Undergraduates’ expectations from the educational program “Rural Development Project Management”

Olga Chudnova, Victoria Kurennaya, Oksana Mukhoryanova, Anna Kalashova, Valentina Ivashova, and Alexey Nemtsev

1 Stavropol State Agrarian University, 12, Zootekhnicheskiy Lane, Stavropol, 355017, Russia
2 Moscow Polytechnic University, 38, Bolshaya Semyonovskaya Street, Moscow, 107023, Russia
3 North Caucasus Federal University, 1, Pushkina Str., Stavropol, 355017, Russia

Abstract. The article presents the results of a study of the expectations of undergraduates of the educational program “Rural Development Project Management”. The relevance of the projected results of the Master’s degree program is checked by the representations of student practitioners among the employees of the municipalities of the South of Russia. A brief review of the publications shows the relevance and importance of studying the opinions of undergraduates and designing an educational program based on the specification of an educational request. The theoretical analysis of publications in the subject area and methodological approaches in studying the expectations of students in higher education programs formed the basis for the development of an empirical research program. The empirical part presents the results of a survey of undergraduates of the 1st year of study “Rural Development Project Management”. A total of 36 people took part in the survey. The results were processed in the SPSS Statistics program (version 24). The analytical materials obtained are important for improving the Master’s program and improving the quality of educational content.

1 Introduction

The well-being of the territory and the sustainability of the community relate to the collective efforts of the administration and residents of the municipality. The timely and adequate response of the municipal administration to the challenges ensures the needs of the population and maintains the stability of the functioning of the socio-economic system. Exploring the issues of sustainability of the rural community and the prosperity of the municipality, the authors of the article V.R. Levesque, K.P. Bell, and E.S. Johnson note the role of digital services in the event of natural events [1]. Using the example of the provision of digital services by rural municipalities in Maine, USA during the COVID-19 pandemic, it was concluded that rural areas are becoming more resilient. The trends previously recorded in research in working with digital services of urbanized local governments have been confirmed.

Corresponding author: vivashov@mail.ru
Digitalization of municipal management processes increases the efficiency of the administration in various fields. The author of the article C. lo Storto gives an example of optimizing the work with solid waste coming from the population using digital data analysis models to determine the environmental efficiency of municipalities [2]. Thus, we see the need for systematic knowledge of municipal specialists in the field of digitalization of management processes, a broad understanding of efficiency (economic, social, and environmental), the ability to optimize management processes based on feedback from residents of the municipality using digital services and mathematical models and standardized procedures for working with big data [3]. The issues of digitalization of municipal management are touched upon in a number of studies conducted by scientists from various countries and regions of the world [4, 5, 6]. A smart municipality in a smart city is a concept within which a digital municipal corporation is being developed. This allows us to provide comprehensive services for cooperation between the population and local authorities based on digitization and automation, which is generally aimed at improving the standard of citizens’ living [7]. Based on their findings, we can talk about the emerging trend in the activities of municipal employees, which is relevant not only for large urban agglomerations, but also for rural municipalities. For our research, it is important that in the training and advanced training of municipal employees, a new core of competencies is being updated (related to a systematic approach to the design of management workflows, data-based decision-making, where digitalization is a tool for optimizing professional activity).

Some authors address the issues of the need for sustainable urban management planning [8]. Thus, the competencies of organizing and conducting predictive research and using their results in the preparation of comprehensive plans for the sustainable development of territories are in demand in the labor functions of the future. The study deals with the proliferation of urban agglomerations and related problems of environmental well-being of territories. In our opinion, these problems are also relevant in connection with the development of rural areas. Thus, the emerging trend of socio-economic development of rural areas is the development of various types of tourism (rural, gastronomic, ethnographic, etc.) and small processing enterprises. From the point of view of sustainable rural development and a systematic approach to the proposed innovations, it is important to consider all possible scenarios, their environmental impact and social effectiveness for the rural community. And municipal employees (who ensure the development and adoption of management decisions) must have sufficient competence to ensure environmental safety and socio-economic efficiency of innovations [9].

Regression models are actively used in the analysis of the economic efficiency of decision-making in municipal government [10, 11, 12]. The authors of the article C.M. Campos-Alba, J.C. Garrido-Rodríguez, A.M. Plata-Díaz, G. Pérez-Lópe show factors that increase the economic efficiency of decision-making, including the financial independence of the municipality, tourism and entrepreneurial activity, the involvement of women in local government processes and others [13]. Using the example of a long-term plan to ensure the environmental safety of the territories of the Spanish province through a differentiated collection for solid household waste, researchers show the economic efficiency of decision-making. Here we see an area of increasing the professional competencies of municipal employees in the field of applying statistical procedures in the organization of forecasting and designing socio-economic development of rural areas.

The timeliness of institutional transformations is important for the effective fulfillment of the tasks of municipal administration. In the article by R. Gore, using the example of the organization of medical services in conditions of significant financial constraints that exist in India, we see the special importance of optimizing the activities of budgetary organizations [14]. In this regard, there is a need for timely changes in the institutional conditions for the functioning of budgetary organizations that meet the realities of practical activity. In order to
carry out institutional transformations, municipal employees must have the competence to analyze, generalize, systematize and classify changes and assess their level as a boundary for changes in the regulatory framework for the functioning of certain areas of activity of the municipality. The declarative and evidentiary nature of such changes must be initiated at the municipal level; municipal employees should have the appropriate competencies [15].

In general, a brief analysis of modern publications of the Scopus database allows us to draw a generalized conclusion about the conceptual representativeness of competencies relevant for the successful performance of labor functions by municipal employees. They are system analysis, project activities, digital services and big data analysis, data-based decision-making, forecasting and designing rural development, initiating timely institutional transformations, ensuring socio-economic and environmental sustainability of rural areas.

The information obtained within the framework of the theoretical analysis confirms the relevance of the research topic and the research question – studying the expectations of undergraduates of the educational program “Rural Development Project Management”.

2 Materials and methods

The theoretical model of the profile of municipal employees and areas of its expansion to ensure sustainable rural development has become the basis for the development of indicators of an expert survey of the professional community. In the empirical part of the research we have studied the expectations of municipal employees in the field of application of competencies for managing rural development. In total, 36 experts took part in the survey. They are active municipal employees. The results were processed in the SPSS Statistics program (version 24), the Rotation Method: Varimax with Kaiser Normalization were performed for factor analysis procedures.

14 expectations of project management for sustainable rural development (the list is given in table 1) were evaluated by the participants of the expert survey on a five-point scale. In this assessment system, 1 point means a low importance in the successful performance of professional functions of project management, 5 points – a high importance in the successful performance of professional functions of project management.

The survey participants had the opportunity to set any values on a given scale. As a result of the factor analysis performed by Rotation Method: Varimax with Kaiser Normalization (Rotation converged in 15 iterations), competencies were ranked.

3 Results and discussion

The survey of undergraduates in the field of training 38.04.02 Management “Rural Development Project Management” was conducted in November 2023 during the full-time phase of classes at the University (the South of Russia). A total of 36 people took part in the survey, among whom 58.3% indicated themselves as male, 41.7% indicated themselves as female; the average age was 37.3 years; about 40% were graduates of the University of different years. The students of the Master’s degree program are represented by the following groups: economists, lawyers, agronomists, engineers. On average, the total work experience is 14.7 years. Work experience in municipalities is 8.9 years and work experience in office is 4.3 years. Thus, the survey participants from among the undergraduates represent a professional group that is at an active and productive working age, has quite a lot of professional experience – total work experience, including in municipalities for about 9 years. Based on the results of the answers, it can be concluded that there is dynamic career advancement, since the length of service in the position is almost 2 times less than the length of service in municipal authorities.
The main group of survey participants (58.3%) is more satisfied with their lives and another 25.0% of undergraduates said they were completely satisfied. 16.7% said they were rather dissatisfied with how their life circumstances are developing today.

In general, it can be said that specialists with a high level of readiness for professional development, open to new knowledge and participation in project activities in practice in municipal authorities, are involved in Master’s degree studies.

Analyzing the target setting with which employees of municipal administrations came to study for the Master’s degree, we see the main message – to learn new skills and abilities that will help them do their current job better – 83.3% of the survey participants said so. 58.3% believe that the most important thing in their studies is to learn what has yet to be used in a new (future) job. The same number – 58.3% came to the Master’s program with the goal – to get to know colleagues from other municipalities and exchange work experience. For a third of the survey participants, studying for the Master’s degree is an opportunity to analyze their work processes and situation. It can be concluded that Master’s degree studies have a positive value for more effective performance of current and future professional tasks in the workplace. In addition, during the studies, the University became a discussion platform for employees of rural administrations of the South Region and gave the opportunity to analyze their work processes in order to optimize them.

During the survey, undergraduates were asked to assess the competencies inherent in the Master’s program in terms of performing work functions at the present time and those that will be in demand in the future. The data is based on the difference in the values of these estimates, we see the most relevant areas for increasing both substantive and quantitative (hours and disciplines – modules) a component of the GEP (General Educational Program). The data is presented in table 1.

Table 1. Assessment by undergraduates of the demand for types of work activities at present and in the future (average score on a 5-point scale)

<table>
<thead>
<tr>
<th>Types of work activities</th>
<th>Performing work functions at the present time, average score</th>
<th>In demand in the future, the average score</th>
<th>Difference in values, average score</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I conduct a critical system analysis of the problematic situations of the municipality</td>
<td>3.2</td>
<td>4.5</td>
<td>1.3</td>
</tr>
<tr>
<td>2. I manage and/or take part in the implementation of economic, social, etc. projects (activities) at all stages of their implementation (organization, coordination of work and employees, allocation of resources to achieve the set goals)</td>
<td>3.3</td>
<td>4.2</td>
<td>0.9</td>
</tr>
<tr>
<td>3. I lead team work, distribute assignments and delegate authority to team members</td>
<td>3.0</td>
<td>4.2</td>
<td>1.2</td>
</tr>
<tr>
<td>4. I analyze and take into account the diversity of cultures in the work processes in the process of intercultural interaction between team members and population groups</td>
<td>2.6</td>
<td>3.9</td>
<td>1.3</td>
</tr>
<tr>
<td>5. I solve professional tasks based on knowledge (at an advanced level) of economic, organizational and managerial theory, innovative approaches, generalization and critical analysis of management practices</td>
<td>2.3</td>
<td>4.3</td>
<td>2.0</td>
</tr>
<tr>
<td>6. I apply innovative approaches based on the achievements of economic, organizational and managerial theories to solve professional problems</td>
<td>2.0</td>
<td>4.4</td>
<td>2.4</td>
</tr>
</tbody>
</table>
I use modern techniques and methods of data collection, advanced methods of their processing and analysis, including the use of intelligent information and analytical systems, in solving management and research tasks.

I independently make sound organizational and managerial decisions, evaluate their operational and organizational effectiveness, social significance, and ensure their implementation in a complex (including cross-cultural) and dynamic environment.

I develop strategic and tactical solutions in the field of creation and development of innovative activities of the organization.

I use modern information and analytical systems to solve management and research tasks in the activities of business entities.

I assist in solving economic issues of business entities and entrepreneurship at the municipal level.

I take part in the development, approval and implementation of strategic planning documents at the municipal level.

I provide assistance to the development of small and medium-sized businesses at the municipal level.

I take part in the preparation of materials for making managerial decisions in project management (development of an action roadmap, cost estimates, selection of project team members, etc.).

Competencies are manifested in the current activities of the survey participants, the average score on a 5-point scale

<table>
<thead>
<tr>
<th>Competency</th>
<th>Score 1</th>
<th>Score 2</th>
<th>Score 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>I use modern techniques and methods of data collection, advanced methods</td>
<td>2.3</td>
<td>4.1</td>
<td>1.8</td>
</tr>
<tr>
<td>of their processing and analysis, including the use of intelligent</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>information and analytical systems, in solving management and research</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>tasks</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I independently make sound organizational and managerial decisions,</td>
<td>2.8</td>
<td>3.6</td>
<td>1.8</td>
</tr>
<tr>
<td>evaluate their operational and organizational effectiveness, social</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>significance, and ensure their implementation in a complex (including</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>cross-cultural) and dynamic environment;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I develop strategic and tactical solutions in the field of creation and</td>
<td>1.9</td>
<td>4.4</td>
<td>2.5</td>
</tr>
<tr>
<td>development of innovative activities of the organization;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I use modern information and analytical systems to solve management and</td>
<td>2.0</td>
<td>4.3</td>
<td>2.3</td>
</tr>
<tr>
<td>research tasks in the activities of business entities;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I develop small and medium-sized businesses at the municipal level;</td>
<td>2.4</td>
<td>4.2</td>
<td>1.8</td>
</tr>
<tr>
<td>I assist the development of small and medium-sized businesses at the</td>
<td>2.9</td>
<td>4.2</td>
<td>1.3</td>
</tr>
<tr>
<td>municipal level.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I use modern information and analytical systems to solve managerial and</td>
<td>2.5</td>
<td>4.4</td>
<td>1.9</td>
</tr>
<tr>
<td>research tasks in the activities of business entities.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

According to the level of demand in the future, the first place is occupied by the competence of the ability to conduct a critical system analysis of problematic situations of the municipality (a separate field of activity), to develop a strategy of action (average score 4.5 points on a five-point scale).

In second place with an average score of 4.4 points on a five-point scale of competence – to apply innovative approaches based on the achievements of economic, organizational and managerial theories to solve professional problems; to develop strategic and tactical solutions in the field of creation and development of innovative activities of the organization; to assist the development of small and medium-sized businesses at the municipal level.

In third place – with an average score of 4.4 points on a five-point scale of competence – solving professional tasks based on knowledge (at an advanced level) of economic, organizational and managerial theory, innovative approaches, generalization and critical analysis of management practices; using modern information and analytical systems to solve managerial and research tasks in the activities of business entities.

Based on taking into account the difference between what undergraduates are already doing in their work and the demand in the future, it is possible to determine the most relevant points of “pre-adjustment” of the educational program 38.04.02 Management “Rural Development Project Management”. They are: the development of strategic and tactical solutions in the field of creation and development of innovative areas of activity of organizations; the application of innovative approaches based on the achievements of economic, organizational and managerial theories to solve professional problems; the use of...
modern information and analytical systems to solve management and research tasks in the activities of business entities.

During the study, the survey participants assessed the general problem field characteristic of our region. Each of the 30 problems included in the list of problems was evaluated by experts on a 5-point scale, where 1 point means there is practically no problem, this is a situation unusual for our region; 5 points – the problem is relevant for the region, it is quite acute.

Ranking the significance of the problems based on the estimates obtained shows that the most acute for the region, according to employees of municipal administrations, are the following:

1st place – outflow of population from the village to the city (4.6 points on a 5-point scale);
2nd place – rising prices for goods and services (4.5 points on a 5-point scale);
3rd place – the difference in the quality of life in the city and the countryside (4.1 points on a 5-point scale);
4th place – low level of pensions, allowances, scholarships (3.9 points on a 5-point scale);
5th place – the state of medical care (3.8 points on a 5-point scale).

The specification of problems at the level of the municipality, which is represented by undergraduates, shows that the most relevant are:

– infrastructural: different standard of living in the city and village; insufficient housing and communal services infrastructure; lack of proper medical examination; provision of residents with drinking water, plumbing, sewerage; condition of the road network in settlements; deterioration of engineering infrastructure to a critical level, etc.;
– personnel: lack of highly qualified specialists, problems with their recruitment to the district; outflow of the able-bodied population; absence of doctors, teachers; outflow of the young able-bodied population from the village to the city, etc.;
– lack of production: agriculture; housing and communal services; lack of processing of agricultural products produced by farmers and private households; purchase of land by “moscovites” and consumer attitude to land.

In the process of participating in the survey, undergraduates expressed their wishes, which once again confirm the relevance of the open educational program and determine the request for:

– project management in the Regional State University; specific methods for solving the issue of rural development; project management; conditions for selecting projects and solving their problems;
– the best practices of local governments in the development of rural settlements, positive experience in the development of rural areas in the Russian Federation with the participation of the state;
– long-term plans for infrastructural and socio-economic development of the Ministry of Defense; designing of long-term programs for development; types of state programs to support rural enterprises and their practical implementation;
– branding of territories, promotion of a municipality as a tourist attraction center; marketing and branding of tourist territories;
– personnel, investments, development of territories.

4 Conclusion

Thus, the analysis of modern publications of the science-intensive Scopus database allowed us to conceptually formulate the core of the labor functions of municipal employees – system analysis, project activities, digital services and big data analysis, data-based decision-making,
forecasting and designing rural development, initiating timely institutional transformations, ensuring socio-economic and environmental sustainability of rural areas territories.

The results of the empirical part of the study do not contradict theoretical generalizations and clarify the relevant competence core for municipal specialists from the point of view of the regional professional community: the development of strategic and tactical solutions in the field of creation and development of innovative areas of activity of organizations; the application of innovative approaches based on the achievements of economic, organizational and managerial theories to solve professional tasks; the use of modern information and analytical systems to solve management and research tasks in the activities of business entities.

The improvement of the professional competencies of municipal employees of rural administrations contributes to the sustainable development of rural areas in the South of Russia.

References


