's program focused on today's labor market:

1. The master's program has no analogues;
2. The specificity of the program is the preparation of masters who are ready to do the following:
  - To create their business;
  - To realize themselves as teachers of financial and economic disciplines;
  - To implement such a professional activity as a business coach engaged in advanced training of employees of financial companies;
  - To implement such a professional activity as a financial adviser, working to improve the efficiency of the company's head;
  - To work as a financial advisor to the head of the company, financial manager, and financial director;
  - To work as a personal financial consultant for managing personal finances, making investments, and developing a personal financial or retirement plan.

The preparation of a master, considering the specifics of future professional activity, should consider the following competencies that correspond to the sustainable development goals (Lavrentev et al., 2021):

- Own business – understanding educational trends and industrial and economic trends;
- Pedagogical activity in the profile of financial and economic disciplines – understanding contemporary problems in the field of ecology, education, and finance;
- Professional activity as a business coach in the financial sector – possession of strategic documents for understanding development priorities;
- Professional activity as a financial adviser – activities to improve the efficiency of company management;
- Activity as a personal financial consultant – the ability to effectively manage personal finances, make investments and other areas in a sustainable development environment.

The department that implements the master's program is one of the structural elements of the center of innovative economic and social development of the region represented by a socially oriented university, concentrating the necessary resources for this around itself.

As a public institution, the university performs the following functions:

- Personnel training,
- Training,
- Organization of scientific research,
- Employment of graduates,
- Creation of innovations,

- Implementation of social projects,
- Entrepreneurship support (Fedorov et al., 2019)

Focusing on the Sustainable Development Goals, emphasis is placed on raising the awareness of the participants in the educational process of their role in achieving these goals and developing the skills and attitudes necessary to contribute to the achievement of these goals. Graduates should be able to use advanced resources and technologies and independently create new technologies that meet the requirements of the future, including in the field of education. Simultaneously, it is necessary to consider the qualities that a university graduate should possess to meet the conditions of sustainable development:

- Responsibility, concerning the chosen direction of professional activity;
- Representation, considering the role held by the position in the chosen professional activity;
- Influence, depending on the group of persons with whom the interaction is carried out in professional activities;
- Empowerment and understanding of the effect in each specific area of professional activity.

The benchmark for setting sustainable development goals can be identified as follows:

- National project “Education,” which determines the forms of support, accompanying young teachers and increasing the level of professional skills (Analytical Center under the Government of the Russian Federation, 2020).
- Strategic documents: federal state educational standards, professional standards, and state strategies, including Strategy for improving financial literacy (Yashina et al., 2022).

The algorithm for implementing educational programs to achieve sustainable development goals includes the following steps:

- Selection of unique educational programs that meet competitive characteristics and ensure the success of graduates in the market;
- Increasing research and publication activity;
- Ensuring commercialization and technology transfer;
- Implementation of competitive programs of continuous education, retraining, and advanced training that are in demand on the market,
- Attraction of personnel of the highest level, development of its competitiveness and planning of personnel succession.

The identified goals are focused on the following:

- Improving the quality of the teaching staff, improving the quality of human resource management, improving the motivation system, and optimizing the structure (Popkova & Sergi, 2020),
- Continuous improvement of educational programs, including through the introduction of end-to-end digital technologies (Shkunova et al., 2018),

- The transformation of pedagogical technologies and the introduction of innovative methods in the educational process, including attention to the use of technologies for teaching vulnerable groups of students: distance learning, open online courses, opening access to their networks and resources for communities, and the implementation of inclusive education (Vinnikova et al., 2021),
- Conducting scientific research in cooperation with business partners, studying the needs of society and business, as well as their relationship with various socio-economic projects and programs for the country's development,
- Involvement of students in activities to reduce environmental impact (Smirnova et al., 2022).

The authors propose forming a system of indicators characterizing the achievement of sustainable development goals, including the following:

- Generally accepted indicators considered during accreditation:
  - KA-1: structure of the educational program;
  - KA-2: students' access to electronic educational resources (Yashkova et al., 2020);
  - KA-3: the proportion of teachers who have an education corresponding to the educational program being implemented, discipline, module;
  - KA-4: the proportion of teachers with an academic degree and (or) academic title, etc.
- Indicators determined by the university considering the specifics of activities and the need to achieve in the context of sustainable development (Table 2):

**Table 2**

Indicators determined by the university

No.	Name of indicator
1	2
KB-1	Achievement of quality indicators for admission to the university based on the results of the admission campaign
	- Competition for a training profile.
	- Average and passing scores.
KB-2	The share of Electronic educational and methodical complex (EEMC) Electronic information and educational environment (EIEE) developed in the educational program of the university in accordance with the requirements of the Federal State Educational Standard (FSES) for fixing the progress of the educational process.
KB-3	Compliance of the share of secondary professional education (SPE) from among the heads or employees of organizations whose activities are related to the focus (profile) of the implemented educational program, in the total number of SPE providing the educational program, with the requirements of the FSES.
KB-4	Attracting students to advanced training courses or additional education courses implemented by the university and enhancing the professional competencies in accordance with the Federal State Education Standard of Higher Education.
1	2

KB-5	Attracting students to professional training programs implemented by the university and the formation of new professional competencies of graduates.
KB-6	Conducting advanced training courses or additional education courses on educational program that strengthen or form new professional competencies of the graduate.
KB-7	Availability of training courses on the portal of open education in the disciplines of the curricula of educational programs.
KB -8	Implementation of the educational program using forms of international academic mobility.
KB-9	The use of clinical practice bases to master professional competencies in accordance with professional standards and labor market needs.
KB-10	High degree of student satisfaction with the quality of the educational process in the framework of the implementation of the educational program: 4.5 points and above.
KB-11	High level of results of the CER: the share of students who passed the exam with 213/142 points (for a CER consisting of 2 components) and above from the total number of students who passed the CER.
KB-12	Presence of full-time students of the budgetary basis of education, assigned to the increased state academic scholarship based on the results of rating assessment of performance, personal scholarships, and scholarships of the President of the Russian Federation and the Government of the Russian Federation.
KB-13	Preservation of the contingent of students.
KB-14	Number of educational programs implemented in a network form.
KB-15	Percentage of educational program graduates who completed a Final qualifying works (FQW) at the employer's request.
KB-16	The share of students who signed agreements on targeted training during the training period, out of all students of the educational program.

*Source:* Compiled by the authors

Information for the formation of a system of indicators is based on the reporting data of educational organizations.

Weight values are determined for each coefficient, on the basis of which a summary assessment of the program being implemented is formed and strengths and weaknesses are identified that require further special attention.

In addition to evaluating each program separately, a rating of programs by university, region, or other parameters can be built.

## **Result**

The authors present a study on the actualization of the educational process to achieve goals in the context of sustainable development. The master's program "Innovations in financial and economic education" implemented at the Minin University was chosen as the research object.

On the example of the program, the authors highlighted the following areas of professional activity: to create one's own business; to realize oneself as a teacher of financial and economic disciplines; to implementation such a professional activity as a business coach engaged in advanced training of employees of financial companies, to work as a personal financial consultant for managing personal finances. Competencies that meet the goals of sustainable development are highlighted. The stages of achieving sustainable development goals are described and a system of indicators is proposed.

### **Discussion**

The authors present the experience of implementing the educational process in the context of achieving the goals of sustainable development. This experience was studied on the example of a master's program, considering the quality assurance of personnel training in the context of digital transformation. The authors analyzed the main indicators characterizing the quality of the educational process, considering the requirements of federal educational standards and the requests of employers. The system of indicators is proposed to assess the achievement of the set goals in the implementation of the main educational program of the master's program.

### **Conclusion**

The research presents the experience of involving the university in implementing the sustainable development agenda, which can be replicated considering the specifics of the university or a specific educational program. For the preparation of a master's degree, this issue is especially relevant in the context of the transformation of the economy. Possession of the necessary competencies for the implementation of sustainable development goals increases the competitiveness of a specialist in the modern labor market.

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