

## MANAGERIAL INNOVATION AND SUSTAINABLE ENTREPRENEURSHIP EDUCATION: STRATEGIC INSIGHTS FROM HIGH SCHOOL SYSTEMS

DOI: <https://doi.org/10.53486/dri2025.15>  
UDC: 005.342:373(478)

**Maria BUCȘA**

Academy of Economic Studies of Moldova

Chișinău, Republica Moldova

[bucsa.maria@ase.md](mailto:bucsa.maria@ase.md)

ORCID: 0009-0005-0024-419X

**Abstract:** *This article investigates how managerial innovation contributes to the development of sustainable entrepreneurial skills in secondary education, with a focus on practices from Romania and the Republic of Moldova. The primary objective is to highlight the impact of innovative managerial strategies on teaching and learning processes in a context marked by economic, social, and environmental challenges. The study adopts a qualitative methodology, relying on the comparative analysis of curricular documents, educational strategies, and relevant institutional case studies. The findings reveal the effectiveness of active pedagogical methods—such as project-based learning, school-community partnerships, and international collaborations—in promoting an entrepreneurial education grounded in sustainability principles. The research also identifies systemic limitations, including unequal access to resources, resistance to change, and the lack of ongoing teacher training. In light of these aspects, the study proposes directions for curriculum reform and institutional development, emphasizing the importance of a shared vision among teachers, policymakers, and the private sector. The contribution of this research lies in the development of a theoretical and practical model for implementing sustainable entrepreneurship in schools and in recognizing the essential role of educational institutions in shaping a fair and responsible future.*

**Keywords:** *sustainable entrepreneurship, educational leadership, organizational culture, sustainable development*

**JEL:** I21, L26, O35

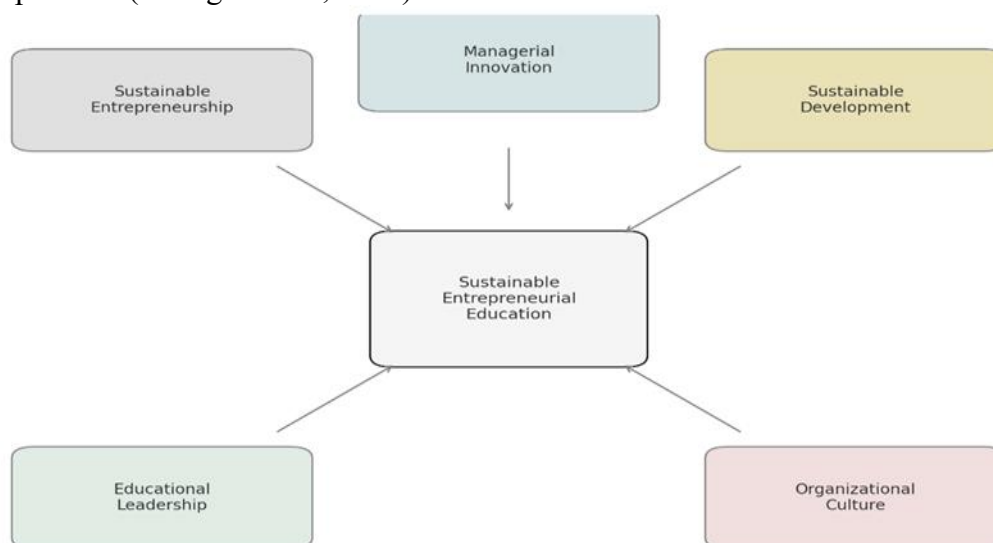
### 1. Introduction

In the current context of rapid social and economic transformation, coupled with escalating environmental issues, education plays a strategic role in preparing young people to face global challenges. One of the globally recognized priorities is the promotion of sustainable thinking that supports innovation and fosters social and ecological balance. The topic is relevant not only from an academic standpoint but also as a direct response to the 2030 Agenda for Sustainable Development of the United Nations, which emphasizes the need for quality education as a cornerstone of global progress (Istrate, 2021; Cojan, 2022). Within this specific framework, the development of an educational culture centered on sustainable entrepreneurship is regarded as a key element in contemporary curriculum reform. Education not only stimulates innovation and entrepreneurial spirit, but also promotes values of social, environmental, and cultural responsibility (Georgescu, 2024). The aim of this study is to investigate the effectiveness of educational strategies applied in secondary education for the development of sustainable entrepreneurial competences, through the lens of managerial innovation and curricular adaptation. The research focuses on identifying “strategic deviations” in current curricular plans that hinder the integration of sustainability principles into educational content. This article not only examines the current state of entrepreneurial education in the two countries, but also proposes a strategic and action-oriented vision that may contribute to preparing a new generation of educational leaders and young entrepreneurs committed to building a sustainable future.

## 2. Theoretical and Conceptual Framework

This research is grounded in a set of key concepts that shape the theoretical and practical directions of the study, offering analytical clarity for each construct within the scope of sustainable entrepreneurship education.

- **Sustainable entrepreneurship** is defined as the process of identifying and developing business initiatives that generate economic value while simultaneously taking into account social responsibility and environmental protection. According to the literature, this concept involves assessing entrepreneurial decisions based on their long-term impact on natural resources and local communities, moving from a profit-only logic to an ethical and sustainable approach (Fanea-Ivanovici & Baber, 2022).
- **Managerial innovation** refers to the continuous adaptation of how educational institutions manage activities in response to a changing environment and the challenges it presents. This involves revising decision-making processes, integrating new technologies, and implementing innovative pedagogical approaches to enhance educational performance and support curriculum revision (Avidov-Ungar & Eshet-Alkalai, 2011).
- **Educational leadership** encompasses the set of skills and behaviors through which education leaders influence learning processes and organizational culture. This type of leadership fosters innovation, supports the professional growth of teaching staff, and promotes a vision of education grounded in social responsibility and sustainable development (Rață & Bîrnaz, 2023).
- **Organizational culture** reflects the entire system of values, norms, and practices that define institutional identity and influence the capacity to adopt and implement innovation. A positive organizational environment provides a favorable context for change and supports the promotion of an educational model that is sustainable, inclusive, and participatory (Berkovich & Eyal, 2021).
- The concept of **sustainable development** is highly relevant in the context of modern education and implies meeting the needs of the present generation without compromising the ability of future generations to meet their own. It involves balancing economic, social, and environmental dimensions. In the field of education, sustainable development offers a guiding framework for curricular reform and encourages students to develop critical and ethical perspectives (Chang & Lien, 2020).



**Figure 1. Conceptual Model of Sustainable Entrepreneurship Education in High School**

*Source: developed by author based on the conducted study and scientific research*

These foundational ideas serve as the analytical backbone of the research, guiding the interpretation of curricular and managerial approaches and informing the formulation of strategic recommendations for achieving equitable and sustainable entrepreneurship education.

### 3. Literature Review

Recent research in the field of education reflects a growing concern for aligning curricula with the evolving social, economic, and environmental challenges of our time. There is a consistent emphasis on the role of sustainability in education and the need for pedagogical innovation in the context of ongoing curricular reforms (Melnic, 2023).

The studies reviewed converge around four main thematic directions:

- **Curriculum revision and implementation barriers**

Political ambiguity influences teachers' autonomy and the role of the state in setting educational standards (Lai, 2010). Moreover, the literature highlights how reforms impact professional identity (Malekipour et al., 2017) and the pressing need to update curriculum content to reflect real societal and economic demands (Dambudzo, 2015).

- **Innovative teaching methods and experiential learning**

The use of interactive methods, such as case studies and simulations, increases student engagement and supports the development of entrepreneurial skills (Zhang, 2023), while also promoting applied competencies and positive entrepreneurial behaviors (Tarekegne, 2019).

- **Sustainability education**

It is appropriate to integrate the durable development objectives (Sustainable Development Goals) into educational programs (Chang & Lien, 2020), train educational leaders who can stand global challenges and support sustainability, which is frequently affected by the absence of a relevant curriculum on this aspect (Fanea-Ivanovici and Barber, 2022).

- **Digitalization and flexibility**

There is a call for enforcing an adaptable and varying learning plan to meet the requirements of culturally expanded and individualized students in the educational workflow (Gunawan et al., 2023; Stewart and Walker-Glaves, 2020) and an assimilated reaching out process between the main subjects of study as an effective technique to enrich the educational experience of students, with the aim of developing visionary skills (Salovaara et al., 2019). Moreover it underscores the importance of digitalizing the educational pathway in ensuring the innovative skills and advanced capabilities, indispensable in today's digitalized and changing economy. (Zou, 2022).

In the academic field, various required subjects are identified that underlie the development of an adapted curriculum for sustainability and entrepreneurship education (Nwosu et al., 2023). These themes range from the difficulties encountered in implementing reforms to the role of the state and educational policies or the integration of innovative pedagogical methods and the digitalization of education and various other aspects such as interdisciplinarity and flexibility of school programs. Theoretical contributions related to these areas provide illustrative clues for the development of education according to current requirements. For a clear systematization of these relationships, figure 2 provides a visual representation of the correspondences between the main theoretical themes and the contributions identified in the specialized literature. Its tabular structure and directional connections facilitate the understanding of the conceptual logic that underpins the research model proposed in this study.

Theoretical Themes	Relevant Contributions
Ambiguity in reform	Need for clear reform guidelines
Students' perception vs. curriculum	Curriculum shapes student engagement
State's role in curriculum	Political and social influences
Teaching professionalism	Reforms support or erode standards
Curriculum reevaluation	Curriculum tailored to labor needs
Innovative pedagogy	Experiential learning approach
Entrepreneurial skills	Applied and practical competencies
SDGs integration	Education aligned to SDGs
Inclusive curriculum	Responding to learner diversity
Interdisciplinary learning	Leadership through themed education
Digital education	Technology fosters innovation
Sustainability attitudes	Curriculum must reflect values
Future-oriented leadership	Training for global challenges
Feedback and curriculum evaluation	Evaluation as reform foundation

**Figure 2. Synthesis of Theoretical Directions in Curriculum Reforms**

*Source: developed by author based on the conducted study and scientific research*

#### 4. Research Methodology

This study investigates how the principles of education for sustainable entrepreneurship are integrated into the secondary education systems of Romania and the Republic of Moldova. The choice of this research paradigm is justified by the need to construct an interpretative framework based on educational realities through the analysis of curricular content and strategic documents. The study employs a qualitative research design, specifically a comparative document analysis approach. Through this methodology, the study identifies both similarities and differences between the two national education systems in terms of how sustainable entrepreneurship is conceptualized, structured, and implemented.

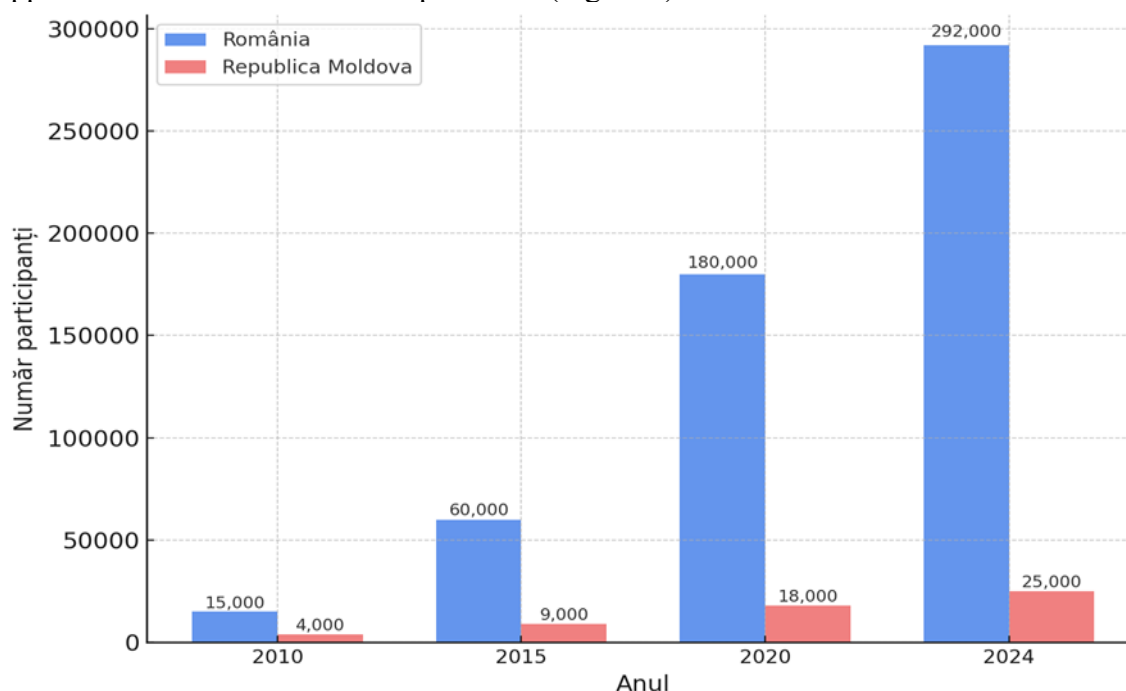
The research adopts an exploratory and interpretative perspective and seeks to examine the impact of curricular and managerial strategies on the development of entrepreneurial competences among high school students. The documents analyzed were selected according to clear criteria: thematic relevance, level of applicability, timeliness, and type of source.

Thematic relevance refers to strategic documents, school curricula, and practical guides that explicitly address entrepreneurship education and sustainable development in the context of managerial innovation and curricular transformation. The degree to which the documents apply to secondary education determined their inclusion based on relevance and recency. The types of sources include ministerial policies, educational resources, and institutional materials used in educational initiatives such as Junior Achievement Romania and Moldova, or local projects funded through Erasmus+.

The research process began by identifying meaningful and comparable sources in the two national contexts (Romania and the Republic of Moldova). The key themes explored include the vision of sustainability in entrepreneurship, the proposal of an appropriate curricular structure, the importance of educational leadership, and the role of institutional collaboration at both intra- and extracurricular levels.

## 5. Results and Discussion

This study focuses on the comparative analysis of official documents and curricular programs from Romania and the Republic of Moldova. In order to ensure theoretical consistency and contextual relevance, an in-depth examination was conducted on educational policies and curriculum-related documents published between 2015 and the present. In both Romania and the Republic of Moldova, sustainable development strategies for education are reflected in programs that support the development of entrepreneurial skills and critical thinking. These documents emphasize the importance of developing entrepreneurial skills and promoting sustainability, but their implementation varies depending on the capacity of educational establishments. The curriculum for the optional subject "Economic and Entrepreneurship Education", validated in 2019, offers a flexible framework, intended for practical application. The Junior Achievement Moldova organization extends valuable learning opportunities through European projects such as Erasmus + ReSTART. Speaking of inequalities in access to resources, especially in rural areas, it can be said that initiatives can only be partially increased or are not supported where their presence is most wanted. Clear differences between the pace and institutional support in the two contexts can be perceived (Figure 3).



**Figure 3. Evolution of Participation in Junior Achievement Programs in Romania and the Republic of Moldova (2010–2024)**

*Source: developed by the author*

In Romania, there is a strong institutional structure that facilitates the integration of entrepreneurial education into secondary schools, supported by strategies consistently aligned with European objectives and the active involvement of schools in educational projects. The role of educational leadership is essential in this context, as it promotes and sustains partnerships and fosters an organizational culture that values innovation and collaboration. Training programs for school managers further support this goal by enabling the dissemination of effective practices.

In the Republic of Moldova, although some schools have made notable progress in certain educational areas, a unified educational framework is lacking, and there is no consistent and coherent implementation of optional curricula. This inconsistency limits the positive impact of innovative approaches within the national education system. Many of the initiatives are the result of international cooperation and individual efforts by teachers and school principals. However, the participation of



students in JA educational programs and the openness of teachers to modern methods highlight the possibilities for change in the education system, provided there is clear support from policymakers and sustainable educational resources. In a general comparison, the two education systems have a similar vision on the importance of sustainability and the development of skills necessary for everyday life. However, discrepancies arise when it comes to the implementation of policies and managerial skills for the effective and coherent implementation of reforms (Figure 4).

The argument of this context supports the importance of developing an integrated educational vision that matches the curriculum with professional training for teachers and the school leadership structure. Leadership in education, the key element in transforming the school into an environment for promoting a sustainable entrepreneurial mindset focused on social responsibility and strategic innovation. By meeting a proactive attitude in both the Romanian and Moldovan educational systems, significant transformations are generated by creating conducive environments that stimulate the development of a set of sustainable entrepreneurial skills. The participation of students in JA educational programs and the openness of teachers to modern methods highlight the possibilities of changes in the educational system, provided there is clear support from political decision-makers and sustainable educational resources.

## 6. Conclusions

The results of this study highlight the critical importance of integrating sustainable entrepreneurship education into secondary education as a means to prepare young people for the economic, social, and environmental challenges of the 21st century. Romania benefits from a robust institutional framework, complemented by strategic partnerships and modern educational resources that facilitate the integration of sustainability principles into the school curriculum. In contrast, in the Republic of Moldova, this process is still in its early stages, marked by recent curricular reforms and an increasing alignment with international standards. The documents examined reflect initiatives to insert education into sustainability principles, but their implementation is nevertheless influenced by the specific local environment, institutional capacity and the involvement of external partners. The comprehensive approach promoted through educational projects, especially in Romania, contributes to the consolidation of an organizational culture conducive to innovation and collaboration. Problems and obstacles encountered consisted of unequal access to updated teaching materials, differences between announced national policies and the way they are put into practice in educational institutions, the absence of a unitary and consistent system of continuous training for teachers to integrate the principles of sustainable entrepreneurship, the absence of a standardized way for monitoring and evaluating the impact of entrepreneurship education at the high school level.

This study underscores the pivotal role of leadership and managerial innovation in fostering a school environment conducive to the cultivation of sustainable entrepreneurial competencies. Within this framework, education assumes a strategic function, extending beyond the professional training of students to encompass the establishment of an ethical and responsible outlook on both individual and societal development.

## References

1. United Nations, 2015. *Transforming our world: The 2030 Agenda for Sustainable Development*. United Nations General Assembly. [online] Available at: <https://sdgs.un.org/2030agenda> [Accessed 09 April 2025].
2. Istrate, M., 2021. Contribuții ale educației fizice și sportului la îndeplinirea obiectivelor Agendei 2030 a ONU pentru dezvoltare durabilă. *Buletinul Universității Naționale de Apărare „Carol I”*, 8(4), pp.117–123. [online] Available at : <https://doi.org/10.53477/2065-8281-20-75>[Accessed 12 April 2025].
3. Cojan, N., 2022. Implicațiile implementării „obiectivelor globale” asupra securității economice a României. *Buletinul Universității Naționale de Apărare „Carol I”*, 11(3), pp.78–86. [online] Available at: <https://doi.org/10.53477/2065-8281-22-81>[Accessed 12 April 2025].

4. Georgescu, C., 2024. Management of innovations in education: concept and particulars. *Studia Universitatis Moldaviae. Seria Științe ale Educației*, 9(169), pp.3–9. [online] Available at: [https://doi.org/10.59295/sum9\(169\)2024\\_01](https://doi.org/10.59295/sum9(169)2024_01) [Accessed 12 April 2025] Avidov-Ungar, O. and Eshet-Alkalai, Y., 2011. Teachers in a world of change: Teachers' knowledge and attitudes towards the implementation of innovative technologies in schools. *Interdisciplinary Journal of E-Learning and Learning Objects*, 7, pp.263–274. [online] Available at: <https://doi.org/10.28945/1525> [Accessed 02 April 2025].
5. Berkovich, I. and Eyal, O., 2021. Leading schools in times of crisis: The role of organizational culture in educational resilience. *Educational Management Administration & Leadership*, 49(2), pp.248–264. [online] Available at: <https://doi.org/10.1177/1741143220910438> [Accessed 03 April 2025].
6. Chang, Y.-C. and Lien, H.-L., 2020. Mapping course sustainability by embedding the SDGs inventory into the university curriculum: A case study from National University of Kaohsiung in Taiwan. *Sustainability*, 12(10), 4274. [online] Available at: <https://doi.org/10.3390/su12104274> [Accessed 02 April 2025].
7. Fanea-Ivanovici, M. and Baber, H., 2022. Sustainability at universities as a determinant of entrepreneurship for sustainability. *Sustainability*, 14(1), 454. [online] Available at: <https://doi.org/10.3390/su14010454> [Accessed 12 April 2025].
8. Lai, M., 2010. Teacher development under curriculum reform: A case study of a secondary school in mainland China. *International Review of Education*, 56(5–6), pp.613–631. [online] Available at: <https://doi.org/10.1007/s11159-010-9181-9> [Accessed 11 April 2025].
9. Malekipour, A., Hakimzadeh, R., Dehghani, M. and Zali, M.R., 2017. Content analysis of curriculum syllabus for the educational technology discipline based on entrepreneurial competencies. *Interdisciplinary Journal of Virtual Learning in Medical Sciences*, 8(4). [online] Available at: <https://doi.org/10.5812/ijvlms.62156> [Accessed 12 April 2025].
10. Melnic, L., 2023. Cadrul didactic în învățământul simultan: aspecte strategice. *Revista Științifică Educație Plus*, 6, pp.225–232. [online] Available at: <https://doi.org/10.46727/s.23-06-2023.p225-232> [Accessed 14 April 2025].
11. Rață, L. and Bîrnaz, N., 2023. The sustainability of public speaking through the lens of developing logos in students – future teaching professionals. *Journal of Educational Sciences*, XXIV(2), pp.92–107. [online] Available at: <https://doi.org/10.35923/JES.2023.2.07> [Accessed 14 April 2025].
12. Dambudzo, I.I., 2015. Curriculum issues: Teaching and learning for sustainable development in developing countries: Zimbabwe case study. *Journal of Education and Learning*, 4(1). [online] Available at: <https://doi.org/10.5539/jel.v4n1p11> [Accessed 15 April 2025].
13. Zhang, L., 2023. Enhancing entrepreneurial mindset and skills through education: Empowering individuals for China's economic recovery from the COVID-19 pandemic. *Journal of Digitainability, Realism & Mastery (DREAM)*, 2(04), pp.42–49. [online] Available at: <https://doi.org/10.56982/dream.v2i04.116> [Accessed 02 April 2025].
14. Tarekegne, W.M. and Gelaneh, A.H., 2019. Integration of entrepreneurship education into Ethiopian universities' formal curriculum. *International Journal of Research in Business and Social Science (2147-4478)*, 8(2), pp.61–73. [online] Available at: <https://doi.org/10.20525/ijrbs.v8i2.191> [Accessed 03 April 2025].
15. Gunawan, A., Zohriah, A. and Saputra, A., 2023. Does Indonesia's inclusive curriculum education sustainability in private madrasah program? *International Journal of Academic Research in Progressive Education and Development*, 12(2). [online] Available at: <https://doi.org/10.6007/ijarped/v12-i2/16814> [Accessed 11 April 2025].
16. Stewart, C. and Walker-Gleaves, C., 2020. A narrative exploration of how curricula for children with profound and multiple learning difficulties shape and are shaped by the practices of their teachers. *British Journal of Special Education*, 47(3), pp.350–375. [online] Available at: <https://doi.org/10.1111/1467-8578.12313> [Accessed 16 April 2025].
17. Salovaara, J.J., Soini, K. and Pietikäinen, J., 2019. Sustainability science in education: Analysis of master's programmes' curricula. *Sustainability Science*, 15(3), pp.901–915. [online] Available at: <https://doi.org/10.1007/s11625-019-00745-1> [Accessed 16 April 2025].
18. Zou, J., 2022. Intelligent course recommendation based on neural network for innovation and entrepreneurship education of college students. *Informatica*, 46(1). [online] Available at: <https://doi.org/10.31449/inf.v46i1.3776> [Accessed 12 April 2025].

19. Nwosu, L.I., Enwereji, P.C., Enebe, N.B. and Segotso, T., 2023. Determining the roles of school management teams in fostering entrepreneurship among learners. *International Journal of Learning, Teaching and Educational Research*, 22(9), pp.478–500. [online] Available at: <https://doi.org/10.26803/ijlter.22.9.26> [Accessed 12 April 2025].
20. Ministerul Educației Naționale, 2017. *Programa școlară pentru disciplina Educație antreprenorială, clasa a X-a*. București: MEN. [online] Available at: <https://www.edu.ro/programe-scolare-liceu> [Accessed 16 April 2025].
21. Guvernul României, 2018. *Strategia națională pentru dezvoltarea durabilă a României 2030*. București: Departamentul pentru Dezvoltare Durabilă. [online] Available at: <https://dezvoltaredurabila.gov.ro/web/wp-content/uploads/2020/02/Strategia-DD-2030-RO.pdf> [Accessed 16 April 2025].
22. Ministerul Educației, 2022. *Plan-cadru de învățământ pentru învățământul liceal, filiera teoretică și tehnologică*. București: ME. [online] Available at: <https://www.edu.ro/planuri-cadru> [Accessed 16 April 2025].
23. Ministerul Educației și Cercetării al Republicii Moldova, 2019. *Curriculum pentru disciplina opțională Educație economică și antreprenorială*. Chișinău: MEC. [online] Available at: [https://mecc.gov.md/sites/default/files/educatie\\_economica\\_si\\_antreprenoriala\\_curriculum\\_2019.pdf](https://mecc.gov.md/sites/default/files/educatie_economica_si_antreprenoriala_curriculum_2019.pdf) [Accessed 16 April 2025].
24. Guvernul Republicii Moldova, 2021. *Strategia Educației 2030*. Chișinău: Ministerul Educației și Cercetării. [online] Available at: <https://mecc.gov.md/ro/content/strategie-sectoriala-educatie-2030> [Accessed 16 April 2025].
25. Agenția Națională pentru Curriculum și Evaluare, 2020. *Ghid metodologic pentru implementarea curriculumului modernizat în învățământul liceal*. Chișinău: ANCE. [online] Available at: <https://ance.gov.md/ro> [Accessed 16 April 2025].
26. Junior Achievement România, n.d. [online] Available at: <https://www.jaromania.org.ro> [Accessed 16 April 2025].
27. Junior Achievement Moldova, n.d. [online] Available at: <https://www.jamoldova.org.md> [Accessed 16 April 2025].