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# Universal Access to Education in Gaza

Business Case and Intervention Summary

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## 1 Strategic Case

### 1.1 Context and need for a DFID intervention

#### 1.1.1 Current situation

The Gaza Strip is home to over 1.56<sup>1</sup> million Palestinians. 1.1 million (70%) of the population are refugees<sup>2</sup>. More than 50% of Palestinians in Gaza are children under the age of 18 (approximately 800,000), with as many as 44% under the age of 15.<sup>3</sup> As elsewhere in the world, the young generation in Gaza is being shaped by their immediate environment, including physical, socio-economic and psycho-social factors. Within this context, the role of education is critical in developing and reinforcing positive values and behaviours and stemming the tide of growing intolerance and extremism.

To achieve universal primary education is the second Millennium Development Goal. Universal access to basic education is of high importance in conflict affected areas, bringing a sense of normality back to children surrounded by violence and building the necessary resilience among the next generation to face future challenges.

Access to all basic services, including education, has been seriously undermined by the ongoing blockade on Gaza. A ban on the import of construction material between June 2007 and July 2010 meant that repair (including of the damage caused by the 2008-09 conflict) and construction of schools to meet the growing needs of the population have been significantly delayed. This has resulted in severe overcrowding in schools. Many schools have been forced to operate on double and triple shifts, leading to reduced class time. It is estimated that 260 new schools (100 for the UN Relief and Works Agency and 160 for the Palestinian Authority) are needed to accommodate new students and to reduce the pressure on schools operating on double and triple shifts<sup>4</sup>.

#### 1.1.2 Who provides education in Gaza?

The main education providers are the Palestinian Authority (PA) and the United Nations Relief and Works Agency (UNRWA)<sup>5</sup>. Governmental schools serve a total student population of 233,013, through grades 1-12. UNRWA serves a student population of 212,000 in 238 schools providing free basic education to registered

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<sup>1</sup> Estimate (Palestinian Central Bureau of Statistics (PCBS)– Palestine in figures 2010

<sup>2</sup> Palestinians/descendants of those who lost their homes in the 1948 Arab-Israeli conflict

<sup>3</sup> PCBS, "On the eve of the international Population Day, 24/07/2010

<sup>4</sup> UN OCHA Special Focus: Easing the blockade, March 2011

<sup>5</sup> UNRWA was mandated by the UN in 1949 to provide services to refugees

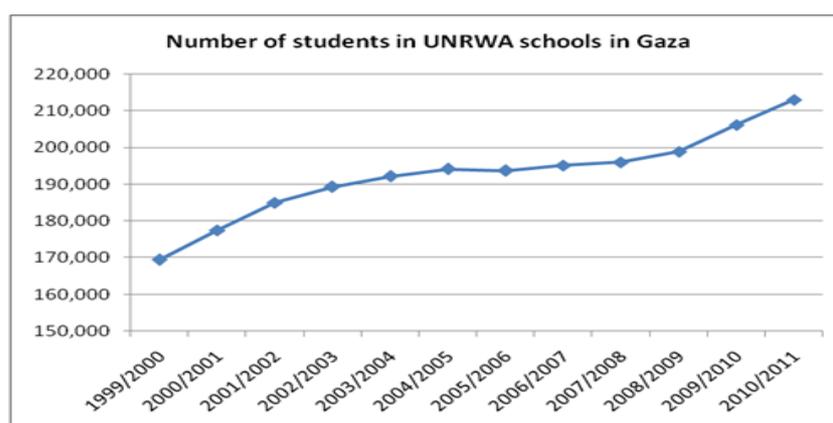
refugee children through grades 1-9. Private schools provide education for over 14,000 students in 33 schools.

Given that we can not provide support to governmental schools, as they are run by Hamas, the next section will only discuss UNRWA school needs.

### 1.1.3 UNRWA schools

UNRWA's capacity in Gaza is overstretched. UNRWA is only able to offer its human rights-based education to approximately 80% of eligible refugee students. The agency is currently running 238 schools in 125 schools buildings (95% of them operating on double shift) with many of the schools being 50-60 years old. In the period when no construction was possible (2007-2010), UNRWA's student population increased at an average annual growth rate of 3% from 195,000 to 212,000. Population growth and the Agency's inability to build new schools, or repair existing ones, resulted in overcrowding of schools:

- The number of students enrolled is larger than the number of students the schools are designed to serve. The physical space available for students (1 sq m per child) is below the UNESCO standard<sup>6</sup>. The average classroom size is 50.6 square meters, with as many as 45-50 students per classroom;
- 1,410 students receive education in 47 shipping containers;
- Around 8,000 students rotate learning periods between classrooms and the school yard.



Source: UNRWA Gaza Field Office

### 1.1.4 The intervention

The adjustment to access restrictions announced by the Government of Israel (GoI) in June 2010 included planned improvements to the import regime for construction

<sup>6</sup> UNESCO standard is 1.4-1.5 square meters per child

materials. Our funds will support the construction of schools that have already been approved or of which UNRWA expects approval soon.

The proposed intervention will support the construction of 12 UNRWA schools. The 12 schools are part of the UNRWA Gaza Recovery and Reconstruction Plan which includes plans to rebuild 22 existing schools and construct 78 new schools. The 100 schools will address the following needs:

- 40 schools will address the natural demographic pressures and the increasing enrolment rates. The student population is increasing by 10,000 students per year.
- 30 schools to address the overcrowding and reduction of class size.
- 30 schools will enhance education for children with special needs (reduction in class size, dedicated facilities).

### **1.1.5 UNRWA's education system**

UNRWA has started a reform process of its programmes. The education reform programme is the most advanced. The Education Reform Strategy (2011-2015) aims to improve the quality, effectiveness and efficiency of education with a focus on the classroom, teaching and the learning pedagogy. The planned results of the reform include increasing the pupil survival rate, students achievement in Monitoring Learning Achievement (MLA) tests, and employability. This will be achieved through investing in teachers training and profession development, the development of inclusive systems and structures, and the development of an Education Management Information System (EMIS) to inform policy and decision making.

The construction of the schools will support UNRWA's work to improve education quality. As the strategy highlights, overcrowding is one of the main factors that negatively impacts upon the quality of education and the development of the children. Through this project and our support to UNRWA's general fund, we will monitor students' achievements in unified testing (in maths and Arabic or MLA).

### **1.1.6 What is the best funding mechanism?**

We will support UNRWA through the PA-UN Trust Fund. The fund was established to finance UN supported statebuilding and development goals, including early recovery and reconstruction initiatives in Gaza. The fund allows donors to choose to contribute to either the West Bank or Gaza. Our contribution will be made to the Gaza window. The first call for proposals, agreed between the PA and the UN is for the construction of UNRWA schools.

Education outcomes will be the same whether we provide funding through the Fund or directly to UNRWA. Supporting the Trust Fund (TF) has other benefits including:

- PA leadership. The management committee of the Fund will be co-chaired by the PA and the UN Resident Coordinator;
- Alignment with national plans: Projects supported by the TF are part of a nationally-approved priority programme, developed in consultation with the appropriate line ministries;
- Compliance with Paris Declaration principles: the TF constitutes best aid practice using partnership principles as articulated in the Paris declaration;
- PA visibility: it provides a clear example of the PA's prioritisation of Gaza early recovery and reconstruction. This is important given frequent accusations that the PA is neglecting Gaza;
- Funding leverage: our support will be the first towards the TF. The UN will use it to unlock donor pledges for the construction of Gaza.

### **1.1.7 Why DFID funding?**

DFID is committed to support action to achieve the Millennium Development Goals, including increasing access to education. As outlined in DFID's four year Operational Plan (OP) for support to Palestinians, we are committed to support children in primary education through the PA and UNRWA. This support is consistent with British government policy on Gaza (reaffirmed by FCO Minister Burt during his recent visit to Gaza) whereby we seek, together with international partners, to ease conditions for the people of Gaza both through humanitarian and development assistance and through lobbying the Israeli Government on access issues.

Because of its size and mandate, UNRWA is the only organisation that can offer an alternative service provision agenda to that of Hamas. It is the largest non-Hamas service provider, employer and educator. Supporting their education system, which teaches human rights and tolerance, provides an alternative to extremism and radicalisation offered through other education systems.

## **1.2 Impact and Outcome that we expect to achieve**

The intended impact is: To ensure that all refugee children have access to and complete an acceptable quality basic education which prepares them for productive life.

The intended outcome is: To ensure improved access to United Nations human rights-based education for vulnerable refugee students in Gaza.

This will result in increasing the enrolment rate of refugees in Gaza from 80% to 85%, and an increase in the proportion of refugees entering UNRWA schools at grade 1 from 81.8% to 86.8%.

This will be achieved through the building of 12 UNRWA schools which will allow UNRWA to enrol additional students eligible for UNRWA services to relieve other schools from crowding. The number of refugees expected to enrol in the new 12 schools is 24,000 of which 3,520 will be new entries from PA schools and 20,480 will be the overflow from existing UNWRA schools in Gaza.

An indirect result of the project will be the provision of job opportunities in the education and construction sectors, providing employment and improved food security at a time of unprecedented levels of poverty and depravation. As a single measure, the construction of 12 schools will generate 1,200 full-time jobs with an estimated 6,600 beneficiaries. Moreover according to UNRWA, within the private sector, such construction works will generate profits among contractors of approximately US\$1.1 million, directly impacting on the local economy.

## 2 Appraisal Case

### 2.1 What are the feasible options that address the need set out in the Strategic case?

Addressing overcrowding and the growing student population is limited to construction and rehabilitation of schools. Other options such as the use of existing facilities/space, or contracting out the running of the schools are not possible. Gaza is one of the most densely populated areas in the world. The violent conflict damage and three years of blockade affected all sectors, meaning that space is limited for everything, not only education. For example, the UNDP One Year After<sup>7</sup> report estimated that over \$829 million is required for housing alone (to repair damage and meet growing needs).

For school construction, the political and access reality means that it is only feasible to construct schools through the UN. The provision of basic education is part of UNRWA's mandate, which it has been fulfilling for over 60 years. It is the only UN agency that has been providing education at scale in Gaza. This section will therefore only discuss the option of construction of UNRWA schools, and the counterfactual "do nothing" option.

#### 2.1.1 Option 1: Construction of UNRWA schools

UNRWA's mandate includes provision of education for refugees. The existing situation on the ground makes UNRWA the only agency capable of delivering the intervention and its expected outcomes. The intervention would consist of 12 individual school construction projects under the portfolio of UNRWA's Recovery and Reconstruction Plan for Gaza. In the 2010/11 school year, the number of students in Agency schools totalled 212,000. This figure could easily increase by at least 40,000 in view of existing physical constraints and demographic pressures. The DFID intervention would ensure that around 24,000 refugee students (3,520 new students from the PA and 20,480 students from existing highly overcrowded schools) in two specific areas would be provided access to UNRWA education facilities. The intervention will thus provide an expanded number of refugee students with the foundation from which to become productive members of their community. Risks associated with the intervention lie in the areas of access constraints that may hamper transfer of necessary materials, political upheaval and/or a conflict situation. Risk factors are likely to be mitigated over time.

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<sup>7</sup> Gaza early recovery and reconstruction needs assessment

The enrolment of students in new schools together with the expected increase in student numbers overall will require hiring new teachers. UNRWA estimates that it will need to hire around 780 new teachers to teach the new students. This will result in an increase on UNRWA payroll by approximately \$9.2 million. Salaries will be covered by UNRWA's General Fund which we support. The UK provides predictable support to the General Fund. We are currently working on a Business Case for the coming three years. We expect our contribution to increase year on year to respond to needs arising from the population growth.

### **2.1.2 Option 2: Counterfactual – “do nothing”**

Access to education is a human right and an investment in the future. To do nothing would leave the Gaza education sector – and refugee students in particular – increasingly vulnerable to the hostile, challenging and destructive environment in which they grow up. Steady population growth alongside stagnant expansion of educational facilities would translate into an ever growing number of refugee children denied access to UNRWA education, to which they are entitled.

The consequences of doing nothing would lead to a further substantial increase in over-crowding in existing UNRWA schools. This would lead to a reduction in the quality of educational service provision and, therefore, poorer educational outcomes for individual students.

## **2.2 Assessing the strength of the evidence base for each feasible option**

In the table below the quality of evidence for each option is rated as either Strong, Medium or Limited.

Option	Evidence Rating
1	Limited
2	N/A

Option 1: the evidence is Limited in that we have had no experience to date of UNWRA's school construction programme and there is a risk of construction materials being hindered from entering Gaza. On the other hand the evidence of the substantial benefits accruing in terms of the learning experience of children being educated in uncrowded well-built and well-stocked educational facilities is Strong.

**What is the likely impact (positive and negative) on climate change and environment for each feasible option?**

**2.2.1 Option 1: Construction of UNRWA schools**

**Risks:**

Provisional categorisation for Option 1 is A/B. This is if UNRWA environmental/climate safeguards for construction projects are found to be lacking, and this cannot be addressed in a fairly rapid manner, then it may be necessary to conduct a full Environmental Impact Assessment of the overall UNRWA funding project and the 12 school construction projects.

In addition to this headline risk, there are some significant environmental costs associated with this intervention. School construction will necessitate import and use of construction supplies, with an associated carbon footprint and potential impacts associated with use of certain materials (e.g. discharge or disposal of by-products/waste into the surrounding environment). Workers and beneficiaries will also be transported to the sites, again with associated carbon emissions. Moreover, the intervention will increase the 'built' environment and thereby reduce natural space available for recreation, which could in turn affect the sense of well-being of the immediate community. All of these costs however can be reduced or avoided completely through review and subsequent development/adaptation of UNRWA climate/environment safeguards.

**Safeguards and opportunities:**

We satisfied ourselves that UNRWA has procedures in place for environmental protection and management. UNRWA maintains a dedicated special environmental health team, which forms an integral part of the infrastructure and camp improvement programme (ICIP). The engineering and construction department and the special environmental health department fall under the ICIP. Under such structure UNRWA ensures minimum negative environmental impact. This includes connection to appropriate water and sewage conveyors and networks. This is very important, as sewage management is one of the most critical health and environmental issues in Gaza.

UNRWA constructs its schools on land which has been identified for such purposes. While this will further constrain the available green areas in Gaza, the schools will be located in urban areas and within the confines of the boundaries of existing schools. The carbon footprints will also be offset to some degree by proximity of

schools to the areas of residence of refugee children, reducing children’s travel and therefore the carbon footprint from the UNRWA education programme.

Overall, in the long term, the negative environmental implications will likely be countered to a reasonable extent (provided appropriate safeguards are in place) by the increased level of education and access to knowledge/information on sustainable environmental practices and protection provided through the UNRWA curriculum. UNRWA has been pioneering in introducing a stand-alone Human Rights curriculum to students in its schools. Protection of the environment is a basic component of the curriculum, instilling values and behaviour compatible with sustainable use of natural resources. Throughout its operations, UNRWA has maintained gender parity in its schools. The education of girls has potential to provide long-term benefits to the environment, as women often take a more direct role in the management of their immediate environmental surroundings.

### 2.2.2 Option 2: Counterfactual – “do nothing”

N/A

Categorise as A, high potential risk / opportunity; B, medium / manageable potential risk / opportunity; C, low / no risk / opportunity; or D, core contribution to a multilateral organisation.

Option	Climate change and environment risks and impacts, Category (A, B, C, D)	Climate change and environment opportunities, Category (A, B, C, D)
1	A/B	A/B
2	N/A	N/A

## 2.3 What are the costs and benefits of each feasible option?

### Political/Conflict Appraisal:

44% (660,000) of Gaza population are under the age of 15. Children in Gaza continue to live under continued violence and a restricted access regime. The impact of the conflict and the closure is high on the socio-economic situation in Gaza (unemployment, food insecurity) but it also has a high psychological impact. Children and youth, as all Gazans, live under the threat of further conflict. The powerlessness and helplessness to change the status quo and to take control of their own lives adds to the frustration and depression. While the impact of the conflict and the closure on children is imminent, and can only be prevented by a long lasting solution to the

conflict, there are ways to reduce the impact of violence on children and to support them to gain a better future.

Quality education is an important part of children's lives, it shapes their character and values. UNRWA schools, which teach human rights and tolerance, form the only education system in Gaza that challenges the Hamas offered education and their picture of extremism and radicalisation.

The construction of schools will also contribute to job creation and increased income in Gaza. It will give a clear message that despite the closure regime, the international community and the UK are not giving up and that they will continue to work towards re-building Gaza and its future generation.

The project will also allow us stronger lobbying with Israel on the import of construction material if need be, as it is our money at stake.

## **2.4 What measures can be used to assess Value for Money for the intervention?**

## **2.5 Summary Value for Money Statement for the preferred option**

## **3 Commercial Case**

### **3.1 Direct procurement**

#### **3.1.1 Clearly state the procurement/commercial requirements for intervention**

Intervention title: Universal access to education for refugees in Gaza

Sub project title: Contribution to PA-UN Trust Fund

Procurement route: Indirect, third party.

### **3.2 Indirect procurement**

#### **3.2.1 Why is the proposed funding mechanism/form of arrangement the right one for this intervention, with this development partner?**

Support will be provided through the PA-UN Trust Fund. We will sign a “Standard Administrative Arrangement for Multi-Donor Trust Funds” with United Nations Development Programme (UNDP).

This funding mechanism advantages are discussed in detail in the Strategic Case.

Another benefit is the saving of funds spent on administration. The use of the Trust Fund will mean that less funds are spend on programme support costs (PSC). UNRWA’s PSC is 11%. The PSC under the Trust Fund will not exceed 8%.

#### **3.2.2 Value for money through procurement**

We are conducting a fiduciary risk assessment (FRA) of UNRWA. The FRA will assess UNRWA’s procurement capabilities and value for money through procurement. We are expecting a final report end of November. If any recommendations are relevant to this contribution, the Project Officer will ensure it’s followed up upon.

UNRWA undertakes procurement and tendering directly. It applies a common framework and values throughout the procurement process. The agency’s general policy on procurement is set out in the Organisation Directive No. 10. All procurement are guided by the following principles:

- best value for money
- fairness, integrity and transparency
- effective competition
- the interest of UNRWA and the Palestine refugees.

To achieve best value for money, UNRWA undertakes to maximize competition, minimize the complexity of the tender process, carefully establish the evaluation criteria of the tenders, and ensure impartial and comprehensive evaluation of offers in a timely manner.

## **4 Financial Case**

### **4.1 What are the costs, how are they profiled and how will you ensure accurate forecasting?**

The cost of 12 schools is £15 million. A detailed budget is available on quest document 3250324

The funds will be disbursed in one instalment to the TF. Disbursement of funds will be subject to financial statements from the UN showing that funds have been spent and accounted for.

### **4.2 How will it be funded: capital/programme/admin?**

Programme funding.

### **4.3 How will funds be paid out?**

Funds will be paid in advance to a Trust Fund (TF). The payment in advance is justified for the following reasons:

- UNRWA need the money to start the tendering process;
- While not an announced pre-condition, having the funds will help UNRWA secure a permit to import the material. Without funds, the risk of the permit being rejected is higher. This will also make a UK intervention to allow import of material more significant and influential.
- UNRWA will commit the funds within 6 months (procurement stage) and will finish construction within 8 months.

### **4.4 What is the assessment of financial risk and fraud?**

The FRA (see section B of the procurement case) will identify any risks to spending through UNRWA. It will bench UNRWA against international standards and will provide recommendations to address any risks where they are identified. The recommendations will be taken forward through our support to UNRWA's general fund. If any are relevant to this contribution, the Project Officer will follow up with UNRWA as necessary.

### **4.5 How will expenditure be monitored, reported, and accounted for?**

The administrative agent of the Trust Fund will prepare consolidated financial reports by 31 May to the Management Committee. These will then be submitted to all donors

and to all UN organisations participating in the Trust Fund. The administrative agent will also provide:

- Certified annual financial statements will be provided no later than five months (31 May) after the end of the calendar year.
- Certified final financial statement will be provided no later than seven months (31 July) of the year following the financial closing of the Trust Fund.

## **5 Management Case**

### **5.1 What are the Management Arrangements for implementing the intervention?**

The Trust Fund terms of Reference (Annex X) provide detailed information on governance, project approval process and management.

Management of the Trust Fund:

The Trust Fund is governed by a Management committee, co-chaired by the PA and the UN Resident Coordinator/Humanitarian Coordinator (RC/HC). The management committee will also include the World Bank, five contributing donors (currently the only donor is DFID), two UN Heads of Agencies on a rotating basis, designated by the RC/HC. The management committee will operate by consensus to provide strategic guidance and agree on funding criteria. Decisions will be informed by on going analysis of needs and funding gaps.

- The management committee will meet at least quarterly. Reports, recommendations and minutes of the meetings of the committee will be shared with all of the Trust Fund donors and relevant stakeholders.
- The management committee will review the progress of the Trust Fund operations and ensure reporting to the contributing donors and the PA.

Project approval process:

- A project approval group (co-chaired by the PA, RC/HC or his designate and with two UN agencies, on a rotating basis), will review and approve project proposals based on the Management committee agreed criteria.
- Funding decisions will be made on basis of an agreed criteria, to be agreed by the Management Committee. The criteria may include quality of proposals, alignment with national priorities, and level of participation and ownership by national partners.

### **5.2 What are the risks and how these will be managed?**

Country level risks are monitored quarterly. The most relevant country risk to this project is movement and access restrictions, which is discussed here as the top risk.

Risk	Probability	Impact	Mitigation Measures
Deterioration of the Gaza access regime	Low	High	<p>The access regime is restricted but our assessment is that it will not deteriorate in Gaza. The recent release of Shalit and the prisoners deal provides an opportunity to push for further relaxation of the access regime.</p> <p>UNRWA Gaza relies on the external market to purchase items which are deemed by the Israeli authorities as “dual-use items for projects”. Any changes to the access regime would either speed up transfer of such commodities and thus enhance project efficiency in implementation, or reduce efficiency to the degree that it could be stalled or frozen for a sustained period of time.</p> <p>The UK will lobby the Israeli government strongly if material for schools construction that it is funding is not allowed.</p>
Deterioration in the political/ security situation	Medium	Medium	<p>UNRWA is well established in Gaza with extensive experience in construction project implementation through its own Engineering and Construction Services Division. Should the situation change and implementation be stalled, the construction projects would be frozen until such a time that they may recommence. We will submit options to management if this risk materialise. This may include providing the funds</p>

			to UNRWA against other identified needs.
Market volatility makes some commodities unavailable	Medium	Medium	UNRWA Gaza relies on the external market to purchase items which are deemed by the Israeli authorities as “dual-use items for projects”. Any changes to the access regime would either speed up transfer of such commodities and thus enhance project efficiency in implementation, or reduce efficiency to the degree that it could be stalled or frozen for a sustained period of time. Relevant mitigation measures are discussed in the above two risks.
Political interference by Hamas	Medium	Low	UNRWA implements its projects directly through local contractors registered with the Palestinian Authority’s Contractors’ Union. Past attempts by Hamas to interfere with its operations has been pushed back robustly by the Agency.
Financial benefit accruing to Hamas, including through use of tunnel-imported project inputs	Low	Low	This project is not engaged in direct procurement. UNRWA Gaza procures materials deemed as “dual-use items for projects” from Israel. The Agency maintains strict procurement procedures consistent with donor policies on prohibition of direct and/ or indirect financial support to Hamas.

### 5.3 What conditions apply (for financial aid only)?

Not applicable

### 5.4 How will progress and results be monitored, measured and evaluated?

Progress and results will be monitored through the following mechanisms:

The reports below will be provided to the administrative agent of the Trust Fund:

- Annual narrative progress report to be provided no later than three months after the end of the calendar year.
- Annual financial statements as of 31 December with respect to funds disbursed to it to be provided no later than four months after the calendar year.
- Final narrative report, after the completion of the activities in the approved project document. The final report will give a summary of results and achievements compared to the trust fund strategic objectives.
- Certified financial statements and final financial report to be provided no later than 6 months following the closing of the programme.

Based on the above reports, the administrative body will provide the following to the management committee:

- Consolidated narrative progress and financial reports, based on the reports referred to above.
- Certified annual financial statements.
- Certified final financial statement.

Transparency:

- Consolidated reports and related documents will be placed on the website [www.mtdf.undp.org](http://www.mtdf.undp.org)

Other (informal) mechanisms to monitor results:

- We have a strong institutional relationship with UNRWA. Through this relationship, we will monitor progress on the schools construction and the status of the import of construction material.
- We are a major donor to UNRWA's general fund. Over 50% (\$288m) of UNRWA's general budget is spent on education, of which 43% (\$124m) is allocated to Gaza. We are currently working on a new multi-year support. Through this support we will continue to monitor UNRWA's education as the core service that it provides. We, amongst other major donors such as the US and the EC will use the UNRWA monitoring matrix, which includes education indicators for all fields. The Project Officer for this project will be involved in this monitoring and use/follow up on relevant issues as required.
- We will include visits to the construction sites and the schools as part of regular Gaza visits, as the security situation permits.

Evaluation:

- The terms of reference of the Trust Fund commit the Management Committee to commission an independent “lesson learning and review exercise” of the entire operation of the Trust Fund. The timeline and scope are not clear, which provides flexibility but also means that there is a potential that the review does not look at issues relevant to the schools construction.
- As mentioned above, we are working on a multi-year support to UNRWA’s general fund. The budget allocated includes evaluation. To ensure that our evaluation of the UNRWA programme is holistic and is a continuous process (rather than limited to the lifetime of this project), we will not evaluate this project separately, but will ensure that the evaluation of the general fund includes questions on the impact of the construction of schools – together with the programmes to improve the quality of teacher and teacher education – on the quality of education (pass rates in Maths and Arabic and Grade 6 and Grade 9 completion rates) as well as on access (enrolment rates as a whole as well as those entering Grade 1).

## **6 Annex1: Notes on Cost benefit analysis, private and social rates of return to education**

### **6.1 Cost benefit analysis**

Jimenez and Patrinos (2008) observe that, while applications of the various methods of cost benefit analysis (CBA) have played a strong role in advocating for greater overall spending on education as a national priority, CBA has been less successful as a guide to set priorities for public policy. It has also not been used extensively in justifying specific education projects because, they argue, of some key methodological shortcomings: specifically, the difficulty of estimating social, as opposed to private, benefits; the complexity of measuring the costs and benefits of other dimensions of education other than access to a year of attending an educational institution; and attribution of outcomes to actual interventions. However, they also argue that, while research continues on the computation of more robust quantifications of costs and benefits, CBA should still be used to guide public investment since the discipline of describing the costs and benefits of a project does help decision-making – far more than the practice of simply saying that such investments are ‘socially’ justified.

### **6.2 Private rate of return**

The private benefit of investing in a further year of education is the gain in net earnings for the rest of a person’s working life. The private cost will include any fees or direct costs that the individual pays plus the opportunity cost in terms of income foregone. Because these values occur over time, they must be discounted to the present to be comparable. The Net Present Value (NPV) is the difference between the discounted values of the net present streams of benefits and costs. It is assumed that a rational investor will invest in a further year of education if the NPV is positive. Another criterion would be to calculate the internal rate of return and compare it with the returns from alternative investments. In a full CBA the private rates of return to different levels of education (e.g. primary, secondary and tertiary) are calculated.

### **6.3 Social rate of return**

The social rate of return to investment in education compares the benefits of having more education to the costs of obtaining that education. To compute the social rate of return to education, which is the appropriate guide for public investment, one must make adjustments. The full resource costs consist of direct social expenditure on schooling, plus the forgone earnings of those who are in school rather than working.

Public spending on education typically includes the rental and maintenance of buildings, costs associated with equipment, materials and utilities, costs associated with management and quality control, and teachers' salaries. The benefits are typically measured by the earnings difference between more and less educated workers that under competitive conditions approximates the productivity differential between the two kinds of workers, using data from the private sector of the economy.. Gross earnings (that is, before taxes and other deductions) are used in a social rate of return calculation, and such earnings also include income in-kind where this information is available. Jimenez and Patrinos (2008) suggest that civil service pay scales are irrelevant for a social rate of return calculation, because public sector wages typically do not reflect market wages. Of course, in many countries—although fewer now than in the past—the majority of university graduates end up in public sector employment. However, civil service pay-based rate of return estimates are useful in private calculations regarding the incentives set by the state to invest in education.

Jimenez and Patrinos (2008) suggest that, ideally, social benefits should include non-income benefits of education – for example, lower fertility or lives saved because of improved sanitation conditions followed by a more educated woman who never participates in the formal labour market as well as better family health and nutrition brought about by educated women whether they are formally employed or not – and the possibility of positive externalities from education, such as productivity spillovers, lower crime, reduced use of social services, increased civic participation, and so on. Given the scant empirical evidence on the external effects of education, social rate of return estimates are usually based on directly observable monetary costs and benefits of education. Since the costs are higher in a social rate of return calculation relative to the one from the private point of view, estimated social returns are typically lower than a private rate of return. The difference between the private and the social rate of return reflects the degree of public subsidization of education.

#### **6.4 Rates of return in practice**

Psacharopoulos and Patrinos (2004) estimated the following rates of return by the full cost benefit method (Table 1) and by the earnings function (Mincerian) method (Table 2).

Table 1: Returns to investment in education by level, latest year, averages by per-capita income group (%)

Country	Mean p.c. income (US\$)	Social			Private		
		Primary	Secondary	Higher	Primary	Secondary	Higher
Low income	363	21.3	15.7	11.2	25.8	19.9	26.0
Middle income	2,996	18.8	12.9	11.3	27.4	18.0	19.3
High income	22,530	13.4	10.3	9.5	25.6	12.2	12.4
<b>World</b>	<b>7,669</b>	<b>18.9</b>	<b>13.1</b>	<b>10.8</b>	<b>26.6</b>	<b>17.0</b>	<b>19.0</b>

Table 2: The coefficient on years of schooling: mean rate of return to an extra year of schooling (%)

Country	Mean p.c. income (US\$)	Mean years of schooling	Coefficient on years of schooling
Low income	375	7.6	10.9
Middle income	3,025	8.2	10.7
High income	23,463	9.4	7.4
<b>World</b>	<b>9,160</b>	<b>8.3</b>	<b>9.7</b>

Overall, women received higher returns to their schooling investments. On the one hand the returns to primary education were much higher for men (20%) than for women (13%). On the other, women experienced higher returns to secondary education (18% versus 14%).

Kingdon (2006) finds that this update to earlier work carried out by Psacharopoulos is not very informative about the current/recent pattern of returns to different levels education given that three quarters of the studies on which it is based used data from the 1950s to the 1980s, and given the very significant changes in the supply of primary, secondary and higher education graduates over time in various countries.

Kingdon also points out that a number of recent studies find that the Mincerian wage return to primary education has collapsed and is substantially lower than that to higher education in several developing countries. The main potential explanations for the decline of returns to primary education are shifts in labour supply and a decline in quality of schooling. This suggests, Kingdon continues, that the poor can attain substantial wage returns only if they attain beyond the primary level of education. There are two main policy implications. Firstly, for poverty reduction, it may no longer be sufficient to ensure universal primary education. Secondly, the recent pattern of returns has implications for the pattern of public funding of education. In particular it implies that the large universal public subsidies for postsecondary

education may not be needed to motivate students to enrol in tertiary education though if, despite its high economic returns, credit market failures still deny the poor access to profitable tertiary education, there will be a need for state intervention for equity reasons.

Just as the returns to primary education have declined, so have average returns to schooling as a whole declined in recent years (Jimenez and Patrinos 2008). At the same time, average schooling levels have increased. Therefore, and according to theory, everything else being equal, an increase in the supply of education has led to a slight decrease in the returns on schooling. That is, if there are no “shocks” – such as changes in technology – that increase the demand for schooling, then an increase in overall schooling levels should lead to a decrease in the returns to schooling.

## 6.5 Rates of return for MENA countries

In line with the above tables, Psacharopoulos and Patrinos (2004) give us the rates of return by geographical area and by level of education (Table 3) and by mean rate of return (Table 4).

Table 3: Returns to investment in education by level, full method, latest year, regional averages (%)

Region	Social			Private		
	Primary	Secondary	Higher	Primary	Secondary	Higher
Asia*	16.2	11.1	11.0	20.0	15.8	18.2
Europe/MENA*	15.6	9.7	9.9	13.8	13.6	18.8
Latin America/Caribbean	17.4	12.9	12.3	26.6	17.0	19.5
OECD	8.5	9.4	8.5	13.4	11.3	11.6
Sub-Saharan Africa	25.4	18.4	11.3	37.6	24.6	27.8
<b>World</b>	<b>18.9</b>	<b>13.1</b>	<b>10.8</b>	<b>26.6</b>	<b>17.0</b>	<b>19.0</b>

\*Non-OECD

Table 4: The coefficient on years of schooling: mean rate of return to an extra year of schooling (%), regional averages

Region	Mean p.c. income (US\$)	Mean years of schooling	Coefficient on years of schooling
Asia*	5,182	8.4	9.9
Europe/MENA*	6,299	8.8	7.1
Latin America/Caribbean	3,125	8.2	12.0
OECD	24,582	9.0	7.5
Sub-Saharan Africa	974	7.3	11.7
<b>World</b>	<b>9,160</b>	<b>8.3</b>	<b>9.7</b>

\*Non-OECD

From the above tables we notice that on average the higher the per capita income the lower the rates of return, particularly at primary and secondary levels. Furthermore, the MENA (and non-OECD European) countries, despite the mean per capita income being one quarter that of OECD countries, have the lowest mean rate of return (7.1%) to each extra year of schooling. Some of the possible reasons for this are explained in World Bank (2008) summarised below.

## 6.6 Education and growth

Because investment in education takes place in young people, and the return to such investment occurs over a long period of time, it is difficult to show with available data the effects of educational investments in more recent years, when secondary and higher education expanded rapidly in the MENA countries. Initial levels of education in the 1960s show a significant influence on later growth rates, so according to these empirical estimates, MENA countries, which had very low educational levels in the 1960s, were predicted to have much lower growth rates than East Asia in the 1980s and 1990s.

Investing in education apparently contributes much more to growth when those who are educated have the opportunity to use their education in more productive activities.<sup>8</sup> In MENA, these opportunities have been more limited than in East Asia, for example, mainly because there has been less investment in manufacturing, high-value-added agriculture and high-value-added services in MENA than in East Asia.

<sup>8</sup> However, Chang (2010) claims that there is remarkably little evidence showing that more education leads to greater national prosperity. What really distinguishes rich countries from poorer ones is much less how well educated their individual citizens are than how well their citizens are organized into collective entities with high productivity.

## 6.7 Education and productivity

Investing in more and better-distributed education in the labour force helps create conditions that could lead to higher productivity and higher economic growth, but this is by no means sufficient. It is also necessary to adopt policies that lead to the creation of diversified, dynamic, and competitive sectors capable of absorbing the more educated labour force to translate human capital into higher economic growth. The evidence supports the view that countries that combine both do better on average than those that do one without the other.

The story of the MENA region is simply one of catching up on both fronts. There are exceptions but most MENA countries have yet to reach the level and quality of human capital of the more dynamic economies in the developing world. In addition, most countries in the MENA region have yet to develop economically into modern, industrialized productive structures capable of absorbing a significant fraction of the labour force into high-productivity jobs. *Short of making a leap forward in both areas, further investment in education is likely to go unrewarded.*

## 6.8 Education and income distribution

It has been shown that income distribution in the MENA region is somewhat more equal than it is in many other developing countries, and may have become more equal in several key MENA countries over the past 15–20 years. A very high proportion of university graduates is employed in the public sector in MENA, and only a small proportion is employed in the private sector. This pattern contrasts starkly with East Asia and some countries of Latin America, where a significant proportion of the more educated is employed in rapidly growing manufacturing or financial and business services. These sectors usually reward higher education with greater earnings than a public bureaucracy does.

Another, related reason is that the expansion of education in the population in MENA countries has been rapid compared to job growth. Given that there are relatively few job opportunities outside government for secondary and university graduates, the expansion of education has produced a large surplus of graduates, high unemployment, and long waits for government jobs. This means that rates of return to higher education are probably not rising, as they are in East Asia and Latin America. These low rates of return to higher education in MENA are likely the main factor in explaining the somewhat more equal income distributions in MENA countries in comparison with East Asia and Latin America.

In addition, income distribution may have remained somewhat more equal in the MENA region than in Latin America because the ***participation of women in the labour market*** in MENA countries over the past 20 years has tended to include the better educated, whereas in Latin America and East Asia, a much higher proportion of the growth in female employment has been among less-educated women entering the manufacturing sector. Because these women are near the bottom of the income scale, this tends to make income distribution more unequal in Latin America and East Asia relative to MENA.

Finally, neither growth rates nor education appear to have contributed to the low poverty levels of MENA countries. Growth rates were very modest in the last two decades and the returns to education were low. Rather, the main reasons for low poverty rates in MENA seem to be: (1) relatively moderate and somewhat declining inequality of income distribution, so whatever growth rates in GDP per capita occurred, they contributed to higher consumption per capita for the poor, and thus lower poverty rates; and (2) income support programmes, especially for poor families. A third factor is the increase in women's education and participation in the labour force. These trends appear to have contributed to lower fertility and population growth rates across a wide range of groups including lower-income families. Beside reducing the cost of government welfare and the cost of providing education, lower fertility and population growth rates could diminish the negative distributional impact of diverging rates of return on higher relative to lower education that are often associated with the deployment of the educated labour force into the more dynamic sectors of the economy.

## 6.9 Rates of return in Palestine (West Bank and Gaza)

Data for these are limited. At present there is work in progress in determining the private and social rates of return to schooling in Palestine. The estimated overall private rate of return to an extra year of schooling is 3.4% (in 2006)<sup>9</sup> which is considerably lower than the average for MENA countries (7.1%, as shown in Table 4 above). On the other hand, the private rates of return for primary and secondary education in Jordan were 3% and 4% respectively in 1997, adjusting to 2% and 4% in 2002 (World Bank 2008:6310).

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<sup>9</sup> Since the work is still in progress, the author has asked not to be quoted. In the same study, it is suggested that the private rate of return to schooling for females was just less than 12% in 2006.

<sup>10</sup> No social rates of return are given here for MENA countries, except for Morocco where private and social rates of return for secondary education were 10% and 9% in 1991 and were 8% each in 1999.

In Palesine, considering the base group to be those with 12 years of schooling (high school graduates) or lower, people with a two year college diploma earn a margin between 11% and 18% more than the base group. As for individuals with a four year college degree or above, the results show that they can earn as much as 40% more than the basic group. (Table 3 above shows that the private rate of return for higher education in MENA countries was 18.8% up to the year 2000.)

The social rate of return to education in West Bank and Gaza has not yet been calculated. However, since the DFID supported programme is for Grade 1-9 students, i.e. at primary and lower secondary levels, it is possible to estimate the social rate of return for completion of grade 9 using the rates of return for MENA countries in Table 3. Here the social rate of return for secondary education is 9.7% which is 71.3% of the private rate of return (13.6%). This would mean that ***the social rate of return to secondary education in Gaza would be in the region of 2.4%***. (Using the same factors, the social rate of return for secondary education in Jordan would have been 2.8% in 2002.)

However, according to Patrinos and Psacharopoulos (2011), higher levels of schooling for a larger proportion of the population lead to spillover effects, as more people are able to learn and share knowledge. Thus it is not odd to see declining individual returns to schooling while social returns continue to rise.

At the macro-level the returns to one additional year of schooling have been estimated by different economists for different countries and are illustrated in Table 5. In addition, one additional year of schooling is associated with a reduction of inequality by 1.4 points on the Gini scale.

Table 5: Macro-estimated returns to one additional year of schooling

Effect	Source
No significant effect of years of schooling on economic growth	Benhabib and Spiegel (1994)
Each additional year of schooling attainment in a country is associated with about 30% higher GDP per capita	Heckman and Klenow (1997)
A one-year increase in the average years of schooling of the labour force raises output per worker between 5% and 15%	Topel (1999)
A one year increase of years of schooling associated with 0.30% per year faster growth	Bils and Klenow (2000)
Macro-estimated rate of return to schooling between 18%	Krueger and Lindahl (2001)

and 30%	
A one-year increase in average education raises per capita income between 3% to 6%	Bassanini and Scarpetta (2001)
A one year increase in the mean years of schooling is associated with a rise in per capita income by 3%-6%, or a higher growth rate of one percentage point	Sianesi and van Reenen (2003)
No evidence of wide social returns to education based on cross-county regressions	Pritchett (2006)
Macro-estimated rate of return to schooling is 27%	de la Fuente and Domenech (2006)
Macro-estimated rate of return to schooling between 9.0% and 12.3%	Cohen and Soto (2007)
Macro returns to years of schooling 36.9%, or each year of schooling is statistically significantly associated with a long-run growth rate that is 0.58 percentage points higher	Hanushek and Woessmann (2008)
Controlling for physical capital stock, the rate of return to the average year of schooling is 12.1%	Barro and Lee (2010)

As can be seen from the summary, macro-returns to schooling can range from “No significant effect of years of schooling on economic growth” (1994) and “No evidence of wide social returns to education based on cross-county regressions” (2006) to “A one year increase in the mean years of schooling is associated with a rise in per capita income by 3%-6%, or a higher growth rate of one percentage point” (2003) and “Macro returns to years of schooling 36.9%, or each year of schooling is statistically significantly associated with a long-run growth rate that is 0.58 percentage points higher” (2008).

## 6.10 References

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## 6.11 Additional notes

### The rationale behind DFID intervention

Education is a very good investment. There is strong evidence linking levels of education – enrolment levels, but particularly levels of learning – to economic growth, improved health and nutritional outcomes, lower fertility and social stability [see Box 1]. These gains underpin the critical role of education in achieving all the Millennium Development Goals (MDGs). The gains are often greater for girls than for boys when they complete a full cycle of quality basic education.<sup>11</sup>

#### **Box 1: Basic Education Makes a Difference**

**Economic Growth** In general, countries with more educated populations enjoy higher rates of economic growth and less inequality. More recently, evidence has shown it is not only years in school, but what is learned in school, that counts. A recent study found that whilst an additional year of schooling was associated with a 0.37% increase in GDP, this increased to 1% when combined with improved learning outcomes.

**Earnings** Education is positively associated with improved lifetime earnings. Each extra year of education raises lifetime earnings by about 10%. Returns to education are higher for low income countries and for women.<sup>12</sup>

**Health** Education, especially for girls, helps to improve health and to reduce fertility. Children of educated mothers are healthier, better nourished and more likely to survive as infants. Across the developing world, an additional year of schooling reduces infant mortality rate by between 5% and 10%. (Education can also contribute greatly to improving the life expectancy index.)

**Environment** Research has shown a strong relationship between levels of school achievement in science and awareness of global environmental problems. Both are associated with a greater sense of responsibility for supporting sustainable environmental management.

**Fragility and Conflict** Education can play an important part in the emergency response to conflict or fragility, in the long term process of reconstruction and building stability and in promoting civil engagement and democracy. Empirical evidence links levels and distribution of education achievement to indicators of democracy, stability and security.

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<sup>11</sup> This paragraph and Box 1 are taken from DFID (2010) Learning For All: DFID's Education Strategy 2010–2015.

<sup>12</sup> Colclough, C., Kingdon, G., and Patrinos, H. (April 2009) The pattern of returns to education and its implications, RECOUP Policy Briefing No. 4, Faculty of Education, University of Cambridge.

Hanushek and Wößmann (2007)<sup>13</sup> conclude that there is strong evidence that the cognitive skills of the population – rather than mere school attainment – are powerfully related to individual earnings, to the distribution of income, and to economic growth. A summary of the evidence permits a tentative conclusion that the returns to a good quality education may be even larger in developing countries than in developed countries. New empirical results show the importance of both minimal and high level skills, the complementarity of skills and the quality of economic institutions, and the robustness of the relationship between skills and growth. International comparisons incorporating expanded data on cognitive skills reveal much larger skill deficits in developing countries than generally derived from just school enrolment and attainment. The magnitude of change needed makes clear that closing the economic gap with developed countries will require major structural changes in schooling institutions.

(Jimenez and Patrinos 2008) (p. 10)

In the 2002 Education for All Global Monitoring Report it is stated that “available estimates of rates of return for developing countries consistently show that both private and social returns to primary schooling are higher than at secondary and tertiary levels. Their magnitudes are generally greater than typical returns to capital in other economic sectors” (UNESCO 2002: 34). The Global Campaign for Education (2005: 3) argues that: “education, especially for girls, empowers families to break the cycle of poverty for good. Young women with a primary education are twice as likely to stay safe from AIDS, and their earnings will be 10-20 percent higher for every year of schooling completed. Evidence gathered over 30 years shows that educating women is the single most powerful weapon against malnutrition – more effective even than improving food supply. Without universal primary education, the other Millennium Development Goals – stopping AIDS, halving the number of people living in poverty, ending unnecessary hunger and child death, amongst others – are not going to be achieved.”

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<sup>13</sup> Hanushek, E.A. and Wößmann, L. (February 2007) The Role of Education Quality in Economic Growth, World Bank Policy Research Working Paper 4122, Washington DC: World Bank.

(p.14)

### **Accounting for Externalities**

The benefits of education may extend to others beyond the individual student. So, the true benefit from a year of education cannot be captured by the difference in earnings as a result of that year. According to Lucas (1988), for example, a worker's schooling enhances his or her own productivity as well as those of co-workers, thereby giving rise to classical externalities or spillover effects. The general level of education in the workforce also expands production possibilities, by facilitating the discovery, adaptation and use of more economically rewarding, albeit technologically more demanding and knowledge-intensive, production processes.

(p.15)

Besides its direct impact on economic production, education can yield other, community level benefits. These non-market effects include the possible contribution of education to improving social equity, strengthening national cohesiveness, reducing environmental stress through its effect on fertility and population growth, reducing crime rates, and so on (see Table 2 for a partial list).

Some studies have succeeded in identifying positive externalities, and have quantified them (see Weisbrod 1964; Haveman and Wolfe 1984; Wolfe and Zuvekas 1997). If one could include externalities to typical estimates, then social rates of return might well be higher than private rates of return on education, perhaps more than double (Haveman and Wolfe 1984; Wolfe and Zuvekas 1997). Rauch (1993) finds higher social returns (at 8.1 percent), compared to private returns (4.8 percent), by comparing worker's educational level and increases in wages with average educational level attained in United States metropolitan statistical areas.

Table 6: Nonmarket and External Benefits of Education

Benefit Type	Findings
Child education	Parental education affects child's educational level & achievement
Child health	Child's health positively related to parental education
Fertility	Mother's education lowers daughter's births
Own health	More education increases life expectancy
Spouse's health	More schooling improves spouse's health & lowers mortality
Job search efficiency	More schooling reduces cost of search, increases mobility
Desired family size	More schooling improves contraceptive efficiency
Technological change	Schooling helps R&D, diffusion
Social cohesion	Schooling increases voting & reduces alienation
Crime	Education reduces criminal activity

Source: Based on and adapted from Wolfe, B. and S. Zuvekas (1997) "Non-Market Effects of Education." *International Journal of Education Research* 27(6): 491-502

(p.24)

*The most effective means of improving school quality may be through addressing the problem of weak teaching.*

(p.25)

*The empirical literature to date is simply too limited for analysts to obtain robust estimates of social benefits. However, if CBA is defined less as an exercise to calculate one figure, such as an IRR or NPV that is the go or no-go decision criterion, and more as a rigorous argumentation that the benefits of an investment outweigh the costs, even if not all of them are quantified, then it can greatly improve policy-making.*

## 7 Annex 2: Notes on education in West Bank and Gaza

### 7.1 Indicators

Lower Middle Income Country	GNI per capita PPP (US\$) 2009-10	Life expectancy at birth		Adult literacy rate (% aged 15+) 2005-09	Primary completion rate (%) 2009	GPI (%) at primary & secondary school 2009	Under 5 mortality rate per 1,000 2009
		Male 2009	Female 2009				
Egypt	5,910	69	72	66	96	96	21
Iraq	3,320	65	72	78	64	81	44
Morocco	4,560	69	74	56	80	88	38
Syria	4,870	73	76	84	112	97	16
WB&G	2,710*	72	75	95	82	104	30
Yemen	2,320	62	65	62	61	-	66
LMI	3,701	63	67	71	88	93	71
MENA	7,851	69	73	74	88	93	33

\*2005

Source: World Development Report 2012.

Indicator	MENA		West Bank and Gaza	
	2005	2009	2005	2009
Fertility rate, total (birth per woman)	2.9	2.7	4.8	4.5
Adolescent fertility rate (births per 1,000 women ages 15-19)	40	38	61	51
Mortality rate, under-5 (per 1,000)	40	35	26	23
Literacy rate, youth female (% of females aged 15-24)	-	87	99	99
Literacy rate, youth male (% of males aged 15-24)	-	93	99	99
Persistence to last grade of primary, total (% of cohort)	85	-	99	98
Primary completion rate, total (% of relevant age group)	92	88	95	82
Total enrolment, primary (% net)	92	91	82	78
Ratio of female to male primary enrolment (%)	91	93	99	100
Ratio of female to male secondary enrolment (%)	93	93	105	107
Ratio of female to male tertiary enrolment (%)	91	97	103	131

Source: World Development Indicators database, December 2010.

### 7.2 UNWRA Education Reform Strategy 2010 (p.8)

#### Gaza:

The regime of border closures followed by the recent conflict with Israel have had an extreme impact on the socio-economic situation in Gaza, bringing public services and the private sector close to collapse (UNRWA 2009b). The overall poverty rate in the oPt is 57%, and it is estimated that 80% of people in Gaza live below the poverty line (EC 2010b). The blockade, which has now been imposed for three years, means that an estimated three-quarters of Gaza's population depend on food aid to survive,

and an increasing number of Palestinian children are malnourished, anaemic or with vitamin A deficiencies (Save the Children 2010d). After the conflict with Israel, food insecurity rose from 56% to 75% (UNRWA 2009b), and 997,500 Palestinian children are now estimated to be living without adequate food, water or medical attention. Damage to the sewage system now causes tons of raw sewage to be pumped into the sea of Gaza each day. Education remains severely disrupted after more than 280 schools were either damaged or completely destroyed in the recent conflict (Save the Children 2010d). Western donor reluctance to legitimate the Hamas government has also had an effect on the Gazan social landscape, as aid is restricted to largely humanitarian, as opposed to developmental or structural capacity building interventions (Hart and Lo Forte 2010).

*(p.15)*

The Palestinian Authority has also been concerned with the standard of teacher education for some years. Approximately 1,800 new teachers are trained each year, chosen from approximately 15,000 applicants. The challenge is therefore not a shortage of teachers, but rather the quality of training that is taking place (Nicolai 2007). Thus, in 2008, the OPT launched a teacher education strategy aiming to develop five progressive values in all teachers by 2014. It anticipates that the strategy will develop teachers who are committed to their students, who have broad as well as specialised knowledge which they transmit using a variety of active learning approaches, who monitor and guide their students' learning, who have a reflective practice and continue to develop professionally, and who work with their colleagues as members of a community of learners.

This vision is the first amongst UNRWA host countries to articulate qualities that teachers should have. In 2008 the Palestinian National Authority also launched an initiative through its Quality Improvement Fund for partnerships to modernize teacher education programmes, and for the first time in the region, is proposing distinct stages in teacher career development. Currently, the region (and UNRWA) recognises only one type of teacher, and most teachers are at the same grade on the salary scale. These new developments in the OPT mean that teachers are now split into the categories of new teacher (under probation for 1 – 2 years), teacher, first teacher and expert teacher (Universalia 2010). This differentiation in experience levels will likely facilitate more focused continued professional development, and help with the issues of teacher motivation and retention.

(p.21)

Elementary education provision at UNRWA comprises of 6 years of schooling for all eligible<sup>14</sup> Palestine refugee children who reach the age of 5 years and 8 months at the beginning of the school year in Jordan and Lebanon and 5 years and 7 months in West Bank, Gaza and the Syrian Arab Republic.

UNRWA considers preparatory education an integral part of the basic education cycle and it is thus compulsory and free of charge for both genders. On successful completion of the elementary cycle, UNRWA students are promoted to the preparatory cycle, which consists of three years in the West Bank, Gaza, the Syrian Arab Republic and Lebanon and four years in Jordan. The Palestinian Authority (PA) have repeatedly requested the introduction of a fourth preparatory year to schools in the West Bank and Gaza: as yet financial constraints have prevented this from being implemented.

(p.26)

Table 7: Student Enrolment in UNRWA Elementary Schools (Grades 1-6) Disaggregated by Gender

		2008/2009		2009/2010		Change	
		Number	GPI (%)	Number	GPI (%)	Number	%
<b>Gaza</b>	Boys	71,811		75,941		4,130	5.75%
	Girls	64,558	90	67,264	89	2,706	4.19%
	<b>Total</b>	<b>136,369</b>		<b>143,205</b>		<b>6,836</b>	<b>5.01%</b>
<b>West Bank</b>	Boys	15,773		15,561		-212	-1.34%
	Girls	21,146	134	21,024	135	-122	-0.58%
	<b>Total</b>	<b>36,919</b>		<b>36,585</b>		<b>-334</b>	<b>-0.90%</b>
<b>Total</b>	Boys	87,584		91,502		3,918	4.47%
	Girls	85,704	98	88,288	96	2,584	3.02%
	<b>Total</b>	<b>173,288</b>		<b>179,790</b>		<b>6,502</b>	<b>3.75%</b>

<sup>14</sup> Children of Registered Palestine Refugees / Children of Palestine Refugee married to a non refugee / Children of non Registered Palestine Refugees

(p.27)

Table 8: Student Enrolment in UNRWA Preparatory Schools (Grades 7-9) Disaggregated by Gender

		2008/2009		2009/2010		Change	
		Number	GPI (%)	Number	GPI (%)	Number	%
<b>Gaza</b>	Boys	31,577		31,383		-194	-0.61%
	Girls	30,914	98	31,526	100	612	1.98%
	<b>Total</b>	<b>62,491</b>		<b>62,909</b>		<b>418</b>	<b>0.67%</b>
<b>West Bank</b>	Boys	8,293		8,109		-184	-2.22%
	Girls	11,172	135	10,985	135	-187	-1.67%
	<b>Total</b>	<b>19,465</b>		<b>19,094</b>		<b>-371</b>	<b>-1.91%</b>
<b>Total</b>	Boys	39,870		39,492		-378	-0.95%
	Girls	42,086	106	42,511	108	425	1.01%
	<b>Total</b>	<b>81,956</b>		<b>82,003</b>		<b>47</b>	<b>0.06%</b>

Table 9: Student Enrolment in UNRWA Schools (Basic Grades 1-9) Disaggregated by Gender

		2008/2009		2009/2010		Change	
		Number	GPI (%)	Number	GPI (%)	Number	%
<b>Gaza</b>	Boys	103,388		107,324		3,936	3.81%
	Girls	95,472	2	98,790	92	3,318	3.48%
	<b>Total</b>	<b>198,860</b>		<b>206,114</b>		<b>7,254</b>	<b>3.65%</b>
<b>West Bank</b>	Boys	24,066		23,670		-396	-1.65%
	Girls	32,318	134	32,009	135	-309	-0.96%
	<b>Total</b>	<b>56,384</b>		<b>55,679</b>		<b>-705</b>	<b>-1.25%</b>
<b>Total</b>	Boys	127,454		130,994		3,540	2.78%
	Girls	127,790	100	130,799	100	3,009	2.35%
	<b>Total</b>	<b>255,244</b>		<b>261,793</b>		<b>6,549</b>	<b>2.57%</b>

(p.27)

Table 10: Teaching Staff by Gender (2010) and Pupil Teacher Ratio (PTR) in Basic Education

	Male	Female	Total	PTR
<b>Gaza</b>	2,824	4,208	7,032	29
<b>West Bank</b>	839	1,412	2,251	25
<b>Total</b>	<b>3,663</b>	<b>5,620</b>	<b>9,283</b>	<b>28</b>

(p.28)

Table 11: Budget Cost (US\$ and ILS\*) per pupil in UNWRA schools (December 2009)

	Elementary		Preparatory	
	US\$	ILS	US\$	ILS
<b>Gaza</b>	675.00	2,552	936.00	3,538
<b>West Bank</b>	711.30	2,689	853.90	3,228

\*Converted at US\$ 1.00 = (Israeli Shekel) ILS 3.78 (15.12.09)

*Draft Statebuilding and Service Delivery Grant to the Palestinian Authority (pp.10-11)*

**Education:** using completion to Grades 5 and 10 as a proxy for quality shows good results for PA schools in the West Bank, with 98% of boys and 99% of girls completing five years of education, and 91% and 93% completing ten years. However, compared to other countries using the Trends in International Mathematics and Science Study (TIMSS), the quality of PA schools is lower than many other Lower Middle Income countries<sup>15</sup> in the region. For instance, the average mathematics scores of 8th grade students in 2007 was only 367 for the OPTs, lower than Jordan (427), Iran (403), Syria (395) and Egypt (391).<sup>16</sup> The Ministry of Education has established the Commission for Developing the Teaching Profession (CDTP). Its responsibility is to oversee the implementation of the National Teacher Education Strategy which was launched in 2008 and will play a key role in the improvement of teaching quality e.g. developing standards for teachers at various levels, a code of conduct for teachers, and a survey of teachers qualified in the current system. The Performance Assessment Framework of the education sector strategy has ambitious targets to improve test scores in maths, science and Arabic at Grades 4, 8 and 10 by 2015. The PNDP also has a target to improve the proportion of the population rating public education as 'good' from 40% in 2010 to 60% by 2013. The plan to achieve these targets consists of eight costed and well-designed programmes; the most relevant to improving quality are Teaching Learning Materials, Curricula Improvement, Teacher Training and Tertiary Education (including technical and vocational education). The recurrent costs are consistent with the medium-term fiscal framework, and the development costs total \$100m per year.

<sup>15</sup> Classified as LMI countries in 2007 (World Development Report 2009). By 2010 both Jordan and Iran had been reclassified as upper middle income countries (World Development Report 2012).

<sup>16</sup> US Dept of Education *Highlights from TIMSS 2007* ([www.nces.ed.gov/timss](http://www.nces.ed.gov/timss))

*Draft Statebuilding and Service Delivery Grant to the Palestinian Authority (p.42)*

**Education:** the value of benefits to society as a result of public spending on education is known as the social rate of return to education. No estimate is currently available for the OPTs specifically, but there are estimates for Lower Middle Income countries as a whole, and for non-OECD Europe and MENA. A conservative average return across all levels of education for the former group is around 15%, while for the latter it is around 10%.<sup>17</sup> It is not possible to judge which is most relevant for the OPTs.<sup>18</sup> So we may take 12.5% as the Central case, 15% as High and 10% as Low. Since 18.2% of the PA's recurrent went on education in 2010, we may assume that 18.2% of the £84m increase in spending will go on education. We can then work backwards to calculate the stream of benefits required over the 2011-2025 period to generate the Low, Central and High returns. If we assume the same constant benefit per year over the period to keep things simple, the annual undiscounted benefit is £6.4m Low case, £6.9m Central case, and £7.4m High case.

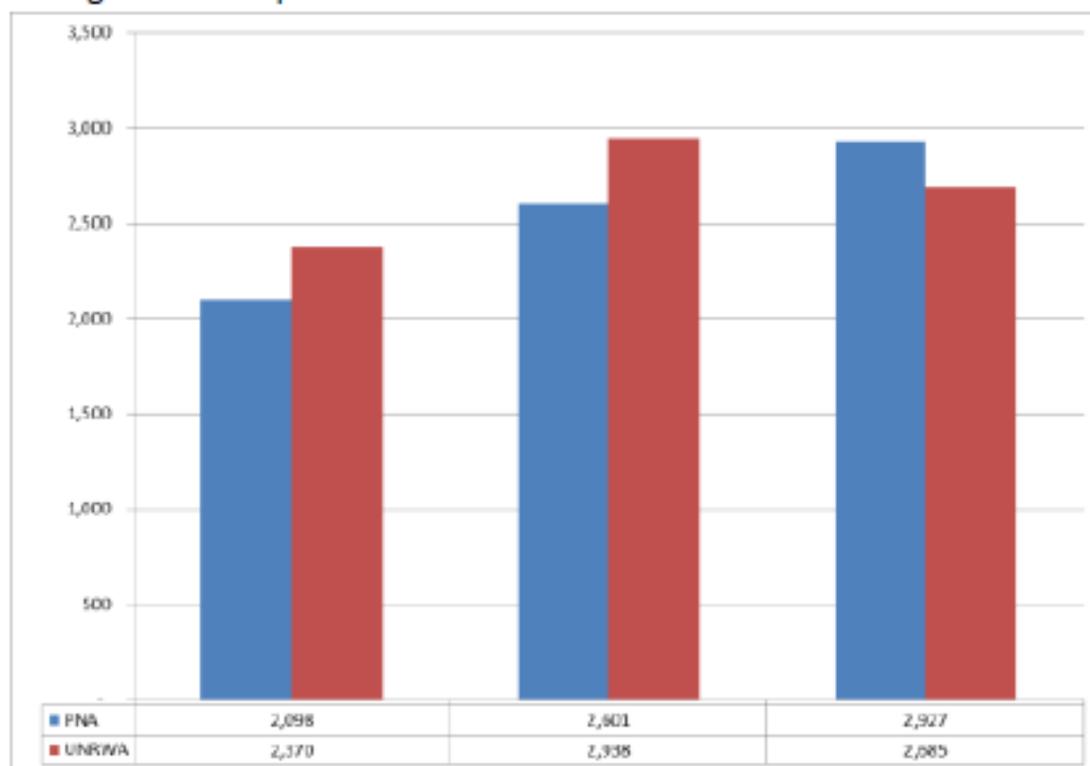
**Cost per child in primary education:** has increased steadily between 2008 and 2010 from 2,098 to 2,927 NIS, while UNRWA were able to reduce their costs in 2010. This means that the primary education unit cost is now higher than UNRWA despite UNRWA's test scores being higher (see Diagram below).

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<sup>17</sup> Psacharopoulos and Patrinos (2002), *Returns to Investment in Education: A Further Update*, World Bank WPS 2881 ([www.worldbank.org](http://www.worldbank.org)). Rates for LMICs are: 18.2% primary; 13.4% secondary, and 11.4% tertiary. Rates for MENA and Europe: 15.6% primary; 9.7% secondary; and 9.9% tertiary.

<sup>18</sup> On the one hand, the OPTs is one of the poorest countries in the MENA region and so the higher returns for the LMICs may be more appropriate. But on the other, the movement and access restrictions mean that economic opportunities are more limited than elsewhere in the region and so will reduce the social rate of return as the potential for earning higher incomes following education is more limited.

3. Figure 4.2: Comparison unit costs PNA and UNRWA 2008-2010



2,098	2,601	2,927
2,658	2,938	2,583

Table 12: Estimation of numbers of students entering new schools in Gaza

	2010/11	2011/12	2012/13	2013/14
<b>A</b> Population aged 5-15 (+10,000 p.a.)	265,000	275,000	285,000	295,000
<b>B</b> Enrolment @ 3% growth p.a.	212,000	218,360	224,911	231,658
<b>C</b> B as % of A	80.0%	79.4%	78.9%	78.5%
<b>D</b> Enrolment as per LogFrame	212,000	224,400	237,405	250,750
<b>E</b> D as % of A	80.0%	81.6%	83.3%	85.0%
<b>F</b> New PA students entering new schools		1,200	3,520	3,520
<b>G</b> F as % of A		0.4%	1.2%	1.2%
<b>H</b> F as % of B		0.5%	1.6%	1.5%
<b>I</b> F as % of D		0.5%	1.5%	1.4%
<b>J</b> Existing UNWRA students entering new schools		10,800	14,480	20,480
<b>K</b> J as % of A		3.9%	5.1%	6.9%
<b>L</b> J as % of B		4.9%	6.4%	8.8%
<b>M</b> J as % of D		4.8%	6.1%	8.2%
<b>N</b> Total students entering new schools		12,000	18,000	24,000
<b>O</b> N as % of A		4.4%	6.3%	8.1%
<b>P</b> N as % of B		5.5%	8.0%	10.4%
<b>Q</b> N as % of D		5.3%	7.6%	9.6%

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