**terms of Reference** (**ToRs**)

**Title: Consultancy services for developing STEM (Science, Technology & Mathematics) teacher activity guides and accompanying teacher training modules for grades 5 and 6**

**Supporting an Education Reform Agenda for improving Teaching, Assessment and Career Pathways (SERATAC)** **Project**

**I. Introduction**

The Ministry of Education (MOE) has received a grant from the World Bank to implement the **“Supporting an Education Reform Agenda for Improved Teaching, Assessment and Career Pathways (SERATAC)”** program. The program aims at improving education outcomes of primary and secondary students and increasing student pathways to tertiary education and the labor market”.

The program is the first phase of a multiphase programmatic approach (MPA); and it includes three components as follows:

* **Component 1**: Building strong foundations for learning and wellbeing
* **Component 2:** Harnessing technology to improve STEM learning and better equip students for the labor market
* **Component 3:** Strengthening the student learning assessment system

***Background on Component 2***

Key among the challenges in the Palestinian education sector is the large deficiencies in science, technology, engineering, and mathematics (STEM) skills that become visibly manifest as students move to upper primary and lower secondary education. Results from the Trends in International Mathematics and Science Study (TIMSS) 2011 showed that more than half of Palestinian students in Grade 8 did not meet the Low International Benchmark in mathematics, meaning they were not able to work with whole numbers and basic graphs.[[1]](#footnote-2) Overall, 41 percent of Palestinian students did not reach the Low International Benchmark in science, meaning that they did not recognize basic facts from the life and physical sciences, nor demonstrate some familiarity with physical phenomena.[[2]](#footnote-3) More recent data from the Programme for International Student Assessment (PISA) 2022 suggest that 80 percent of 15-year-old Palestinian students do not meet minimum proficiency levels in mathematics, and 72 percent in science.

Many interrelated factors contribute to deficiencies in STEM skills.Key amongst these factors is the ineffective preparation of teachers in the use of evidence-based classroom practices that are conducive to high-quality STEM skills development, and in providing differentiated instruction to address the heterogeneity in learning levels.[[3]](#footnote-4),[[4]](#footnote-5) Current teaching practices in upper primary and lower secondary education classrooms leave many students bored and/or struggling to find relevance and meaning in their STEM classroom experiences.[[5]](#footnote-6) This is consistent with educational research in other countries that shows a steep decline in science interest and achievement among middle grade students.

Under Component 2, “Harnessing technology to improve STEM learning and better equip students for the labor market”, SERATAC will improve STEM teaching and learning and better equip students to make informed career choices and find jobs. A key activity to support this objective will be the development and roll-out of a package of aligned and interrelated interventions and resources that supports an evidence-based approach to STEM teaching and learning in upper primary classrooms (grades 5 and 6), which is the specific contribution of this TOR (Terms of Reference). This package will include the following elements:

1. The first, and central, element of the package will be a set of *activity-based STEM teacher guides.* The guides would be developed for and distributed to science, mathematics, and technology teachers in grades 5 and 6 (one guide per subject, one guide may serve more than one grade). The aim of the guide is to provide structured lesson plans for teachers with guidance on how to implement more project-based STEM activities in the classroom, enhancing the existing curricular content, promoting integrative and collaborative learning, and leveraging formative assessments to better tailor instruction. The guides will be mapped to the regular grades 5 and 6 science, mathematics, and technology curricula so that teachers can connect and choose the activities in the guides that align with the learning objectives of the regular curriculum. The guides shall include explicit connections between the lesson plan activities and the grades 5 and 6 mathematics, science, and technology curricula. Training on the use of these guides will be provided as part of the in-service training module (elaborated in point 3). The guides would be informed by a review of the grades 5 through 9 STEM curricula and an evaluation of in-country teaching practices which is currently underway (not a task under this TOR). The guides would further build on latest research evidence on “structured pedagogy” and principles of differentiated instruction and “teaching at the right level.”[[6]](#footnote-7)

A list of STEM resources and equipment necessary for adequately implementing activities in the STEM guides for grades 5 and 6 will be produced. Under this TOR, the selected consultant shall: (i) review data collected by a third-party inventory on existing school STEM equipment (Science lab and IT equipment) and (ii) identify additional STEM resources and equipment needed to be procured to implement the activities in the activity-based STEM teacher guides*.* The consultant will present identified STEM and IT equipment needs to the Ministry of Education (MOE) and work with the MOE to propose alternative resources should alternatives be sought in the Palestinian market. The consultant shall also work with the MOE to prioritize STEM and IT equipment procurement and distribution based on frequency of use (e.g., Tier 1 resources and equipment that require periodic use may need to be available in all schools, whereas Tier 2 resources and equipment required for less frequent activities can be made available for a cluster of schools, for example through a mobile lab or in a central location).

1. The second element of this package will be in-service professional development training modules for grades 5 and 6 mathematics, science, and technology teachers, with its corresponding training rollout and implementation plan. The training modules will be developed with four objectives in mind: (i) to improve the STEM subject knowledge of teachers; (ii) to introduce/strengthen the use of evidence-based pedagogies (i.e., project-based, hands-on, integrative, collaborative learning, and the use of formative assessment) that are conducive to high-quality STEM learning; (iii) to help teachers make relevant connections between the curriculum and the students’ daily lives and use of STEM subjects and between STEM subject matter; and iv) help teachers continue to develop their ability to recognize the different learning needs of students, plan future lessons and target support accordingly, and provide feedback. The modules will be developed around the activity-based STEM teacher guides and will provide the necessary knowledge and skills for teachers to implement the guides. These in-service modules will be used, with the guides, to train in-service teachers. Complementary materials such as videos should be embedded in the modules to support the training of teachers. More details about the number of teaching classes in STEM subject areas in grades 5 and 6 can be found in table 2 at the end of this TOR.

Once the module(s) have been developed, the consultant shall produce a rollout plan to train an initial cohort of Grade 5 & 6 teachers. This plan will elaborate on the roles and responsibilities of the National Institute of Educational Training (NIET) at the MOE as well as the Directorate General of Supervision and Qualification and its corresponding District Supervisors in the training structure/cascade. The involvement of both NIET and district supervisors will ensure the development of the necessary institutional capacity for the sustained ability to train teachers in the use of teacher guides and modules over time. Background information on NIET and the Directorate General of General Education and Supervision can be found in the Annex. The consultant shall be responsible for the initial training of trainers, supervising the implementation of the first cohort of teacher training, and assessing the pilot phase.

1. The third and last element of the package will be a proposal that considers how a modified and/or expanded version of the in-service modules may be used for pre-service teacher training. The consultant will suggest in-service training modules most relevant for adaptation/usage during pre-service teacher training and shall also develop a corresponding roll-out proposal which would include how the modules can be embedded in the existing national pre-service teacher training structure.

**II. Objective of the Consultancy**

The objective of the consultancy is to develop activity-based STEM teacher guides, a series of accompanying in-service teacher training modules, and a proposal to strengthen pre-service teacher training in selected STEM subjects in close collaboration with the MOE and other local entities.

**III. Scope of Work**

To support MOE on the development and rollout of the above-mentioned package of STEM interventions, the consultant will conduct a series of tasks grouped into three larger categories. First, a series of tasks to develop a set of activity-based STEM teacher guides and identify needed IT resources. Second, a series of tasks related to the development of in-service training modules and its associated rollout plan. Third, a proposal on how the developed in-service training modules can be adapted for us in a pre-service training structure.

The consultant will be able to draw from a comprehensive review of grades 5–9 mathematics, science, and technology and programming curriculum which will have been previously completed and available in report form. It will also be able to draw on reports on STEM teacher training, teacher teaching practices and student outcomes, in addition to continuous discussion and consultation with the assigned STEM technical committee, all of which will help develop the following tasks:

**Task 1: Development of STEM teacher guides with the corresponding supporting materials**

Firstly, the consultant will develop a series of STEM teacher guides for grades 5 and 6 in consultation with MoE supervision and curriculum departments and the World Bank. The teacher guides shall include structured lesson plans for teachers to implement during their daily lessons. The lesson plans shall provide structured guidance to teachers on how implementing project-based STEM activities to enhance curricular content, promote integrative and collaborative learning, and leverage formative assessments to tailor instruction. Each subject shall have their own teacher guide.

*Subtask 1.1: Student learning objectives for the STEM teacher guides*

The consultant will develop the student learning objectives expected to be tackled by the STEM teacher guides. The purpose of such learning objectives is to help teachers connect the teacher guide to the curriculum and expected student outcomes.

*Subtask 1.2: STEM teacher guides*

Develop STEM teacher guides with structured lesson plans for teachers to utilize in grades 5 to 6. The teacher guides will be a core reference resource for teachers in their day-to-day lessons. The teacher guides shall include lesson plans for each lesson, with guidance on daily activities, student work, and assessment. The lesson plans shall reference existing textbooks and make connections between each daily lesson and the relevant textbook pages. The lesson plans shall include activities for teachers to implement project-based STEM activities in the classroom that are aligned to curricular content and that integrates mathematics, technology and science and which also promotes skill-based learning (i.e., activities focused at a skill level rather than at a grade level). The guide shall also include adjusted activities that can be implemented remotely when in-person schooling is not possible. The guide should include activities with a range of equipment requirements, whereby some activities can be done with little to no specialized STEM equipment and others make use of new technologies.

*Subtask 1.3: Corresponding student materials*

Based on the STEM teacher guides, the consultant shall also create corresponding student materials. This could include student booklets, worksheets, short quizzes, and homework.

*Subtask 1.4: Supplementary teaching and tracking resources to support differentiated learning and “teaching at the right level” for mathematics.*

To supplement the STEM teacher guides, the consultant will develop resources that support mathematics teachers to identify levels of student achievement and that target groups of students with specific needs (for example, for reteaching, reinforcing, or extension). These will be known as differentiated learning or “teaching at the right level” resources, which may be included within the mathematics teacher guide or may be developed as standalone supplementary resources and can include the following:

1. Development of diagnostic test to help teachers identify students learning gaps and track students’ progress.
2. Development of criteria on how to sort students based on their learning level.
3. Development of a tool or matrix to help teachers track student learning.

*Subtask 1.5 List of STEM/IT/Lab equipment*

Corresponding to the STEM teacher guides, the consultant will develop a list of materials, equipment, and resources needed to carry out the lessons in the guide. The list may include lab equipment and tools, technological resources, or other materials. Once the needed equipment is identified, the consultant shall: (i) review data collected by a third-party inventory on existing school STEM and IT equipment, (ii) identify additional STEM and IT equipment needed to be procured to implement the lessons in the STEM teacher guides*.* If needed, the consultant will work with the MOE to propose alternative resources should alternatives be sought in the Palestinian market, and (iii)provide the MoE with a suggested list of equipment and items that could serve as a model setup of STEM lab.

In addition, the consultant shall work with the MOE to prioritize STEM and IT equipment procurement and distribution based on frequency of use (for example, Tier 1 resources and equipment that require periodic use may need to be available in all schools, whereas Tier 2 resources and equipment required for less frequent activities can be made available for a cluster of schools, for example, through a mobile lab or in a central location).

**Task 2. Development of corresponding in-service training modules, a training proposal and a set of monitoring arrangements, and training of local trainers**

The consultant will develop corresponding training modules for in-service teachers to raise their skills in teaching the lessons in the STEM teacher guides in consultation with MoE NIET and supervision departments and the World Bank.

*Subtask 2.1: Development of in-service training modules*

The consultant will develop the corresponding training modules for grades 5 & 6 STEM teachers. The training modules will deliver the key knowledge and skills for teachers to effectively carry out the lessons and activities within the STEM teacher guides. The modules should include practical training on the STEM knowledge and skills, the related pedagogies (including a brief description of the underpinning learning theory), and the specific activities in the teacher guide. Wherever possible, the modules will also include connections and overlap to climate change education and linkages between mathematics and science and climate change education.

*Subtask 2.2: In-service training rollout proposal*

The consultant will design a rollout plan for the in-service teacher training modules. This proposal can draw on existing reports on the institutional set-up for teacher training but may require further research to understand the existing capacity in the country, such as the possible roles and responsibilities of the central MOE departments, NIET, district training centers, district supervisors, and STEM university professors (and their corresponding departments). The proposal could include multiple rollout options and may also consider the use of blended modalities. The proposals should clearly state how it relates to existing training models used by the MOE, how it complements existing training programs, and how any new modalities can be introduced and sustained after the completion of the program. The proposal would have two sections:

* An in–service training rollout proposal which will include the training of the in–service STEM modules and the corresponding STEM teacher guides. It would include a detailed implementation plan for the roll-out, including the personnel and logistics needed, the training approach, follow-up modalities to support teachers as they start implementing the new lessons, the size of the first pilot and scale up, and the timeline for this piloting.
* A monitoring and evaluation plan to track the training program outputs and outcomes.

*Subtask 2.3: Capacity building of local trainers for in-service modules and staff involved in follow-up.*

Connected to the training rollout plan mentioned in subtask 2.2 above is the training and capacity-building of a core team of master trainers comprising MOE supervision departments, NIET, curriculum center, district supervisors, and local university professors. This task will include developing a training program for the identified actors and their training, including:

* *Training modules for local trainers and relevant staff*. This is the development of a training program to build capacity of local trainers. The consultant will identify a capacity-building approach for local trainers and develop the training module(s) for the training of trainers. The consultant shall suggest and advise the MOE on how to transfer the training program into a Massive Open Online Course (MOOC) or onto an alternative online platform so that it can be available for other future trainers and support the scale up and sustainability of the training program.
* *Training of local trainers and relevant staff.* The consultant will train local trainers according to the proposed rollout plan and training modules.

*Subtask 2.4: Provision of implementation support for the roll out of the first cohort of training*

The consultant will supervise the rollout of training for the first cohort of teachers. This includes supporting the implementation of the rollout plan devised in subtask 2.2. and supporting the local trainers trained in subtask 2.3. Additionally, this first rollout will give the consultant the opportunity to receive feedback and modify the teacher guides and training modules, if necessary, as well as ensure that the devised monitoring and evaluation strategy is appropriate. Tasks include:

* *Supervising the first cohort of teacher training* – shadowing and supporting trainers and coaches and those involved in follow-up during selected sessions throughout the training program to ensure high quality of training delivery.
* *Reviewing/revising all deliverables (such as the training modules and teacher guides)* – based on the implementation and delivery of training programs for the first cohort, the consultant will receive feedback from different parties including the NIET, supervisors, and local university professors, and will implement a comprehensive review of all deliverables as needed.
* *Monitoring and evaluation* – initial monitoring and evaluation of the first cohort training and ensuring the provisions for future monitoring are in place. This should include classroom observations, focus groups discussions, and individual interviews. A monitoring and evaluation plan shall be developed by the consultant and then discussed and approved by the MOE.

**Task 3:** ***Proposal for pre-service training modules and rollout plan***

*Subtask 3.1: Pre-service training modules and rollout proposal*

Based on the experience gained in Tasks 2 and 3, the consultant will develop a proposal for how the in-service modules could be modified and/or expanded for pre-service teacher training. The proposal should be built on an analysis of the connections between the STEM modules and the induction training teachers receive in country. The proposal would consider, among others, key topics such as national hiring practices, capacity-building of key personnel, and how teachers flow from the university into the education system. The proposal would also specify how the modules could be embedded in the existing pre-service teacher training national structure.

**IV. Deliverables**

|  |  |  |  |
| --- | --- | --- | --- |
| **Task #** | **Deliverable** | **Description of the Deliverable** | **Delivery Date** |
| **Task 1: Development of STEM teacher guides with the corresponding supporting materials** | | | |
| Subtask 1.1 | Student learning objectives for the STEM teacher guides. | A framing document which will make explicit the student learning objectives expected to be tackled in each of the STEM teacher guides. | February, 2025 |
| Subtask 1.2 | STEM teacher guides | STEM teacher guides with structured lesson plans for teachers to utilize in grades 5 to 6. The teacher guides will be a core reference resource for teachers in their day-to-day lessons. | May, 2025 |
| Subtask 1.3 | Corresponding student materials  (in both Arabic and English) | Building on the teacher guides, student materials that correspond to the activities in the guide is developed and packed for the use of students. This could include worksheets, short quizzes, and homework. | July, 2025 |
| Subtask 1.4 | Supplementary activities for “teaching at the right level” for mathematics teachers  (in both Arabic and English) | To supplement the STEM teacher guides, resources will be developed that support mathematics teachers to identify levels of student achievement and that target groups of students with specific needs (for example, reteaching, reinforcing, or extension).  Known as differentiated learning or “teaching at the right level” resources, these can include the following:   1. Diagnostic test to help teachers identify students learning gaps and track students’ progress 2. Criteria on how to sort students based on their learning level 3. Tool or matrix to help teachers track student learning | August, 2025 |
| Subtask 1.5 | Equipment list corresponding (to the STEM teacher guides) | Corresponding to the STEM teacher guides, the consultant will develop a list of materials, equipment, and resources needed to carry out each lesson in the teacher guides.  Once the needed equipment is identified, the consultant shall (i) review data collected by a third-party inventory on existing school IT equipment and (ii) identify additional IT equipment needed to be procured to implement the lessons in the STEM teacher guides*.* If needed, the consultant will work with the MOE to propose alternative resources should alternatives be sought in the Palestinian market.  In addition, the consultant shall also work with the MOE to prioritize IT equipment procurement and distribution based on frequency of use. | August, 2025 |
| **Task 2. Development of corresponding in-service training modules, a training proposal and a set of monitoring arrangements, and training of local trainers** | | | |
| Subtask 2.1 | In-service teacher training modules for math, science, and technology grades 5 & 6  (in both Arabic and English) | A series of in-service teacher training modules for teachers in grades 5 & 6 teaching math, science, and technology. The training modules will deliver the key knowledge and skills for teachers to effectively carry out the lessons and activities within the STEM teacher guides. | October, 2025 |
| Subtask 2.2 | Training proposal for in-service rollout with corresponding monitoring and evaluation plan | Training proposal for how the rollout of the pre-service modules would be implemented. This should include the needed logistics and human resources needed to implement the training. This would also include a monitoring and evaluation plan to follow up the trainings | October, 2025 |
| Subtask 2.3 | Training program and training of trainers and relevant staff  (in both Arabic and English) | This task will include developing a training program for the identified actors and their training, including:   * *Training modules for local trainers and relevant staff*. This is the development of a training program to build capacity of local trainers. The consultant will identify a capacity-building approach for local trainers and develop the training module(s) for the training of trainers. The consultant shall suggest and advise the MOE how to transfer the training program into a Massive Open Online Course (MOOC) or onto an alternative online platform so that it can be available for other future trainers and support the scale up and sustainability of the training program. * *Training of local trainers and relevant staff.* The consultant will train local trainers according to the proposed rollout plan and training modules. | November, 2025 |
| Subtask 2.4 | Provision of implementation support for the roll out of the first cohort of training | The consultant shall supervise the rollout of training for the first cohort of teachers.  Deliverables include:   * Report upon the completion of the training of the first cohort of trainers. * A final and revised version of the STEM teacher guides and associated training modules. * M&E report of first cohort, accompanied by a revised M&E plan as necessary. | November – December 2025 |
| **Task 3:** ***Proposal for pre-service training modules and rollout plan*** | | | |
| Subtask 3.1 | Training proposal for pre-service rollout | Proposal for how the in-service modules could be modified and/or expanded for pre-service teacher training and training proposal for the rollout of the pre-service modules. | March, 2026 |

**V. Minimum Required Qualifications**

The consultant is expected to possess the following qualifications:

(Note to consultants: to substantiate the responsiveness of the requirements, the consultant shall provide solid, sufficient, and documented information in response to each criterion)

* The consultant (university/ firm/ JV) shall have extensive international experience in conducting consulting services in the education sector.
* The consultant shall possess a profound expertise in STEM with extensive international experience in conducting similar assignments, including, but not limited to the following:

1. Developing STEM teacher activity guides and training modules.

2. Developing curriculum, teacher training, and pedagogy, with experience in STEM standards and/or new generation science standards, teacher training (especially in integrative STEM approaches)

3. Extensive experience in developing teaching and learning materials based on project-based learning, evidence- based learning, and hands-on approach to foster STEM education.

* Ability to synthesize and contextualize research and effective practices and the ablility to understand those practices and modify them accordingly.
* Experience working in the MENA region is preferred.
* The consultant shall possess a team composition with diverse skill sets and expertise including:
  + STEM curriculum development expert(s) – Significate experience in curriculum design and development, including developing STEM standards, standards-based instruction, and STEM activities, as well as familiarity with STEM frameworks, experience in instructional design, strong background & subject-matter knowledge in science and/or mathematics and/or IT and/or engineering, is required.
  + Teacher professional development expert(s), Extensive experience in developing training modules, training teachers, in- service professional development, monitoring and impact assessment, and a familiarity with pre-service programs in STEM education worldwide.
  + Teacher trainer/training expert (s), Extensive experience in training teachers on several components (including but not limited to): STEM attributes and competences, integrative STEM approach, hands-on methods, project-based learning, and authentic evaluation.
  + School management expert(s), Extensive experience in school management system, and leadership experience in schools. Experience in the Palestinian schooling system is considered a plus.

**Note**: For the team composition; experience in MENA region and knowledge of Arabic language are considered advantageous, fluency in English language is a must. Familiarity with the Palestinian context or countries-like context is also considered advantageous.

***Notes*: *Joint venture (JV) is possible, consulting firms are encouraged to associate with international universities in which case international universities are recommended to lead consortiums.***

**VI. Estimated Timetable**

1. The estimated time to complete this consultancy is about 18 calendar months. At minimum, three in-country visits to West Bank (and Gaza whenever possible) of different team members are expected for the completion of the work. The suggested timing of these visits is: 1) during the development of the activity guide; 2) for the training of trainers; and 3) for the roll out of the first cohort of teacher training. In consultation and agreement with MOE, one or more of these visits may be organized virtually and/or through a hybrid in-person/virtual modality.
2. A total of 400 staff days is estimated for the consultant to complete the assignment.

**VII. Selection Method and Type of Contract**

# The consultant will be selected in accordance with “World Bank Procurement Regulations for Investment Project Financing Borrowers” dated July 2016, revised in November 2017, and in August 2018, and in November 2020, and in September 2023 . The selection method is – Quality Based Selection (QBS).

Payments will be disbursed according to an agreed upon delivery schedule.

**VIII. Reporting**

The consultant will report to the Component 2 Technical coordinator and the PCU Director.

* The consultant will work under the supervision and guidance of the Palestinian Ministry of Education, Ramallah. The focal point and the administrative counterpart will be the Director of the Project Coordination Unit (PCU).
* The joint MOE-World Bank Component 2 task management team will serve as the central consultative body to review and provide feedback on draft deliverables.

# **IX. Institutional Arrangements**

The selected consultant will work under the supervision and guidance of the Palestinian Ministry of Education, Ramallah. The focal point and chief administrative counterpart will be the technical coordinator of component 2, and the Director of the Project Coordination Unit.

A Task Management Team (TMT) has been established to serve the implementation of STEM activities under the SERATAC project and to ensure coherence among other initiatives from other national and international development partners. The TMT shall include members from the supervision department, NIET, creativity and Entrepreneurship departments, school health and career counselling department.

The selected consultant will report to the Ministry of Education’s Project Coordination Unit, which will liaise with the STEM focal point and TMT to ensure efficient day-to-day management during the development of the different modules.

# **X. Services and Facilities Provided by the Client**

The Ministry of Educationwill provide the selected consultant with assistance in scheduling meetings, workshops, site visits if needed, and provide all required logistics for workshops and meetings. When necessary, suitable office space will be made available. The Ministry of Education will also provide background information on the existing framework and previous and current STEM activities in Palestine, description of existing preservice study programs and relevant project documentation for SERATAC.

**Annex: Departments at Ministry of Education that are responsible for in-service teachers training**

1. **National Institute for Educational Training (NIET)[1]**

The National Institute for Educational Training “NIET” oversees the training programs for all employees within the education sector, this includes both education and non-education/administrative related training for all MOE employees not only for teachers in the West Bank. On the other hand, NIET in the Gaza Strip is **only** responsible for the training programs for the administrators at MOE, other training programs for teachers is the responsibility of supervision department at MOE.

The National Institute for Educational Training (NIET) in West Bank provides a number of **professional diploma training programs.** Additionally**,** NIET also provides logistical support for other training programs and activities performed by the supervision department and its supervisors at the education district offices

NIET runs four main departments:

1. The Development and design of Training Materials Department,
2. Training implementation Department
3. Training Evaluation Department
4. Training Support Department.

NIET Offers number of diploma programs that include the following:

1. Professional Diploma in initialization – For all teachers during the first year in their career. – **Mandatory**
2. Professional diploma specialized in **general** education for upper primary “5-9” – **Elective**, considered as an alternative to an Educational Diploma from the universities.
3. Supervision Professional Diploma.
4. Leadership Professional Diploma.
5. Professional Diploma in Counseling.
6. Professional Diploma in vocational education.
7. **Supervision Department at D.G. of School Education**

**Supervisors Duties and Responsibilities:**

There are 207 science, mathematics and technology supervisors distributed in West Bank and Gaza education district offices, they are responsible for relevant subject teachers in grades 5-12. There is a supervision unit in each education district office, the head of this unit is responsible for all the supervisors at this office. This unit reports to the “Directorate General of School Education” at the Ministry of Education. The table below shows the distribution of science, mathematics and technology supervisors in West Bank and Gaza.

**Table 1. Number of supervisors classified upon the subject and the district office in West Bank and Gaza (academic year 2022-2023)**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | | **District office** | **Mathematics Supervisors** | **Science Supervisors (includes subjects physics, chemistry & Biology)** | **Technology supervisors** | **Total no. of supervisors in the district** |
| 1 | **West Bank** | Jenin | 5 | 6 | 1 | 12 |
| 2 | Qabatia | 3 | 2 | 2 | 7 |
| 3 | Tubas | 2 | 3 | 1 | 6 |
| 4 | Nablus | 5 | 5 | 2 | 12 |
| 5 | S. Nablus | 3 | 3 | 1 | 7 |
| 6 | Tulkarm | 4 | 4 | 2 | 10 |
| 7 | Qalqilya | 3 | 3 | 2 | 8 |
| 8 | Salfit | 3 | 2 | 2 | 7 |
| 9 | Birzeit | 2 | 2 | 1 | 5 |
| 10 | Ramallah | 4 | 4 | 2 | 10 |
| 11 | Jericho | 1 | 3 | 1 | 5 |
| 12 | Jerusalem Suburbs | 2 | 4 | 1 | 7 |
| 13 | Jerusalem | 3 | 5 | 2 | 10 |
| 14 | Bethlehem | 4 | 3 | 2 | 9 |
| 15 | N. Hebron | 3 | 4 | 2 | 9 |
| 16 | Hebron | 4 | 4 | 3 | 11 |
| 17 | S. Hebron | 5 | 5 | 2 | 12 |
| 18 | Yatta | 3 | 3 | 1 | 7 |
|  | **Total West Bank** | | **59** | **65** | **30** | **154** |
| 1 | **Gaza Strip** | N. Gaza | 3 | 3 | 2 | 8 |
| 2 | Khan Younes | 2 | 3 | 1 | 6 |
| 3 | Rafah | 2 | 3 | 1 | 6 |
| 4 | Wosta-Middle Gaza | 2 | 3 | 1 | 6 |
| 5 | E. Gaza | 4 | 4 | 2 | 10 |
| 6 | E. Khan Younes | 2 | 3 | 1 | 6 |
| 7 | W. Gaza | 4 | 5 | 2 | 11 |
|  | **Total Gaza strip** | | **19** | **24** | **10** | **53** |

Each supervisor oversees 80 to 100 teachers with the following professional duties and responsibilities [2]:

* Make regularly scheduled observation visits to the teachers’ classes and report them.
* Complete and collect all required observation forms and evaluation forms for the teachers.
* Follow-up with teachers on all curricular and extra-curricular activities “Exhibitions, fairs, competitions, Olympiad, TIMSS and PISA pre-practices, ….”
* Assist in the professional growth and development of the teachers’ knowledge and skills.
* Assist the teacher in dealing with problems she/he may be experiencing.
* Train teachers, under two main areas [3]:
  1. The courses under NIET diplomas programs,
  2. The subject matter “content” training.

[1] All the upcoming descriptions, responsibilities, and activities are related to the diploma programs ONLY.

[2] Some supervisors are responsible for 120-130 teachers.

[3] More details shall be provided at a later stage of the project implementation.

**Table 2: Number of STEM Subject Classes in grades 5 and 6 per week**

|  |  |  |
| --- | --- | --- |
| **Subject** | **No. of classes per week in grade 5** | **No. of classes per week in grade 6** |
| Mathematics | 5 | 5 |
| Science and Life | 4 | 4 |
| Technology and Programming Education | 2 | 2 |
| **TOTAL subject classes/ week** | **34** | **34** |

Each period duration is 40 minutes in West Bank and 45 minutes in Gaza

1. Mullis et al 2012. “TIMSS 2011 International Results in Mathematics.” [↑](#footnote-ref-2)
2. Martin et al 2012. “TIMSS 2011 International Results in Science.” [↑](#footnote-ref-3)
3. Abualrob, Marwan and Said Al-Saadi. 2019. “Performance-Based Assessment: Approach and Obstacles by Higher- Elementary Science Teachers in Palestine”. *Journal of Education and Learning*, 8: 198-206. 10.5539/jel.v8n2p198. [↑](#footnote-ref-4)
4. Khlaif, Zuhair N. and Shahid Farid. 2018. “Transforming learning for the smart learning paradigm: lessons learned from the Palestinian initiative”. Smart Learning Environments. 5:12 https://doi.org/10.1186/s40561-018-0059-9 [↑](#footnote-ref-5)
5. Wahbeh, Nader A. 2003. “Teaching and learning science in Palestine: dealing with the new Palestinian science curriculum”. *Mediterranean Journal of Educational Studies*, 8(1): 135-159 [↑](#footnote-ref-6)
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