

TERMS OF REFERENCE

Job title:	National Individual Consultant/Researcher on STEAM Piloting
Duty Station:	Republic of Moldova, Chisinau
Reference to the projects:	Advancing quality education and lifelong learning opportunities for all
Contract type:	Individual Contract
Assignment type:	National Consultant
Contract duration:	October 2026 – July 2027
Expected workload:	Researcher: 20 working days
Indicative starting date:	15 October 2026

A. Project Description:

During 2024 – 2027, UNDP and UNICEF are jointly implementing the Project “Advancing Quality Education and Lifelong Learning Opportunities for All”, funded by the European Union. The overarching objective of the project is to contribute to human capital development in the Republic of Moldova, improving the quality and relevance of education and lifelong learning opportunities for all, for better matching the labour market demands. To achieve this, the Program will target the following specific objectives:

1. Strengthen institutions and system for teacher and school leaders' professional development and support the implementation of education policies to enhance quality of teaching and learning (Development Strategy “Education 2030”).
2. Improve equitable access for all children to quality education, promoting the development of an inclusive, digital, and resilient education system.
3. Upgrade learning environments through renovation of selected school infrastructures and facilitate the development of the 21st century skills, contributing to better education opportunities for pupils/students and improved efficiency of the school network.

Under this joint Project, UNDP will support the professional development of teachers, promote life-long learning opportunities for adults, and be responsible for implementing interventions under the specific objective number 3 mentioned above, that aims at increasing quality, relevance, and efficiency of learning. More specifically, it will support Ministry of Education and Research in enhancing the learning environments and improving the teaching-learning conditions by setting up modern learning spaces, improvement of school infrastructure of 10 model/aspirational schools. It will also aim at redesigning existing STEAM learning spaces to facilitate better learning, provision of modern technologies and teaching-learning resources and support the roadmaps for continuous development of digital learning space. The activities will ease the accessibility of students from remote areas to the model/ aspirational schools through access to transportation means and development of an integrated national system for school bus management. In addition, this component aims at designing and rolling-out a digital transformation & STEAM model in upper-secondary education focusing on teachers' mentorship in using new educational technologies, adopting new pedagogical approaches, support the development of digital educational resources for science disciplines, and support the capacity of school managers to embark upon the process of e-transformation in education.

To support the implementation and improvement of optional curriculum during piloting three local consultants will be contracted, one leading and two regular consultants.

Background:

The Moldovan education system faces a complex array of challenges, including underperforming rural schools, an inefficient school network, resource shortages, and a significant teacher deficit.

Moldova's school network includes 1,196 primary schools, gymnasiums, and lyceums serving 331,000 students from grades 1 to 12. A notable issue is the inefficiency caused by 22% of schools having fewer than 100 pupils, while less than 3% of students attend these institutions. Despite allocating 5.8% of GDP to education, schools remain underfunded and lack basic infrastructure upgrades and educational technologies. Many rural school facilities are so outdated that they fail to meet basic sanitation and hygiene standards. Rural school children have limited access to water, sanitation and hygiene facilities in their school^[1]. This fragmentation impacts student performance, as evidenced by the 2022 PISA results showing significantly better outcomes in larger schools compared to smaller, rural ones.

The most recent PISA results, released in December 2023, reveal a concerning trend: nearly 50% of all Moldovan pupils, and a significant 70% of those attending schools with fewer than 400 students struggle to achieve basic proficiency in reading, writing, and science by age 15. In addition, the PISA results indicate on drastic discrepancies between small and larger schools' educational outcomes – with 7 out of 10 pupils in large schools attaining the minimum competence levels, compared to only 3 out of 10 pupils from small schools (under 400 students) performing at minimum level across the three domains assessed (reading, mathematics, and science).

In response, the Ministry of Education and Research (MER) is focusing on optimizing the school network by transforming larger district schools into Model Schools. 35 schools have been selected, one per district/municipality, to serve as Model Schools featuring modern infrastructure, high-quality teaching staff, modern equipment, inclusive management, and school buses for transportation.

STEAM education:

The concept of inter- and trans-disciplinarity, particularly through STEAM projects, was introduced for the first time in the 2019 Framework Curriculum. However, due to limited training and support, teachers have been applying this novel approach to teaching and learning only sporadically.

Prior to launching teacher training programs, an analysis of the 2022 PISA context questionnaires was conducted in April–May 2024. This analysis revealed that, in the Republic of Moldova, theoretical teaching practices based on rote learning continue to predominate.

In addition, a needs assessment survey conducted among science teachers participating in the project showed that fewer than 20% have taken part in training or workshops on STEAM education since its introduction in the curriculum in 2019. The most commonly reported barriers to implementing STEAM education include limited knowledge and experience, lack of preparation time due to busy schedules, and insufficient equipment, teaching materials, and technological resources.

The new concept of curriculum reform, launched in 2024 by the Ministry of Education and Research, provides a foundation for increasing the share of integrated, inter-, and transdisciplinary content. In this context, supporting teacher training and revising curriculum content through the integration of a STEAM approach represents a key priority for UNDP within the ongoing education project.

Over the past two years, UNDP has organized teacher trainings, mentoring sessions, and platforms for sharing best practices within a professional community of practice, including during Education Week in May 2025 and 2026.

As a result, participating teachers have reported increased confidence and enthusiasm in applying the STEAM approach in their classrooms and in effectively integrating multiple scientific disciplines. However, several challenges have emerged, including limited availability of educational resources, the need for stronger cross-disciplinary collaboration, insufficient support from school management, and the time required to align curricula for integrated STEAM projects.

To address these challenges and ensure alignment with the ongoing National Curriculum reform, in 2026 UNDP supported the development of a new optional curriculum, *“STEAM for Sustainable Development”*, along with a corresponding methodological guide. The draft optional curriculum was presented to the National Curriculum Commission on 4 June and approved for piloting in 11 Model Schools starting with September 2026.

To ensure a robust process of monitoring, evaluation, and continuous improvement of the curriculum pilot UNDP intends to contract three individual consultants, one leading to coordinate the piloting process and to compile the activity and final reports, as well as two regular consultants.

The curriculum piloting will be conducted during the 2026–2027 academic year and will involve 11 Model Schools. The contracted company will be responsible for proposing a comprehensive methodology for proper testing, feedback, and curriculum improvement. This will include criteria and indicators, instruments for data collection and feedback gathering from managers, teachers, students, and parents, and assessing external partnerships established during the implementation of STEAM projects. The company will conduct a series of relevant training and coaching for school teams and responsible for STEAM curriculum piloting, as well as will organize opportunities to exchange best practices, both online and offline. To ensure that this is a collaborative cycle to improve curriculum or educational process stays in the system, consultants will design and propose a “Plan-Do-Check-Improve” cycle that can take place in any school and consist of organizing, evaluation and taking action to improve educational curriculum. At the school level, the way the curriculum is taught can evolve based on data concerning students and local communities. At the national level, the data concerning teaching the curriculum can be gathered before the end of new stage of curriculum revision. This accumulation of evidence on teaching practices, pedagogical pitfalls and success stories can subsequently feed into the discussion of the National Curriculum reform.

B. Objectives of the assignment

UNDP Moldova intends to contract one individual consultant/researcher to support the monitoring, evaluation, and continuous improvement of the optional curriculum **“STEAM for Sustainable Development”** during its pilot implementation in 12 Model Schools throughout the 2026–2027 academic year.

The overarching objective of this assignment is to support the transition toward a **student-centred teaching and learning approach** that promotes student engagement and motivation, fosters deeper learning, and enhances the overall quality of teaching and learning. Through evidence-based monitoring, evaluation, and iterative curriculum improvement, the assignment will contribute to the development of effective pedagogical practices and learning experiences aligned with the principles of sustainable development and 21st-century competencies.

Specific Objectives:

1. **Review the assessment and curriculum improvement methodology and elaborate assessment instruments**
 - Design a methodology to assess the relevance, coherence and quality of the optional curriculum. Elaborate assessment instruments, including observations rubrics, teacher feedback questionnaires, student diagnosis & formative tests and focus group & interview protocols.
2. **Support effective curriculum piloting**
 - Provide guidance, coaching, and training support to school teams to ensure the proper piloting of the STEAM optional curriculum.
3. **Collect and analyze stakeholder feedback, identify challenges and areas for improvement and provide evidence-based recommendations**
 - Two rounds of structured cycles of feedback will be collected from teachers, students, parents, and school leaders regarding the relevance, usability, and impact of the STEAM optional curriculum.
4. **Contribute to scalability and optional curriculum refinement**

- Organism a platform for sharing best practices from pilot schools. Produce a final report with actionable recommendations to inform decision-making for potential national scale-up.

To achieve the above-mentioned scope, the following specific goals and tasks shall be carried out by individual consultant:

1. **Review the assessment and curriculum improvement methodology and elaborate assessment instruments**

Review the methodology for assessing the relevance, coherence, and quality of the optional curriculum, incorporating an evaluation framework (algorithm) and a set of tools, including observations rubrics, teacher feedback questionnaires, student diagnosis & formative tests and focus group & interview protocols. The methodology will include an observation of research lessons. It will be focused on collaborative teacher learning, continuous improvement of teaching practice and iterative refinement of the optional curriculum. The process will include the following stages:

- **Definition of focus and goals** – Establish clear, long-term curriculum objectives to guide the assessment (e.g. development of complex problem-solving competencies);
- **Collaborative lesson planning** – Teachers jointly design research lessons, with a strong emphasis on student learning processes, anticipated thinking, and potential misconceptions, rather than solely on teaching steps.
- **Implementation and observation** – Conduct research lessons in classroom settings, with structured observations focusing on student learning, engagement, and thinking processes.
- **Post-lesson reflection** – Facilitate structured discussions led by consultants, where evidence-based feedback is shared and analyzed.
- **Lesson revision** – Refine lesson design based on feedback, improving tasks, questioning strategies, pacing, and instructional materials.
- **Re-teaching and validation** – Implement a revised research lesson in another model school to test and validate improvements.
- **Documentation and knowledge sharing** – Systematically capture insights on teaching practices, student learning, effective strategies, and implementation challenges, and disseminate findings across the network of Model Schools involved in piloting the optional curriculum.

Overall, two full cycles of research lessons will be conducted across the 10 participating schools:

- **First round:** 10 research lessons in November 2026
- **Second round:** 10 research lessons in April 2027

This iterative process will ensure evidence-based refinement of the optional curriculum and support informed decisions for scaling up its implementation.

1. **Support effective curriculum piloting**

Conduct a training programme for teachers participating in piloting on relevant topics to support a smooth piloting and collection of educational data. Target groups are 40 teachers and principals of 12 Model Schools involved in curriculum piloting, as well as university lecturers and researchers. The programme volume - 24 academic hours, including at least 3 online coaching sessions for each Model School. The logistic costs for the organization of the in-person trainings will be supported by UNDP.

3. **Collect and analyze stakeholder feedback, identify challenges and areas for improvement and provide evidence-based recommendations**

Conduct two rounds of research lessons observations, capture insights on teaching practices, student learning, effective strategies, and implementation challenges. Gather structured feedback from teachers, students, parents, and school leaders regarding the relevance, coherence and quality of the optional curriculum, focusing on the development of problem-solving competencies in students. Analyze the role and effectiveness of external partnerships established during STEAM project implementation. The transportation costs for the participating in the research lessons will be supported by the consultant and will be included in the offer.

4. Contribute to scalability and optional curriculum refinement

Organize one event to share teaching practices, student projects, effective strategies, and implementation challenges, aiming to disseminate findings across the network of Model Schools involved in piloting the optional curriculum. Prepare a comprehensive final report on curriculum piloting that synthesizes findings into clear conclusions and actionable recommendations regarding curriculum refinement, methodological guidelines, and the scaling-up of the implementation approach. The logistic costs for the organization of the event will be supported by UNDP.

C. Key deliverables and tentative timetable

Both consultants selected under the announced competition will render the services as per assigned Model Schools:

Consultant / Researcher (Model Schools from Mereni, Orhei, Cimişlia)

No.	Key deliverables	%	Tentative deadline
1	Contribute to the development of a comprehensive assessment and curriculum improvement methodology, including assessment instrument for assigned Model Schools. Deliverable 1. Comprehensive methodology to assess the relevance, coherence and quality of the optional curriculum submitted to, and accepted by UNDP, including a set of curriculum monitoring and evaluation tools.	3 WDs	By 30 October 2026
2	Conduct a training programme for teachers <u>at assigned Model Schools</u> participating in piloting on relevant topics to support a smooth piloting and quality collection of educational data. Deliverable 2.1. Report on the training programme for teachers participating in piloting on relevant topics to support a smooth piloting and quality collection of educational data and evidence, developed and submitted to UNDP. Agenda and course materials for 8 hours in person will be attached to the report. Deliverable 2.2. Report on coaching sessions conducted (preparing and delivering of 6 hours of coaching for <u>each assigned Model school</u>), developed and submitted to UNDP.	2 WDs 3 WDs	By 30 November 2026 By 30 April 2027
3	Collect and analyse stakeholder feedback, identify challenges and areas for improvement and provide evidence-based recommendations, through 3 research lessons observation and feedback <u>in assigned Model Schools</u>. Deliverable 3.1. Report on the 3 distinct research lessons observed in November 2026 focusing on student learning, engagement, and thinking processes, developed and submitted to UNDP. Deliverable 3.2: Report on the 3 distinct research lessons observed in April 2027, focusing on student learning, engagement, and thinking processes, developed and submitted to UNDP.	4 WDs 4 WDs	By 30 November 2026 By 30 April 2027
4	Contribute to scalability and optional curriculum refinement Facilitate one event to share teaching practices, students' projects, effective strategies, and implementation challenges, aiming to disseminate findings across the network of Model Schools involved in piloting the optional curriculum. Prepare a comprehensive final report on curriculum piloting that synthesizes findings into clear conclusions		

	and actionable recommendations regarding curriculum refinement, methodological guidelines, and the scaling-up of the implementation approach.		
	Deliverable 4.1: One day event to share teaching practices, student learning, effective strategies, and implementation challenges, aiming to disseminate findings across the network of Model Schools involved in piloting the optional curriculum. Agenda, list of participants and presentations submitted to UNDP. Deliverable 4.2: Contribution to the final report on curriculum piloting that synthesizes findings into clear conclusions and actionable recommendations regarding curriculum refinement, methodological guidelines, and the scaling-up of the implementation approach, developed and submitted to UNDP. Report will include the perceptions survey of the managers, teachers and students regarding STEAM optional curriculum.	2 WDs	By 30 May 2027
		2 WDs	By 30 May 2027

Note: Deliverables timeline can be amended for the purpose of the assignment.

D. Institutional arrangements

The timeframe for the work of the Consultants is planned for the period **October 2026 – June 2027**.

The assignment shall be performed in close coordination with the UNDP Project Team, under the guidance and supervision of the Project Manager, who will approve contractor's deliverables.

For the duration of the assignment the Programme will provide the Consultants with the necessary information and materials for the fulfilment of the assignment. The Consultants will be responsible for arranging all necessary travels and transportation, obtaining all needed permissions, and establishing and maintaining of good working relationships with all involved parties.

The Consultants will be responsible for facilitating the trainings in Romanian. UNDP Moldova will be responsible for making all logistic arrangements for trainings and other events. All communications and documentation related to the assignment required by UNDP will be in Romanian, unless specifically agreed otherwise.

E. FINANCIAL ARRANGEMENTS

The consultants will be engaged under Individual Consultancy contract, the fee shall be negotiated and brought to the same level for both consultants.

Payments will be disbursed in four tranches, upon submission and validation of deliverables by the Project Manager, as per the following schedule, with each consultant responsible for their designated Model Schools:

Consultant / Researcher (Model Schools from Mereni, Orhei, Cimişlia)

Tranches	Tentative date
Tranche 1: Deliverables 1.	By 30 October, 2026
Tranche 2: Deliverables 2.1 and 3.1.	By 30 November, 2026
Tranche 3: Deliverables 2.2 and 3.2.	By 30 April 2027
Tranche 4: Deliverables 4.1 and 4.2.	By 30 May 2027

F. QUALIFICATIONS REQUIREMENTS

Academic Qualifications:

- University degree (or higher) in Educational Sciences, Mathematics, Physics, Chemistry, Geography, English Language or other STEAM areas.

Experience and knowledge:

- At least 3 (three) years of teaching experience in relevant subjects - integrated/interdisciplinary teaching, active teaching methods, STEAM integrated approach in secondary education or in teacher training.
- Experience in STEAM curriculum design in primary and/or secondary education.
- Demonstrated experience in mentoring peer teachers or within projects supported by international development partners.

Competencies:

- Ability to perform and deliver expected results in a fast-paced working environment.
- Strong sense of initiative and ability to work independently.
- Strong written and communication skills, with analytic capacity and ability to identify relevant findings and prepare analytical documents in a clear and concise manner.
- Demonstrated interpersonal skills, as well as the ability to communicate effectively and build meaningful partnerships with all stakeholders.
- Fluency in Romanian (verbal and written) is a must. Knowledge of English or Russian languages is an advantage.

Personal qualities:

- Responsibility, flexibility and punctuality, ability to meet deadlines and prioritize multiple tasks.
- Proven commitment to the core values of the United Nations, in particular respecting differences of culture, gender, religion, ethnicity, nationality, language, age, HIV status, disability, and sexual orientation, or other status.

G. DOCUMENTS TO BE INCLUDED WHEN SUBMITTING THE PROPOSALS

Interested individual consultants must submit the following documents/information to demonstrate their qualifications:

- Signed and filled-in Offeror's letter to UNDP confirming interest and availability for the individual contractor (IC) assignment, incorporating financial proposal in Annex 2 (in USD, specifying a total requested amount per working day, including all related costs, e.g. fees, phone calls, fuel, etc.). Annex 2 to the Offeror's letter, incorporating the Financial Proposal, shall be filled in mandatorily and includes the detailed breakdown of costs supporting the all-inclusive financial proposal;
- Proposal (Motivation Letter): explaining why they are the most suitable for the work, including previous experience in similar Projects (please provide brief information on each of the above qualifications, item by item, including information, links/copies of documents for similar comprehensive studies);
- Duly updated CV with at least 3 references.

Important notice: The applicants who have the statute of Government Official / Public Servant prior to appointment will be asked to submit the following documentation:

- a no-objection letter in respect of the applicant received from the Government, and;
- the applicant is certified in writing by the Government to be on official leave without pay for the entire duration of the Individual Contract.

H. EVALUATION

Initially, individual consultants will be shortlisted based on the following minimum qualification criteria:

- University degree (or higher) in Educational Sciences, Mathematics, Physics, Chemistry, Geography, English Language or other STEAM areas.
- At least three years of teaching experience in relevant subjects - integrated/interdisciplinary teaching, active teaching methods, STEAM integrated approach in secondary education.
- Citizen of Republic of Moldova

The short-listed individual consultants will be further evaluated based on a Cumulative analysis.

The award of the contract will be made to the individual consultant whose offer has been evaluated and determined as:

- responsive/ compliant/ acceptable, and
- having received the highest score out of a pre-determined set of weighted technical and financial criteria specific to the solicitation.

* **Technical Criteria weight** – 60% (300 pts) / * **Financial Criteria weight** – 40% (200 pts).

Only candidates obtaining a minimum of 210 points for the Technical Evaluation shall be considered for the Financial Evaluation.

Criteria	Scoring	Points
University degree (or higher) in Educational Sciences, Mathematics, Physics, Chemistry, Geography, English Language or other STEAM areas.	Bachelor's degree – 25 pts. Master's degree – 40 pts. PhD – 50 pts.	50
At least 3 (three) years of teaching experience in relevant subjects - integrated/interdisciplinary teaching, active teaching methods, STEAM integrated approach in secondary education or in teacher training.	Three years – 30 pts. Each additional year 10 pts up to a maximum of 50 pts.	50
Experience in STEAM curriculum design in primary and/or secondary education	No assignment – 0 pts. One assignment – 25 pts. Each additional assignment 25 pts. up to a maximum 100 pts.	100
Demonstrated experience in mentoring peer teachers or within projects supported by international development partners.	No assignments – 0 pts. One assignment – 20 pts; Each additional assignment 20pts up to a maximum of 80 pts.	80
Fluency in Romanian (verbal and written) is a must. Knowledge of English or Russian languages is an advantage.	Russian – 5 pts. English – 5 pts.	10
Belonging to the group(s) under-represented in the UN Moldova and/or the area of assignment*	Yes/No – 10 pts	10
Maximum Total Technical Scoring		300

* Under-represented groups in UN Moldova are persons with disabilities, LGBTI, ethnic and linguistic minorities, especially ethnic Gagauzians, Bulgarians, Roma, Jews, people of African descent, people living with HIV, religious minorities, especially Muslim women, refugees and other non-citizens. Please specify in CV, in case you belong to the group(s) under-represented in the UN Moldova and/or the area of assignment.

Financial	
Evaluation of submitted financial offers will be done based on the following formula: $S = F_{min} / F * 200$ S – score received on financial evaluation; F_{min} – the lowest financial offer out of all the submitted offers qualified over the technical evaluation round; F – financial offer under consideration	200

Winning candidate

The winning candidate will be the candidate who has accumulated the highest aggregated score (technical scoring + financial scoring).

The top two candidates that accumulated highest combined score shall be proposed for contract award.