




“An application of creative problem-solving approach in forming public management competencies”

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AN APPLICATION OF CREATIVE PROBLEM-SOLVING APPROACH IN FORMING PUBLIC MANAGEMENT COMPETENCIES

Abstract

Modern bureaucratic competencies, such as creativity, innovative problem-solving, and critical thinking, have become essential in contemporary public management due to complex challenges in a wide range of areas, including the economy, social welfare, and the environment. This has led to a greater focus on developing these competencies, through innovative methods like creative problem-solving (CPS) in the training of public management specialists. The aim of this study is to identify specific competencies among public management professionals that can be cultivated through the CPS approach and to explore the critical conditions for its successful implementation. The analysis was conducted at the Military Academy of Lithuania, where CPS techniques have been consistently integrated into public management-related subjects for several years, forming a stable foundation for the in-depth investigation. First, the study examines Lithuania's legal framework for public management and public management education to implement CPS. Second, a qualitative data analysis of open-ended feedback (n = 199) highlights practical application. The findings reveal that the Lithuanian legal context underscores the importance of fostering creativity and innovation among public managers. Furthermore, the practical integration of CPS into public management curricula promotes modern bureaucratic qualities such as teamwork, critical thinking, problem-solving, creativity, innovation, and leadership. However, effective CPS implementation requires additional curriculum time, a supportive and creative learning environment, and strong teacher and student commitment. These findings underscore CPS's potential as a valuable tool for cultivating public management competencies.

Keywords creative problem-solving, innovativeness, public management, personnel competencies, Lithuania

JEL Classification M53, J24, O31, I23

INTRODUCTION

The current landscape of global changes, coupled with the volatile nature of the geopolitical situation and rapidly emerging environmental issues, presents novel and unprecedented challenges to the personnel involved in public management. Their decisions, often pivotal in determining the public's welfare, are now confronted by various complex factors. This underscores the need for new ways to develop innovative problem-solving skills for future public management professionals. Accordingly, public sector professionals must find creative and innovative solutions to find new ways to form and implement public policies. This includes finding new rules, managing programs, implementing project-based management, as well as discovering new forms of governance and funding tools, organizing better human resource management, improving accountability and transparency, and involving citizens, businesses, and nongovernmental sector (Giedraitytė, 2016). The solution to contemporary problems through creativity and innovation is unquestionable in pursuing international development and implementing the Sustainable Development Goals (SDGs) (The United Nations, n.d.). Consequently, public management profession-

als need competencies such as innovative problem-solving, the ability to implement public sector innovation, critical evaluation of innovation processes, and the ability to create an innovation-friendly environment in the public sector (Bason, 2018).

The creative problem-solving (CPS) approach cultivates these essential competencies. CPS is a proven method to solve a problem or challenge inventively and innovatively. It enhances abilities that involve encountering gaps, opportunities, and challenges, generating and examining various possibilities, choosing certain options, and confronting complex problems in an uncertain and dynamic world. The CPS approach can also help develop some skills that increase adaptability, flexibility, and openness to innovation (Treffinger et al., 2006; Khalid et al., 2020; Giedraitytė & Kazlauskaitė Markelienė, 2021). However, successful application of CPS may require additional efforts and suitable environmental conditions (Kallet, 2014).

Thus, there is a need to assess the suitability of the CPS approach for developing critical competencies, including creativity and problem-solving, in public management. This need arises from the increasing complexity of public management practitioners' challenges, especially in the economy, social welfare, and the environment. Lithuanian public sector institutions and public management specialist training institutions have recently paid attention to developing skills based on creativity and applying innovative methods such as CPS.

1. LITERATURE REVIEW

The rapidly changing environment, both in business and state governance, requires quick reactions and effective solutions. In such cases, it is necessary to look for new and unusual ways of activities, innovative tools, and solutions. Thus, to achieve the development of the state, the public sector today should constantly change and strive for innovation (Giedraitytė, 2016; Torfing, 2016).

Creativity is identified as one of the main elements of change (Khalid et al., 2020) and as the origin of innovation (Houtgraaf et al., 2023). The definition of creativity is associated with words such as “new, unusual, ideas, out of the ordinary, imagination, unique, exciting, wacky, open, fuzzy, or something radically different” (Isaksen et al., 2011, pp. 2-3). At the same time, the concept of creativity, although it has been studied for more than 50 years, is quite complex and challenging because it can be associated with the creation of art, music, literature, or altogether with something useless, worthless, or purposeful (Isaksen et al., 2011). Despite that, the concept of creativity is increasingly emphasized in creating new technologies, with the aim of innovations in the management of organizations, service provision, and state and local governance. Creativity is often defined as a part of the innovation process: “having original ideas

that have value... and is further divided into two concepts: putting imagination to work (creativity) and putting new ideas into practice (innovation)” (Khalid et al., 2020, p. 272).

The creative and innovative approach is demanded even with the bureaucratic model. The bureaucratic model points out that the primary task of public employees is to apply the law to individual cases and ensure citizens' equality and fundamental rights when making decisions. Individual public servants are expected to follow the rules, which are developed to clarify procedures and to provide some protection to the members of the government organizations. Bureaucrats at all levels deal with thousands of problems and make decisions related not only to the formulation of public policy but also to the implementation and application of policy to individual cases. The procedures regulated by legal rules “can only specify the steps necessary to make the decision, but they may not be sufficiently detailed to answer all questions that may arise” (Guy Peters & Pierre, 2018, p. 32).

The complex and often unpredictable challenges facing bureaucrats require finding new governing practices that incorporate the full diversity of potential approaches and adapt sufficiently to the needs of citizens (Noveck, 2015). Therefore, public organizations and their employees should

be given discretion to make not only rational but also better (different, innovative, smart) decisions. Public employees should not only be able to follow the instructions of the executives and assume responsibilities that are “constrained by structures and processes of formal authority and by institutionalized standards, norms, and values” (Hill & Lynn, 2016, p. 335) but should be “characterized as enterprising or entrepreneurial, inclined to take risks, purposeful, imaginative and intuitive, and disposed to act rather than reflect” (Hill & Lynn, 2016, p. 337). In other words, they should be creators. Consequently, creative capacities become extremely important in public management (Giedraitytė, 2016, 2020; Houtgraaf et al., 2023).

According to Guy Peters and Pierre (2018), the major public sector issue is confronting the problem and making and implementing the necessary decisions. Therefore, decision-making in public organizations should be seen as a constant problem-solving activity. Problem-solving is defined as the process that “involves devising ways to answer questions and to meet a situation that presents a challenge offers an opportunity, or is a concern. It involves closing the gap between what one has and what one wants” (Isaksen et al., 2011, pp. 19-20).

Isaksen et al. (2011) claim that changes can be made and problems can be solved in two ways: creatively and non-creatively. Creativity requires imagination and intelligence to take a more comprehensive view and to use the whole system and context in the approach. According to Houtgraaf et al. (2023), public sector creativity can be used not only to create ideas as a response to problems that have already arisen (“reactive creativity”) but also to generate promising ideas for new and unexplored problems or situations (“proactive creativity”). The use of a creative approach to problem-solving includes items such as: seeing the problem from many viewpoints; solution of existing and future-focused problems; examination of facts, impressions, feelings, and options; openness to many different possibilities; generation of varied and unusual (even wild) ideas; development the idea into a workable solution; consideration of surrounding situation and the context of the solution; reflexing on many different factors, etc. (Isaksen et al., 2011).

Based on Noller’s (cited in Isaksen et al., 2011, pp. 5-6) symbolic formula for understanding creativity, “creativity is a function of an interpersonal attitude toward the beneficial and positive use of creativity in combination with three factors: knowledge, imagination, and evaluation ($C=f_a(K, I, E)$).” According to this model, creativity is dynamic. These changes depend on knowledge and experience, but they are also determined by strong imagination and the ability to perceive, identify, and apply criteria for evaluating ideas or behavior. However, according to Isaksen et al. (2011), creativity depends not only on the personal characteristics of people but also on other conditions, such as the processes (operations) they perform, the results (outcomes) they seem, and the context in which they operate (influence of the environment, climate, or culture) (Figure 1).

CPS and other change and creativity-enabling methods (e.g., lateral thinking and six hats, design thinking, problem-based learning, critical thinking, etc.) have been used in political science, management, public management, and other study programs and were also applied in practice (Isaksen & Tidd, 2006; Awang & Ramly, 2008; Liedtka & Ogilvie, 2011; Griffin, 2011; Kallet, 2014; van Buuren et al., 2020; Lewrick et al., 2020).

CPS as a method also has different versions developed to meet the specific context and specific needs. However, in a general sense, the CPS framework consists of such components which are distinguished and characterized by Isaksen et al. (2011):

- understanding the challenge deals with a clear focus for problem-solving efforts and includes three stages: constructing opportunities, exploring data, framing problems;
- generating ideas – creating many varied, unusual ideas and identifying the most interesting and potential to develop and use;
- preparing for action – strives to transform the best and most valuable ideas into useful and feasible actions; consists of two stages: developing solutions and building acceptance;
- planning the approach – management component that includes the efforts to monitor the

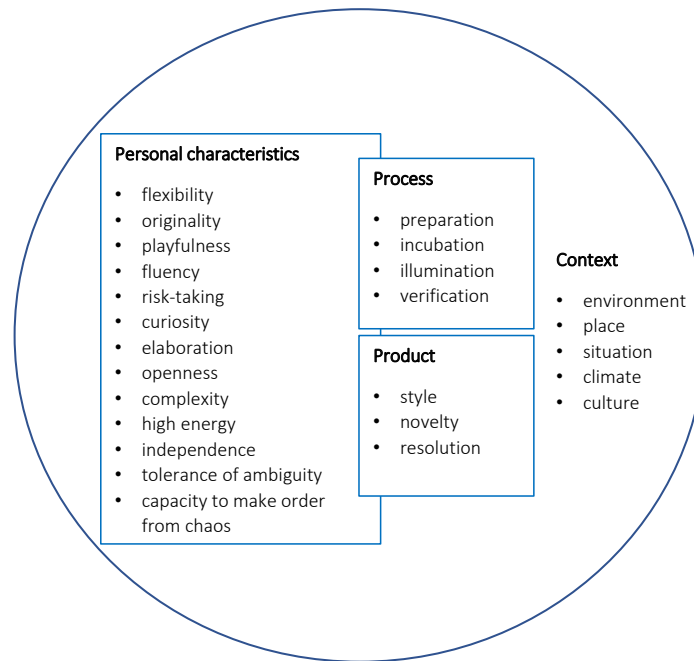


Figure 1. Elements of creativity

thinking, manage the choices about the tools and location, and modify the approach to allow for effectiveness; includes these stages: appraising tasks and designing process.

Using this method, learners have a greater sense of competence in dealing with change; they are more confident dealing with challenges, more competent in promoting change processes, think more strategically, cooperate, and find joint solutions (Puccio et al., 2010). Using CPS increases the likelihood of productive results, provides common problem-solving language, provides a natural and flexible framework for organizing tools and strategies, encourages a balance between creative and critical thinking, stimulates group ownership, and allows the participation of all group members. However, on the other hand, the application of the CPS method requires openness, time, and energy to learn and use the CPS technique, self-control, and courage to work beyond traditional ways of thinking, effective and efficient communication, and coordination, planning to structure opportunities and environments (Isaksen et al., 2011), and also it takes more time and energy for decision-making and reaching agreement.

To sum up, theoretical perspectives underscore the growing importance of creativity and innovation in modern public management, even within

bureaucratic frameworks. Creativity is highlighted as a dynamic force essential for developing novel and unconventional solutions to the constantly evolving challenges public organizations encounter. As detailed in this study, the CPS approach emerges as a promising methodology to cultivate creativity and enhance problem-solving abilities within public management. However, it remains unclear how the legal framework of public management and the educational environment supports the integration of the CPS method into public management training and what key factors can facilitate the application of CPS in public management education. Therefore, the aim of this study is to identify specific competencies among public management professionals that can be cultivated through the CPS approach and to explore the critical conditions for its successful implementation.

2. METHOD

The first stage was document analysis. This method established a comprehensive understanding of legal obligations and constraints for using CPS methods in Lithuanian public administration study programs. First, the legal provisions regulating the qualification and training (studies) requirements of Lithuanian public management and public administration specialists are reviewed.

Official (legal) documents are used for document analysis, which are selected based on the principle of using norm referring to another legal act, i.e., starting from the highest legal act in that area (Seimas of the Republic of Lithuania, 1999, 2020) and looking for references to lower (implementing) legal acts in it. The consolidated versions of the current legal acts, valid on January 1, 2023, are used. The source of legal acts is the electronic platform of the Official Register of Legal Acts.

The second stage used qualitative data analysis of feedback from the Military Academy of Lithuania students to identify the perceived effects of integrating CPS into public management curricula in terms of fostering creativity and what public management competencies are formed by CPS, as well as the conditions for applying the CPS approach in the training process. The Military Academy of Lithuania was selected as the focal case due to the paramount role of CPS in enhancing students' managerial competencies in the realm of public management at this institution. This study focused on specific modules where CPS techniques have been consistently integrated from 2019. These modules were chosen for their continuous application, providing a stable foundation for the in-depth investigation. Written student feedback questionnaires with open questions were utilized to collect research data. The paper focused on three key study subjects at the Military Academy: Public Governance, Defense Innovation Management, and Management of Emergency Situations. These subjects were selected due to the consistent application of CPS methodologies between 2019 and 2022. Feedback questionnaires were collected from all students enrolled in these specific study subjects during this period. A total of 199 student responses to open-ended questions were analyzed and distributed as follows: Public Governance – 72 responses, Defense Innovation Management – 55 responses, and Management of Emergency Situations – 72 responses.

Open-ended student feedback was collected, prompting responses on competencies shaped by CPS, its perceived advantages and disadvantages, and the conducive conditions for its application in training. Qualitative data analysis involved the codification and categorization of all material. The findings are contextualized within the scien-

tific literature and legal regulations, providing a comprehensive perspective.

3. RESULTS

The analysis started with an exploration of the legal framework aimed at promoting creativity and innovation in developing competencies among Lithuanian public management personnel. The Republic of Lithuania Law on Public Administration (Seimas of the Republic of Lithuania, 2020), which regulates the main principles of public sector activity, emphasizes the importance of novelty and openness to change. It means that the public sector entity should look for new and effective ways to better solve the problems, continuously improve operations by applying the most advanced methods, models, technologies, and tools, and to use examples of good practice.

The Republic of Lithuania Law on the Civil Service (Seimas of the Republic of Lithuania, 1999), among other basic principles of civil servants, must follow principles such as openness, creativity, and flexibility. It means that a civil servant is required to be: open to different views, positive initiatives, dialogue, cooperation, and novelties; proactive and discern, among the challenges, new opportunities for the success of the state and seek to implement them; able to adapt to changing conditions of and requirements for activities, technological, technical changes, changes in work organization, and other circumstances.

In the Professional Standard of the Public Sector (Center for the Development of Qualifications and Professional Training Director, 2019), the following qualifications are assigned to the public sector: general help center specialist; soldier; customs officer; border officer; prison maintenance specialist; a policeman; lawyer; firefighter; public administration specialist; specialist in public economics; public safety defender; public safety specialist. This standard identifies key specific competencies, and although it does not use the terms creativity or innovation, it identifies related competencies such as: monitoring and analysis of changes at the level of a public sector institution; evaluation of changes and prediction of measures to prevent

negative consequences; adaptation to changes in the workplace caused by changes in technology and work organization; identification and assessment of risks and threats indicators; operation in extreme conditions; solving unexpected problems; knowledge and application of public governance problem formulation methods; providing suggestions on improvement issues; working in groups.

The Description of the Field of Study in Public Administration (current version 2015 and draft of the upgraded version 2020), which regulates the special requirements of study programs in public administration, also indicates that studies in public management must harmonize the formation of the competencies for classical public administration, public governance, public management, public policy, social research methods, values, principles, as well as creative and critical attitudes. According to the Description (The Study Quality Assessment Center, 2020; Ministry of Education and Science of the Republic of Lithuania, 2015), graduates who have completed university studies in addition to other skills should be able to:

- assess the main operational changes, opportunities, and risks in order to achieve the effectiveness of public sector (bachelor's degree);
- identify public sector problems and development opportunities (bachelor's degree);
- apply advanced, evidence-based public policy analysis and evaluation methods and instruments (bachelor's degree);
- critically evaluate and improve the functioning and management processes of public sector organizations (master's degree);
- creatively initiate, plan, coordinate, skillfully implement, and control organizational processes;
- apply and prepare managerial innovations in the public sector (master's degree);
- manage changes and implement innovations in order to meet the needs of society and advance public government (master's degree);

- assess the risk of threats to society and the state and promptly adopt and implement administrative decisions (master's degree);
- creatively interpret and apply public policy theories or concepts (master's degree);
- cooperate flexibly and creatively with citizens, other country residents, business entities, NGOs, and other interest groups (master's degree).

For competencies related to creativity, innovativeness, critical thinking, flexibility, acceptance of change, problem-solving, and threat management in the study process, it is necessary to apply modern methods specific to the field of public management studies (e.g., teamwork, case analysis, problem-based learning, role-playing games, simulations, etc.) (The Study Quality Assessment Center, 2020).

The application of the CPS approach in practical contexts was scrutinized through the case study of the Military Academy of Lithuania (MAL). Here, CPS techniques have been consistently integrated into public management-related subjects since 2019. Meanwhile, analyzing the legal environment, it was found that the 2018–2024 Strategy of the Military Academy indicates that all members of the MAL community base their activities on creative and critical thinking, openness to ideas, and innovativeness. To continuously improve study programs and their implementation, it is planned to create and implement a university studies learning environment based on modern learning technologies and innovative study methods (General Jonas Žemaitis Military Academy of Lithuania, 2021).

The method is used at bachelor and master study levels (Bachelor's level – Study programs in National Security and Defense; Defense Technology Management; Defense and Public Management; Master's level study programs in Defense Resource Management; Defense Studies). CPS is applied in subjects such as Public Governance, Public Management, Defense Innovation Management, Modern Management Theories, Decision Making, Management of Emergency Situations, and Risk and Emergency Management. As already indi-

cated in the methodology, the results of feedback from students of Public Governance, Defense Innovation Management and Management of Emergency Situations study subjects (modules) are discussed.

To sum up, the Lithuanian legal framework regulating public management competences strongly emphasizes the values of novelty, openness to change, and creative problem-solving. Established laws and standards emphasize the importance of competences related to creativity, innovation, critical thinking, and adaptability in the public sector. They emphasize that public management professionals are expected to be open to new ideas, to proactively engage with challenges and opportunities, and to adapt to changing conditions and demands. They should also have the skills to effectively assess and manage risks and threats to improve public governance.

The results of qualitative data analysis of the feedback from students from the Military Academy of Lithuania on the implementation of CPS in public management study programs made it possible to identify the advantages of the CPS approach, the

challenges and aspects that require attention, and suggestions to improve the application of the CPS approach.

The main advantages of using the CPS approach in the study subject were identified based on student feedback. The advantages include not only acquired competences necessary to public sector professionals but also circumstances related to the attractiveness of learning and the learning environment (Table 1).

The students' feedback analysis highlights the numerous advantages of CPS as an innovative learning method. Most notably, students' feedback provides evidence of the perceived benefits of teamwork, including working with diverse groups of peers, sharing different opinions, discussing ideas, finding compromises, and achieving common results. They emphasize that this approach facilitates a better understanding of the subject matter and enhances cooperation skills and teamwork.

In addition, the practical nature of critical thinking and problem-solving activities is lauded for sparking curiosity and motivation among stu-

Table 1. Students' feedback on the advantages of CPS

Groups of advantages	The main advantages	
Teamwork	variety in team	finding a compromise
	diversity of opinion	getting a common result
	cooperation (team building)	mutual assistance
Critical thinking and problem-solving	discussions	easier assimilation of study material
	consistency of thinking	variety of problems
	the use of various ideas	critical thinking
Creativity and innovation	delving into the problem	attention to the future problems
	diversity of opinions (ideas)	promoting originality
	leaving the comfort zone (openness to change and innovation)	visualization (illustration)
Leadership	time management	self-reflection
	responsibility	public speaking
	engagement	reasoned opinion
Practical work experience	leadership	
	application of theory	solving real situations
	better understanding	independent decision-making
Learning	practical examples	
	motivation to learn	step-by-step process of the method
	innovative learning	feedback
Atmosphere	interest in learning	special classroom (group workplace)
	curiosity, variety, interest in tasks	use of individual knowledge
	friendliness	avoiding criticism
	positivity	student engagement
	informality	the teacher's charisma

dents. It encourages them to delve into the specifics of real-world problems, critically evaluate solutions, and gain a deeper understanding of their environment. Students appreciate the step-by-step process of solving problems that helps them effectively identify and address detailed issues.

CPS is commended for its innovative teaching methods, which foster creativity and innovation through brainstorming sessions that generate a wide range of ideas. It encourages students to think broadly, step out of their comfort zones, and develop personal qualities such as time management, responsibility, participation, leadership, self-reflection, and applying individual knowledge. In addition, it offers valuable experience in decision-making.

The physical environment in which CPS takes place, specifically an adapted classroom, is mentioned as a favorable factor. The informal and benevolent atmosphere within the classroom is considered conducive to effective learning, as it allows students to express themselves comfortably and engage in productive brainstorming without undue stress.

In general, students view CPS as a highly beneficial and innovative learning approach that improves academic understanding and nurtures a wide range of valuable skills and qualities. Despite the advantages, the students also identify specific difficulties and aspects that should be considered when applying the CPS method (Table 2).

The feedback highlights several challenges associated with the implementation of the described method. First and foremost, it points out that the method's stages are time-consuming, that is, re-

quiring more time when compared to completing tasks individually. This extended time commitment can pose difficulties, particularly for students who struggle with time management or have difficulty effectively dividing their time. Consequently, it is sometimes challenging to carry out all planned activities with high quality, as decisions may be rushed, and ideas may not be thoroughly measured due to the lengthy nature of the method.

Another significant challenge is the diversity of opinions within group work, often leading to sharp discussions and disputes. The lack of consensus and the belief that everyone's idea is correct can hinder decision-making and cooperation within the team. Additionally, the composition of the groups plays a critical role in the success of the method. Working in unbalanced groups with limited diversity in terms of experience, knowledge, and abilities can result in suboptimal outcomes. Some students may have fewer opportunities to contribute, and it can be challenging to divide the work effectively, particularly if there is a lack of teamwork or cooperation among group members.

Furthermore, the level of effort and motivation among group members can vary, and some students can be passive or afraid to express their opinions. In such cases, a significant burden can fall on those demonstrating leadership qualities, which could cause an imbalance in group dynamics. The challenges become even more pronounced in international groups, where language barriers complicate discussions and communication.

In summary, while the method discussed offers numerous benefits, it also presents several challenges related to time management, diverse opin-

Table 2. Students' feedback on the things to be improved and aspects that require attention

Things to be improved	Aspects requiring attention	
Time resources	lack of time	lack of time management skills
	long process	
Work progress and results	lack of commonality	lack of experience
	diversity of opinions	doubts about the results
	non-consistency of work	assessment of individual contribution
Group abilities	independent distribution of work	improperly formed group
	group responsibility	
Characteristics of group members	passivity	lack of creativity
	lack of flexibility	lack of drawing skills
	fear	language barrier

Table 3. Students' feedback on recommendations to improve CPS

Subject of recommendation	Recommendations	
Value	application in other subjects	variety of practice-oriented methods
	project continuity	
Application of the method	more attention to understanding of the process (stages).	more time for activities
Activities and tools	excursions, guest specialists	informational and other tools
	improvement of activities	classroom
	tighter control	
Group building	ensuring a diverse team	leadership promotion
	formation tests	
Group members' engagement	everyone's participation	more individual tasks
	teacher's intervention	

ions, group composition, individual characteristics, and language barriers, all of which can impact the effectiveness of its implementation. However, the research results show that despite the potential challenges, the students see the great benefits of the CPS method in their studies, also wish that the method was applied more often and in various study modules, and have suggestions on how to improve the application of the CPS (Table 3).

The feedback underscores the students' appreciation for CPS and enthusiasm for its frequent use in various educational scenarios. They advocate for its continued application, believing that it enhances their understanding and application of information. They also express the desire for more practical sessions to facilitate knowledge absorption.

To enhance the effective implementation of CPS, students provide several valuable suggestions. First, they recommend improving the understanding of the CPS process by incorporating visual materials to aid in the comprehension of the stages. Additionally, they stress the importance of dedicating enough time to CPS activities, emphasizing the need for time intervals to allow participants to reflect on their progress at each stage.

In addition, the students propose diverse activities and tools to enrich the learning experience. They suggest incorporating educational excursions involving specialists, focusing on comprehensive risk assessment, implementing stricter control during classes, and using web-based surveys as informational tools. They also highlight the importance of stimulating creativity and imagination through virtual reality in lectures to showcase results.

In group formation, students advocate for creating large and diverse teams, each member specializing in a particular field and actively contributing. They propose including intermediate tasks to foster team cohesion before beginning the main work and using more detailed questionnaires to identify group member types and form groups effectively. Finally, to ensure equal participation and engagement, students recommend task division among team members, rotating the responsibility for presenting tasks, and including more individual tasks within group assignments to encourage less active participants to contribute more effectively.

In summary, students are enthusiastic about CPS and offer constructive suggestions for its improvement, emphasizing the importance of understanding the process, dedicating time, diversifying activities, forming influential groups, and promoting active participation.

4. DISCUSSION

Upon reviewing the study's findings, it becomes evident that the Lithuanian legal instruments, which regulate the principles of public sector activities, emphasize the significance of competencies associated with openness to change, innovation, and creativity in the search for and implementing new solutions. This recognition of the importance of fostering these competencies within public sector employees underscores the relevance of training methods grounded in the CPS approach. This importance becomes even more apparent in the context of the SDGs, which emphasize the promotion of innovation (SDG 9), the development of strong and effective public institutions (SDG 16), increas-

ing society's adaptability to changes and resilience to disasters (SDG 11), and the acquisition of the knowledge and skills needed to promote sustainable development (SDG 4) (The United Nations, n.d.).

Considering the students' feedback results, it can be said that the advantages of CPS named by the students of the Military Academy of Lithuania correspond to the essential principles formulated by the theory of modern public management, in which the need for creativity and innovative decision making is associated with a more flexible and innovative bureaucracy (Noveck, 2015; Bason, 2018; Giedraitytė, 2020). Such public management allows to achieve the efficiency of public sector institutions and ensure public responsibility and transparency (Houtgraaf et al., 2023; van Buuren et al., 2020).

Groupwork and cooperation skills, which students mention in their feedback, are critical for public management when looking for shared ideas, discussing possible options, and making joint decisions (Torfing, 2016). This reflects the focus of the New Public Governance theory on the relations and partnerships of public sector institutions with other public sector institutions, as well as policymakers, citizens, NGOs, and business entities (Noveck, 2015; Hill & Lynn, 2016; Guy Peters & Pierre, 2018). In the context of the implementation of SDGs (The United Nations, n.d.), cooperation skills are significant not only for building strong public institutions at various levels, ensuring citizens' trust and involvement in participatory governance, but also for strengthening intercultural understanding and communication.

Mentioned problem-solving, creativity, and other personal skills allow public sector professionals to respond to a rapidly changing environment, assess emerging or future problems, search for the most suitable solutions, prepare strategies and implementation plans, form human and finance resources, convince stakeholders, and act effectively in the im-

plementation of public sector functions (Puccio et al., 2010; Isaksen et al., 2011; Ansell, 2016). These competencies help strengthen the resilience of society and institutions, provide a quick and efficient response to disasters, and manage other risks that threaten sustainable development (Tang et al., 2022).

When evaluating the aspects of CPS improvement in the learning process, it becomes clear that applying this approach is complicated. The results of student feedback show that CPS requires not only absorption and adaptation of the methodology to achieve a specific result but also a specific infrastructure and extremely active involvement of all participants. In this context, the importance and involvement of the teacher becomes clear. When applying CPS in the study process, teachers must be significant facilitators. First, the facilitator's job is to form balanced and diverse teams. When performing CPS stages, the facilitator should not participate in creating the content, i.e., giving an opinion or suggesting ideas. His main task is to observe how the group understands the tasks, how they work together, and what steps they take. The main facilitator's decisions are related to group activities, objectively helping the group achieve its end goal efficiently and effectively (Isaksen et al., 2011). Furthermore, facilitators must use various tools and several techniques to involve students and diversify tasks (especially when applying the method not for the first time) (Sophonhiranrak et al., 2015).

By creating a favorable environment that promotes diverse viewpoints and methodically integrating CPS into various teaching subjects or modules, there is an opportunity not only to improve the competencies of future public management professionals but also to contribute to forming a public sector culture based on creativity and innovation. Furthermore, the importance of the CPS approach in influencing organizational culture and its potential impact on decision-making processes in institutions is a direction for further research.

CONCLUSION

This study identified competencies among public management professionals that can be cultivated through the creative problem-solving (CPS) approach and explored the critical conditions for its successful implementation. First, it was discovered that in the case of Lithuania, the application of CPS is enabled by the legal framework, which strongly supports the development of competencies related to

creativity, innovation, critical thinking, and adaptability in public management. Established laws and standards emphasize that public management professionals are expected to be open to new ideas, to proactively address challenges and opportunities, and to adapt to changing conditions and demands.

Second, the case of the Military Academy of Lithuania reveals that the integration of CPS into public management curricula shows positive perceived effects on fostering creativity, innovation, and critical thinking among students. In particular, applying the CPS approach helps shape the competencies required for public management professionals, such as: 1) teamwork, 2) critical thinking and problem-solving, 3) creativity and innovation, and 4) leadership. In this way, the CPS approach helps to develop modern bureaucratic qualities. However, effective implementation of CPS in public management education requires strong commitment and motivation from educators and students. Creating an environment conducive to creativity emerges as a crucial facilitator. It is also crucial to recognize that the integration of CPS requires additional curriculum time. Despite these challenges, this study underscores the essential role of CPS in forming skilled and innovative public management professionals.

AUTHOR CONTRIBUTIONS

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