

# Restoring learning in war-impacted contexts: Modelling learning recovery, teacher replacement and teacher costs in Palestine

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The authors dedicate this report to the children, young people, teachers and counsellors of Gaza and the West Bank, including East Jerusalem, who daily demonstrate their spirit, determination and courage to assert the right to equitable and quality education in Gaza and the West Bank, including East Jerusalem.

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## **Abstract**

This background paper presents the impact of war on teachers, students and learning losses in Gaza and the West Bank, including East Jerusalem. We projected learning losses that occurred due to war and simulated various scenarios for learning recovery and their associated costs. We also estimated the potential costs of replacing teachers who had died, were injured or were traumatised. We made the same calculations for both Gaza and the West Bank, including East Jerusalem.

For each context, we first estimated learning losses that occurred due to the war. We then developed scenarios of school reopening and remedial education plans to project the resources required. Furthermore, we also calculated the numbers of teachers needed to replace those killed. Finally, we presented the costs required for both remedial education and teacher replacement.

## Gaza

### Overview of teaching force affected by war in Gaza

Table 1 presents a broad overview of the existing teaching force. In 2023, there were 23,000 teachers in Gaza schools, including public, United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA), and private schools. In August 2025, according to reports, the ongoing war has directly impacted approximately 17 percent of Gaza's teaching force. Among them, 780 teachers have died and 3,211 have been injured in the present war (OCHA oPt, 2025a).

*Table 1: Teaching force affected by war in Gaza*

Total teaching force in 2023 (before war) <sup>i</sup>	No. of teachers killed (a)	No. of teachers injured (b)	No. of teachers arrested (c)
23,000	780	3,211	Unknown

Source: OCHA oPt, 2025a.

### Learning loss and recovery

*“Even in the best-case scenario of the war stopping now and us putting children in catch up programmes, we are reaching the point of, if this does not stop, there will be no way out. We will have a lost generation”.<sup>ii</sup>*

Learning for children and young people in Gaza has been profoundly affected by the current war. Prior to the war on Gaza, the overall student enrolment rate at the compulsory basic level (Grades 1 to 10) was 95.2 percent, closely aligning with the national enrolment rate of 96 percent in Palestinian schools (Ministry of Education, 2022). In this section, we estimate the effects of the war, as well as recurrent hostilities and COVID-19, on learning, factoring into the calculation the overlapping effects of these crises. We build into the calculation of learning loss the additional learning recovery needed because of the adverse effects of hunger and trauma on the learning of children. Given the impossibility of collecting data in the current context, the estimates are based on the estimated effects on children's and young people's learning competencies.

In total, from 2019 to September 2025, children and young people have lost more than three academic years. This includes one year of school closures related to COVID-19 (UNICEF, 2021) and two years due to the current war. It is important to highlight that other conflict escalations happened during the timeframe of the analysis but are not being included in the calculations. This includes the escalation of hostilities in May 2021.

During COVID-19 school closures, as well as during the current war on Gaza, students could access distance learning, but under challenging conditions due to inadequate online education infrastructure, lack of devices, basic education materials, as well as

overcrowded houses and other factors, resulting in significant learning losses (UNRWA, 2022). During the current war, education in Gaza is taking place in very challenging conditions amidst school closures, displacement, trauma and hunger, as well as war-induced disabilities, resulting in significant learning loss for children. The impact of these is also likely to impede learning recovery, as severely malnourished children and young people who are traumatised and/or have experienced war-induced disabilities will face serious challenges in returning to school even once schools re-open (assuming they are able to do so).

By considering various scenarios, we explored the number of years of learning losses for children and young people (Table 2). This analysis is grounded in four key assumptions. Firstly, we assume that students remained in formal schooling and were promoted to the next grade level after COVID-19 school closures. Secondly, we assume that learning occurred without interruptions in the academic years 2021/2022 and 2022/2023. Thirdly, we assume that, even though efforts are being made to continue education during the war, including through temporary learning spaces and distance learning, given the severe disruption due to killing, displacement, trauma and hunger, learning is likely to have been severely limited. Finally, the variation in outcomes between scenarios is based on anticipated efforts to accelerate learning during and after COVID-19, as well as on the differential effects of school closures on different groups of students, which is also likely to vary by types of schools.

Our analysis for learning loss projects the academic competencies these students are likely to have acquired compared to their nominal grade level, providing insights into the impact of these disruptions on student learning. It is important to note that these projections are indicative and do not imply that all students have the competencies of the grade level drawn by each scenario. It is more likely that students have acquired some competencies from different grade levels, depending on individual abilities and the extent of informal or remote education received. Moreover, these projections do not capture or address the number of students who dropped out of school due to school interruptions.

Table 2 outlines three scenarios for learning loss calculated as an outcome of school closure, trauma and hunger. In scenario one, if schools were to have fully reopened in September 2025, there would already be five years of learning loss. The scenario implies that cumulatively, learners would have missed out on three years of schooling as a result of COVID-19 (one year) and war (two years) and that their recovery would be further impeded by a further two years considering the trauma (one year) and hunger (one year) that many would have experienced. Drawing on relevant studies, it is assumed that for each year of trauma, learning recovery will require an additional half a year.<sup>iii</sup>

It is assumed that for each year of hunger and famine, which was officially declared in August 2025,<sup>iv</sup> it will take an additional one year for students' learning to recover, recognising that the effects of malnutrition will have longer term effects.<sup>v</sup> This implies that students in the elementary phase would only be able to achieve very basic literacy and numeracy at most. It is important to note that the children and young people have encountered hunger in different modalities since the beginning of the war on Gaza.

In August 2025 the Integrated Food Security Phase Classification (IPC) stated:

*As of 15 August 2025, Famine (IPC Phase 5) with reasonable evidence—is confirmed in Gaza Governorate. After 22 months of relentless conflict, over half a million people in the Gaza Strip are facing catastrophic conditions characterised by starvation, destitution and death. Another 1.07 million people (54 percent) are in Emergency (IPC Phase 4), and 396,000 people (20 percent) are in Crisis (IPC Phase 3) (Integrated Food Security Phase Classification, 2025).*

In the second scenario, if school reopening is delayed for an additional year until 2026, learners would experience a total estimate of seven and a half years of learning loss. This includes one year lost due to COVID-19 and three years lost because of the ongoing war. A further three and a half years would be required for learning recovery, taking into account the trauma and hunger that many learners would have experienced. This implies that students in the elementary phase of schooling would achieve little or no literacy and numeracy.

In the third scenario, which is conceived to be the worst-case scenario, an entire generation of learning would be lost. This is the scenario that many of the interviewees described as creating a generation of children without meaningful access to education, and for whom the dream and aspiration to learn has all but disappeared. The implication of this third learning loss scenario is expressed clearly in the words of an interviewee:

*“My concern is that we fear for our children. The anger, not the hate, that they have is dangerous... not just for the Israelis, but for the whole world. If someone feels that the whole world has let them down and they are alone... My child who is 12 says “they all betrayed us”... Imagine the impact on generations to come. We can overcome the learning loss through summer schools and lengthening school days but this... When I graduated during the first intifada there was a year with just 40 days, but the whole world around us was with the Palestinians. Now, there is anger, and they are hopeless. This is dangerous for the region and the existence in Palestine.” (International organisation staff)*

**Table 1. Projected scenarios of learning loss**

Projected date of resumption of learning	Learning loss			Total learning loss
	School closures due to war and COVID-19	Trauma	Hunger	
<u>Assumption</u>	Learning loss due to COVID-19 was 1 year  Each year of school closures due to war is equivalent to 1 year of learning loss	For each year of war, trauma will cause an additional 0.5 of learning loss	Starting in 2024, each year of hunger will result in an additional 1 year of learning loss	
<u>Scenario 1:</u> Classes resume in September 2025	3 years of learning loss	1 year of learning loss as because of trauma (0.5 for each year of war)	1 year of learning loss because of hunger	5 years of learning loss (students would have lost competencies equivalent to 5 years of schooling)
<u>Scenario 2:</u> Classes resume in September 2026	4 years of learning loss	1.5 year of learning loss due to trauma (0.5 for each year of war)	2 years of learning loss because of hunger	7.5 years of learning loss (students would have lost competencies equivalent to 7.5 years of schooling)
<u>Scenario 3:</u> Classes resume in September 2027	10 years of learning loss, equivalent to almost an entire school cycle. (5 years school closure, 2 years trauma, 3 years hunger)			

Source: Authors' calculations.

The three scenarios outlined above estimate the unprecedented learning loss amongst the children in Gaza because of the cumulative effects of COVID-19, the ongoing war and long-term consequences of trauma and hunger that are likely to hold back learning recovery. Due to the war, children are not only missing formal education, but they are also experiencing diminished capacity to learn due to trauma, malnutrition and instability.



To further illustrate the devastating impact of the scenarios, for a Grade 12 student registered to complete Tawjihi (General Secondary Education Certificate Examination) in 2025, their chance of graduating is likely to be delayed between three to four years unless they return immediately to school with additional support for lost learning. This risks education loss for a generation of children and young people and undermines the achievement of the education Sustainable Development Goal. Even though some students were able to take the Tawjihi exam in 2025, their chances of enrolling in higher education remain constrained due to the destruction of universities and vocational education infrastructure, and killing and injury of staff.

These estimates serve as a stark warning that delaying recovery plans could lead to similar or even more long-term educational, social and economic implications for Gaza. Therefore, immediate and sustained investment in education is essential to prevent further setbacks.

### **Remedial education to overcome learning loss**

The work of teachers and counsellors is challenging, not only now but also for future recovery. In the above section, we estimated five to seven years of learning loss. Beyond ensuring that all children resume schooling, there will be a need for remedial education and additional tutoring to enable learning recovery. This will require empowering teachers and counsellors as well as recruiting additional staff (teaching assistants). Remedial education is the support provided by teachers and teaching assistants to learners returning to classrooms to compensate for the learning loss because of school closures, trauma and hunger. This is in effect additional catch-up classes to make up for the learning loss as outlined in the estimates above.

Table 3 summarises our estimates of teacher requirements. Calculations are based on providing all students in groups of 40 with additional tutoring, taking account of the total years of learning loss (for example, five years lost if schools reopen in 2025, seven years if reopening is delayed to 2026). The group of 40 students per session is based on the existing average class size in schools in Gaza which is 41.2 (UNRWA, 2022). We assume that the teaching assistants will be hired full-time (i.e., working for 40 hours per week). We also assume that the current teaching force will simultaneously contribute to remedial education for one hour per week (see Appendix 1 for calculations). The assumption of this model is that teaching assistants are additional part-time staff who are recruited for remedial education and therefore costed. It is possible that those involved in the reconstruction may choose to use the existing teaching force for remedial education. If teaching assistants are not recruited, then remedial education will have to be added to the workload of the existing teachers.

We present two scenarios based on the assumption that learning recovery could be consolidated in an accelerated manner in one year or completed over a period of three

years. The first scenario represents a three-year recovery plan, in which the remedial learning efforts are spread across three school years. The second scenario is a one-year intensive recovery plan, meaning that remedial learning interventions are implemented within a single school year.

**Table 2: Projected required teaching assistants for remedial education in Gaza**

Scenario	Years of loss (Y) <sup>vi</sup>	Recovery period (T)	Total number of teaching assistants needed for learning recovery <sup>vii</sup>
<b>Schools reopen 2025, 3-years' recovery</b>	5	3 years	1,371
<b>Schools reopen 2025, 1-year accelerated</b>	5	1 year	4,113
<b>Schools reopen 2026, 3-years' recovery</b>	7.5	3 years	2,056
<b>Schools reopen 2026, 1-year accelerated</b>	7.5	1 year	6,169

Source: Authors' calculations.

The demand for teaching assistants for remedial learning rises steeply as the recovery horizon shortens. For a 2025 school reopening, a three-year recovery programme requires approximately 1,371 remedial teachers per year. Compressing the recovery to a one-year accelerated programme demands over 4,113 teaching assistants. The same pattern holds if schools reopen in 2026, with annual demand ranging from about 2,056 remedial teacher assistants under a three-year plan to around 6,169 teacher assistants under a one-year accelerated plan.

But it is not just additional teaching assistants who will be needed for remedial learning. Teachers who have been killed or injured and therefore unable to return to teaching will also need to be replaced, as presented in Table 4. We estimate teacher recovery under two scenarios. First, we assume that 30 percent of the total injured and traumatised teachers would return to the schools after the war. Second, we estimate that none of the injured teachers would return to teaching and would be replaced by a new teaching force.

*Table 3. Number of teachers to be replaced in Gaza*

Scenario	Total teachers before war	Teachers killed	Teachers injured/ traumatised	Teachers unable to return	Demand for replacement teachers
<b>If 30% of injured teachers do not return to schools</b>	23,000	780	3,211	963	1,743
<b>If none of the injured teachers return to schools</b>	23,000	780	3,211	3,211	3,991

*Source: Authors' calculations.*

Depending on whether injured teachers return to classrooms, between 1,743 and 3,991 new teachers will need to be recruited simply to restore the pre-war teaching force. When added to remedial requirements, this represents a very large expansion of the teacher workforce.

Overall, the results illustrate that even under the most gradual recovery scenario, the system will need to recruit and train more than 1,000 teaching assistants for remedial education per year, in addition to replacing the teachers who were killed. Faster recovery or delayed reopening to 2026 raise these requirements dramatically, highlighting the urgency of planning, financing and mobilising large-scale teacher preparation initiatives.

While the above figures are broad estimates and projections based on the available data, the trends illustrate the reality that the war on Gaza will result in the need for large numbers of teachers to be recruited and consequently will add to the cost of recovery. Most of the current costs for reconstruction tend to understate the need for additional teacher recruitment, both to replace those injured or killed as well as to expand the workforce to provide remedial education that addresses the severe learning losses. In short, without massive and immediate investment in teacher recruitment and training including recruitment of teaching assistants to support remedial education, Gaza faces an unrecoverable collapse in human capital.

The above has pointed to the scale of challenge but our research also indicates how teachers embody commitment, hope, and resilience, while also reflecting a deepening sense of despair, frustration and disillusionment with the world's failure to support them amid a horrific and brutal war. Teachers remain hopeful but emphasise the urgent need for 'a psychological, physical, social and financial recovery' (Faculty of Education, University of Cambridge, Centre for Lebanese Studies & UNRWA, 2025). They highlight the importance of schools being fully staffed and of providing psychosocial support for learners. Teachers warned that 'with each passing day, the reality deepens: not only will an entire generation of learners be deprived of education, but thousands of both

learners and teachers risks losing all faith in the international community and in public commitments to peace.

### **Cost estimates for teachers' replacement: preparation of new teachers**

The estimation of teacher replacement costs reflects the long-term financial implications of rebuilding Gaza's education workforce following the recent war. The replacement of teachers who have been killed, injured, or otherwise unable to return to teaching requires new entrants to complete a four-year bachelor's degree.<sup>viii</sup> Based on the 2022 average annual tuition fee of US\$1,400<sup>ix</sup> for undergraduate teacher education programmes in Palestinian universities, the total cost of preparing a new teacher amounts to approximately US\$ 5,600 per student. We calculated costs for teacher replacement under the two scenarios as presented in Table 5. The data related to teacher replacement is drawn from Table 4.

*Table 4. Cost of teacher replacement*

Scenario	Total teachers before war	Teachers killed	Teachers injured/ traumatised	Teachers unable to return	Demand of replacement teachers	Cost of teacher preparation (4-year qualification) <sup>x</sup> in US\$
If 30% of injured/ traumatised teachers do not return to schools	23,000	780	3,211	963	1,743	9,762,480
If 100% of injured/ traumatised teachers do not return to schools	23,000	780	3,211	3211	3,991	22,349,600
<b>Demand of replacement teacher * US\$ 5,600 = cost of teacher preparation</b>						

*Source: Authors' calculations.*

Table 5 presents the cost projections under two scenarios. In the first scenario - if 30 percent of injured or traumatised teachers (n = 963) do not return to service - the total demand for replacement teachers is estimated to be 1,743, resulting in a total projected cost of US\$9.76 million. In the second, more severe scenario - where 100 percent of injured or traumatised teachers (n = 3,211) are unable to resume teaching - the total replacement demand rises to 3,991 teachers, with an estimated cost of US\$22.35 million.

## Salary cost of the teachers in Gaza

In this section the salary costs of the teachers returning to the teaching profession were calculated. The baseline number of teachers used for these calculations was the total number of teachers employed before the war. According to a report by the World Bank (2025: 121), the average monthly salary of a Palestinian teacher was US\$1,310 in both Gaza and the West Bank in 2021. We included their monthly salary, cost of additional time for remedial education and the cost of their continuing professional development (CPD) in the cost calculations. For the CPD costing, we made a conservative assumption that the annual cost of CPD is equivalent to 10 percent of a teacher's salary. Table 6 projects such costs.

*Table 5. Salary and other costs of restoring teachers*

Scenario	Total # teachers before war	Annual salary cost of teachers	Annual cost of salary for additional time for remedial education <sup>xi</sup>	Annual cost of CPD (10% of their annual salary)	Cost of teacher preparation (spread over 4 years)	Total cost (salary + remedial + CPD + preparation)
If 30% of injured/traumatised teachers do not return to schools	23,000	361,560,000	9,039,000	36,156,000	9,762,480	416,517,480
If 100% of injured/traumatised teachers do not return to schools	23,000	361,560,000	9,039,000	36,156,000	22,349,600	429,104,600
<b>Cost estimates in US\$</b>						

Source: Authors' calculations.

The cost of provision for annual salaries required to restore the pre-war teaching workforce of 23,000 teachers is estimated to be approximately US\$361.56 million, representing a recurring expenditure. To support post-conflict learning recovery, teachers would need to deliver remedial education for an additional hour per week, which would incur an estimated annual cost of US\$9.04 million.<sup>xii</sup> The expenditure on CPD, calculated at 10 percent of the total annual salary, amounts to US\$36.156 million.<sup>xiii</sup> When these costs are combined with the estimated teacher preparation costs required to replace 30 percent of injured or traumatised teachers, the total expenditure rises to approximately US\$416.52 million. In a more extreme scenario, where all injured

teachers are unable to return to service, the total cost increases further to US\$429.105 million.

These projections illustrate the substantial investment required to restore Gaza's teaching capacity to pre-war levels. Even under the conservative assumption of partial non-return, the financial burden of rebuilding human capital is significant. The figures highlight the need for targeted international assistance and national recovery planning to ensure that the long-term rebuilding of the education sector is both financially and institutionally sustainable.

### **Estimating costs for teaching assistants**

In this section, we estimate the possible costs of recruiting the desired number of teaching assistants to compensate for learning loss in Gaza. The teaching assistants - defined as individuals possessing a college-level qualification or higher to conduct remedial sessions - can be recruited on a contractual basis to support learning recovery. Accordingly, we calculated the projected costs based on the assumption that the salary of each teaching assistant would be 50 percent lower than that of a full-time government schoolteacher. Salary estimates are derived from a report by the World Bank (2025) that cites the average monthly salary of a full-time teacher as US\$1,310 in 2021. Using these parameters, we projected the total salary costs under four scenarios of school reopening and recovery duration, as summarised in Table 7.

**Table 6. Projected salary cost for teacher assistants for remedial education in Gaza<sup>xiv</sup>**

Scenario	Years of loss (Y) <sup>xv</sup>	Recovery period (T) <sup>xvi</sup>	Teaching assistants needed for learning recovery	Monthly salary of teacher (US\$)	50% of salary for teaching assistants (US\$)	Total Salary cost teaching assistants (US\$) per year <sup>xvii</sup>	Total salary cost of Teaching assistants over three years <sup>xviii</sup>
<b>A1: Schools reopen 2025, 3-years' recovery</b>	5	3 years	1,371	1,310	655	10,774,750	32,324,250
<b>A2: Schools reopen 2025, 1-year accelerated</b>	5	1 year	4,113	1,310	655	32,324,250	-
<b>B1: Schools reopen 2026, 3-years' recovery</b>	7.5	3 years	2,056	1,310	655	16,162,125	48,486,375
<b>B2: Schools reopen 2026, 1-year accelerated</b>	7.5	1 year	6,169	1,310	655	48,486,375	-
<b>Note: This costing is only for the salary, which does not reflect training of teaching assistants. It is assumed that the teaching assistants will work under the mentorship of existing teachers.</b>							

Source: Authors' calculations; World Bank, 2025.

Table 7 presents projected salary costs for teaching assistants required to support remedial education in Gaza under four potential school reopening and learning recovery scenarios. These projections are based on varying assumptions regarding the years of cumulative learning loss (Y), the duration of the recovery period (T), and the number of teaching assistants required to address the learning backlog.

In Scenario A1, schools are assumed to reopen in 2025 following five years of learning loss, with a three-year recovery period. Under these conditions, the projected demand is 1,371 teaching assistants, resulting in a total salary cost of approximately US\$32.32 million over the recovery period of three years. In terms of yearly costing, the cost will be US\$10.77 million for each of the three years. By contrast, Scenario A2 models an accelerated one-year recovery following the same learning loss (five years). This accelerated approach increases short-term demand substantially, requiring 4,113 teaching assistants to complete remedial programmes within one year. Despite the larger workforce, the total annual salary cost remains US\$32.32 million as the

expenditure is concentrated within a single year rather than spread across multiple years.

Similarly, Scenarios B1 and B2 assume that school reopening is delayed until 2026, corresponding to seven years of cumulative learning loss. Under a three-year recovery model (B1), the projected requirement rises to 2,056 assistants, with a total salary cost of approximately US\$48.48 million. Under the one-year accelerated model (B2), the demand further increases to 6,169 assistants, again maintaining the same total cost of US\$48.48 million due to the shorter timeframe.

Overall, the projections suggest that accelerated recovery scenarios (A2, B2) require a larger number of teaching assistants to achieve rapid learning recovery within one year, whereas extended recovery scenarios (A1, B1) spread instructional recovery over three years with proportionally fewer assistants engaged per year. The total cost remains constant within each reopening year, as it reflects the total expenditure for the given period rather than annualised costs across multiple years. These scenarios suggest that the effect of war on learners is significant and will require substantial investment in learning recovery to support learners in their learning progress. Even if schools open immediately the learning loss will require serious intervention and investment as suggested in this report.

The total estimated cost to support the learning of Palestinians impacted by the war is between US\$448.84 million and US\$477.59 million, depending on the scale of teacher replacement, the years of learning loss, and the recruitment of teaching assistants to support learning recovery for each of the two learning scenarios.

One way of understanding the effect of the war on Gaza and in the West Bank is to understand the human capability and capacity that has been lost. Education as an intensive human activity relies on qualified, motivated and experienced teachers, counsellors and education officials to deliver equitable and quality learning. The education system in Palestine has been destroyed by the war, which has had a major impact on human capabilities and capacities. Rebuilding education in Gaza as well as in the other occupied territories of Palestine is reliant on the long-term knowledge, skills, and expertise developed over many years in delivering education. This human capacity is not easily recovered. However, human capacity still exists within the education system and any reconstruction efforts must build upon and support the decades long experience that was part of the Palestinian education system.

The above figures are broad estimates and projections based on the available data and our assumptions, but illustrate that the war on Gaza means large numbers of teachers must be recruited. Most of the current estimates for reconstruction underplay the need for additional teacher recruitment, for both replacing those injured or killed, as well as the additional numbers needed to provide for meaningful remedial education. Without



significant investment in teacher recruitment and training, Gaza faces a huge capacity challenge in delivering education.

The analysis points to the scale of the challenge, while also highlighting how teachers in their work embody commitment and resilience. Teachers interviewed emphasised the urgent need for 'a psychological, physical, social and financial recovery'. They highlighted the importance of schools being fully staffed and of providing teachers, as well as parents, with psychological support so they can help students effectively.

## The West Bank

In this section, we present the impact of war on the learning loss during a school year, followed by the remedial plan for learning recovery in the West Bank. Then we estimated the financial cost required to prepare and recruit teachers.

### Overview of teaching force effected by war in the West Bank

Table 8 presents a broad overview of the existing teaching force. In 2024/25, there were 52,087 teachers in the West Bank, including public, UNRWA and private schools (Occupied Palestinian Territory Education Cluster, 2025a). In September 2025, according to reports, the ongoing war has directly impacted 28 teachers, of which five teachers have died, and 23 have been injured.

*Table 7. Teaching force affected by war in the West Bank*

Total teaching force in 2024-25	No. of teachers killed (a)	No. of teachers injured (b)	No. of teachers arrested (c)
52,087	5	23	198

Source: Occupied Palestinian Territory Education Cluster, 2025a; OCHA oPt, 2024.

### Learning loss and recovery

Students in the West Bank have faced unprecedented levels of learning loss because of escalating violence, movement restrictions, and economic decline. During the 2023/2024 academic year, on average between 8 and 20 percent of schools in the West Bank were closed due to military operations, settler violence, checkpoints and curfews (Occupied Palestinian Territory Education Cluster, 2024). As an interviewee noted:

*“I would say, we have a huge amount of learning loss among our students. We cannot separate the students from the situation on the ground. What they are seeing on the TV and hearing from their parents and seeing in their own eyes could affect their ability to focus inside the classroom and gain the knowledge and skills we are trying to provide.” (International organisation staff)*

Due to intensifying safety concerns, access constraints, and economic pressures since October 2023, all public schools across the West Bank, administered by the Palestinian Authority, have implemented a distance learning system, combining in-person engagement where possible with asynchronous offline learning (Occupied Palestinian Territory Education Cluster, 2024). From February 2024 to the end of the school year, face-to-face schooling was reduced to two days a week (Occupied Palestinian Territory Education Cluster, 2024). During the school year 2024/2025, in-person learning increased to four days a week (INEE, 2025). An interviewee reported that the Ministry of Education used various platforms to overcome what is lost because of attacks on education. These included a Palestinian education television channel that focused on

students in East Jerusalem, an advanced online platform including recorded lectures and live interactive sessions, as well as in-person teaching.

On 8 May 2025, six UNRWA schools in East Jerusalem were forcibly closed, cutting off education for around 800 children, while in the northern West Bank, including East Jerusalem, at least ten UNRWA-run schools in Jenin, Tulkarm and Nur Shams refugee camps have also been shut, disrupting the schooling of more than 4,400 students (OCHA oPt, 2025b). From these 10 schools, 40 percent of the students are attending classes run by UNRWA in Palestinian Authority school buildings for three days a week, based on an agreement between UNRWA and the Palestinian Authority (Occupied Palestinian Territory Education Cluster, 2025b).

Areas affected by Israeli security force operations experienced a large loss in the number of school days. Between 48 and 78 learning days were recorded as lost over the academic year 2024-2025: 78 days in Jenin, 59 days in Tulkarm, and 48 days in Nur Shams refugee camps (UNRWA, 2025). UNRWA schools have been able to address this learning disruption by catching up or extending their academic year to end in July 2025 instead of June. During school closures, UNRWA launched an emergency education programme in February 2025, which reached 4,600 students attending closed schools. By May 2025, 90 percent of these students participated in the programme's activities, which included distance learning strategies, with self-learning materials accessible via the UNRWA Digital Learning Platform, a compressed curriculum, and a range of communication channels. For schools that faced forced closures, UNRWA facilitated in-person learning by providing alternative learning spaces at Palestinian Authority schools three days a week (UNRWA, 2025).

In total, from October 2023 to September 2025, children and young people lost at least two academic years, due to closures related to COVID-19 and the current attacks on education. In 2023/24, schools in the West Bank were closed for 108 days due to shortened school weeks, and 14 days due to escalation of attacks. In addition, in 2024/25, schools lost 36 days due to a shortened week schedule and 22 days due to the escalation of attacks. This is equivalent to one school year in total over the period October 2023 to September 2025.

By considering various scenarios from negative to positive, we explored the depth of the losses that children and young people have faced in their education trajectories. This analysis is grounded in the same assumptions outlined above used for the analysis of learning losses in Gaza. However, the assumptions used in the West Bank analysis are based on the COVID-19 pandemic, attacks on education, and resulting trauma.

In Table 9, we outline three scenarios for learning loss calculated as an outcome of school closure and trauma. In scenario one, if schools reopen in 2025, there will be an estimated two and a half years of learning loss. The scenario implies that cumulatively

learners would have missed out on one year of schooling because of COVID-19, and one year due to shortened school weeks and school closures due to the escalation of attacks. In addition, it is assumed that their recovery would be further impeded by an additional half a year accounting for the trauma experienced by many learners.

If school reopening is delayed until 2026, learners will experience an estimated four years of learning loss. This includes one year due to COVID-19, and two years of the war. Learning recovery will require an additional one year when considering the trauma that many would have experienced. Table 9 summarises the two scenarios of learning losses.

If the schools reopen in 2025, the learning loss will be equivalent to around two and a half years in the West Bank, which includes of two years of loss due to COVID-19 and attacks on education as well as half a year of trauma. If schools reopen in 2026, learning loss increases to four years. The uncertainty around the continuity of schooling remains severe, as identified by one interviewee,

*“If we are forced to start next year with the same conditions, it will be very tough because many children will not be able to attend. We don’t know what will happen in East Jerusalem or North West Bank.” (International organisation staff)*

**Table 8. Projected scenarios of learning loss in the West Bank**

Projected date of resumption of learning	Learning loss		Total learning loss
	School closures due to COVID-19 and attacks on education	Trauma	
<b>Assumptions</b>	Learning loss due to COVID-19 was 1 year  Each year of school closures due to attacks on education is equivalent to 1 year of learning loss	For each year of attacks, trauma will cause an additional 0.5 year of learning loss	
<b>Scenario 1: Classes resume in September 2025</b>	2 years of learning loss	0.5 years of learning loss because of trauma	2.5 years of learning loss (students would have lost competencies equivalent to 2.5 years of schooling)
<b>Scenario 2: Classes resume in September 2026</b>	3 years of learning loss	1 year of learning loss because of trauma	4 years of learning loss (students would have lost competencies equivalent to 4 years of schooling)
<b>Scenario 3: Classes resume in 2027</b>	5.5 years of learning loss (4 years school closure, 1.5 years trauma)		

Source: Authors' calculations.

### **Remedial education to overcome learning loss**

As outlined above, the learning loss in the West Bank is between two and a half to four years. Therefore, beyond reopening schools for all children, there will be a need for remedial education. This requires preparing existing teachers as well as recruiting additional staff. Table 10 summarises the projected teacher requirements for remedial education under various scenarios of school reopening and recovery time periods.<sup>xix</sup> We estimated remedial staffing in teacher full-time equivalents (FTE) using a demand-side formula. We assumed that teaching assistants for remedial education will be hired full-time (i.e., working for 40 hours per week). We also assumed that the current teaching

force will simultaneously contribute to remedial teaching, therefore we accounted for this in the calculations (see Appendix 2).

### Estimating demand for teachers to overcome learning loss

*Table 9. Projected teacher requirements for remedial education in the West Bank*

Scenario <sup>xx</sup>	Years of loss (Y) <sup>xxi</sup>	Recovery period (T) <sup>xxii</sup>	Total number of teaching assistants needed for learning recovery <sup>xxiii</sup>
A1 – Schools reopen 2025, 3-years’ recovery	2.5	3 years	815
A2 – Schools reopen 2025, 1-year accelerated	2.5	1 year	2,444
B1 – Schools reopen 2026, 3-years’ recovery	4	3 years	1,303
B2 – Schools reopen 2026, 1-year accelerated	4	1 year	3,910

*Source: Authors’ calculations.*

The demand for remedial teachers rises steeply as the recovery horizon shortens. For a 2025 reopening, a three-year recovery programme requires approximately 815 remedial teachers per year, but compressing the recovery to a one-year accelerated programme demands over 2,444 teachers. The same pattern holds if schools reopen in 2026, with the annual demand ranging from approximately 1,303 remedial teachers under a three-year plan to 3,910 teachers under a one-year accelerated plan. In all scenarios, thousands of teaching assistants will be needed for remedial teaching, and qualified teachers who have been killed or injured and therefore unable to return to teaching will also need to be replaced. In Table 11, we estimated teachers’ recovery under two scenarios. First, our assumption in scenario one was that 30 percent of the total injured and traumatised teachers would return to the schools after the war. Secondly, our assumption in scenario two was that none of the injured teachers would return to teaching and would be replaced by a new teaching force.

**Table 10. Teachers to be replaced in the West Bank**

Scenario	Total teachers before war	Teachers killed	Teachers injured/traumatised	Teachers unable to return	Demand for replacement teachers
If 30% of injured/traumatised teachers do not return to schools	52,087	5	23	7	12
If 100% of injured/traumatised teachers do not return to schools	52,087	5	23	23	28

Source: Occupied Palestinian Territory Education Cluster, 2025a; OCHA oPt, 2024; authors' calculations.

Depending on whether injured teachers return to classrooms, between 12 and 28 new teachers would be required simply to restore the pre-war teaching force. When added to remedial requirements, this represents a very large expansion of the teacher workforce in the West Bank.

### **Estimating costs for replacing teachers<sup>xxiv</sup>**

The estimation of teacher replacement costs reflects the long-term financial implications of rebuilding the West Bank following the recent war. The replacement of teachers who have been killed, injured, or otherwise unable to return to teaching requires new entrants to complete a four-year bachelor's degree.<sup>xxv</sup> Based on the 2022 average annual tuition fee of US\$1,400<sup>xxvi</sup> for undergraduate teacher education programmes in Palestinian universities, the total cost of preparing a new teacher amounts to approximately US\$5,600 per student. We calculated costing for teacher replacement under the two scenarios as presented in Table 12.

**Table 11. Cost of teacher replacement**

Scenario	Total teachers before war	Teachers killed	Teachers injured/ traumatised	Teachers unable to return	Demand of replacement teachers	Cost of teacher preparation (4-year qualification) US\$ <sup>xxvii</sup>
<b>If 30% of injured/ traumatised teachers do not return to schools</b>	52,087	5	23	7	12	66,640
<b>If all 100% of injured/ traumatised teachers do not return to schools</b>	52,087	5	23	23	28	156,800
<b>Demand of replacement teacher * US\$5600 = Cost of teacher preparation</b>						

Source: Authors' calculations.

Table 12 presents the cost projections under two scenarios. In the first scenario - if 30 percent of injured or traumatised teachers (n = 12) do not return to service - the total demand for replacement teachers is estimated at 12, resulting in a total projected cost of US\$66,640. In the second, more severe scenario - where 100 percent of injured or traumatised teachers (n = 28) are unable to resume teaching - the total replacement demand increases to 28 teachers, at a total estimated cost of US\$156,800.

### **Salary cost of the teachers in the West Bank**

We now project the salary cost of the teachers returning to the teaching profession. The baseline number of teachers for the calculations is the total number of teachers employed before the war. We included their monthly salary, the cost of additional time for remedial education and the cost of CPD. Salary estimates are derived from a report by UNRWA and the World Bank that cites the average monthly salary of a full-time teacher as US\$1,310 in 2021 (World Bank, 2025: 121). For the CPD costing, we made a conservative assumption that the annual cost of CPD is equivalent to 10 percent of their salary. Table 13 projects such costs.



**Table 12. Salary and other costs of restoring teachers in the West Bank in US\$**

Scenario	Total # teachers before war	Annual salary cost of teachers	Annual cost of salary for additional time for remedial education <sup>xxviii</sup>	Annual cost of CPD (10% of their annual salary)	Cost of teacher preparation (spread over 4 years)	Total cost (salary + remedial + CPD + preparation) US\$
<b>If 30% of injured/traumatised teachers do not return to schools</b>	52,087	818,807,640	20,470,191	81,880,764	66,640	921,158,595
<b>If 100% of injured/traumatised teachers do not return to schools</b>	52,087	818,807,640	20,470,191	81,880,764	156,800	921,315,395

Source Authors' calculations:

The annual salary cost required to restore the pre-war teaching workforce of 52,087 teachers is estimated at approximately US\$818.81 million, as a recurring annual expenditure. To support post-conflict learning recovery, teachers would need to deliver remedial education for an additional hour per week, which would incur an estimated annual cost of US\$20.47 million.<sup>xxix</sup> The expenditure on continuous professional development (CPD), calculated at 10 percent of the total annual salary, amounts to US\$81.88 million.<sup>xxx</sup> When these costs are combined with the estimated teacher preparation costs required to replace 30 percent of injured or traumatised teachers, the total expenditure rises to approximately US\$921.16 million. In a more severe scenario, where all injured teachers are unable to return to service, the total cost increases further to US\$921.31 million.

### **Estimating costs for teaching assistants**

Using the same assumptions as Gaza, we estimated the possible costs of recruiting the desired number of teaching assistants to compensate for learning loss in the West Bank. The teaching assistants - defined as individuals possessing a college-level qualification or higher to conduct remedial sessions - can be recruited on a contractual basis to support learning recovery. We calculated the projected costs based on the assumption that the salary of each teaching assistant would be 50 percent lower than that of a full-time government teacher. Thus, the estimated remuneration for a teaching assistant is US\$655 per month. Based on this assumption we projected the total salary

costs under four scenarios of school reopening and recovery duration, as summarised in Table 14.

*Table 14. Projected salary cost for teacher assistants in the West Bank<sup>xxx</sup>*

Scenario	Years of loss (Y) <sup>xxxii</sup>	Recovery period (T) <sup>xxxiii</sup>	Teaching assistants needed for learning recovery <sup>xxxiv</sup>	Monthly salary of teacher (US\$)	50% of salary for teaching assistants (US\$)	Total salary cost teaching assistants (US\$) per year	Total salary cost of teaching assistants over three years US\$
A1: Schools reopen 2025, 3-years' recovery	2.5	3 years	815	1,310	655	6,402,625	19,207,875
A2: Schools reopen 2025, 1-year accelerated	2.5	1 year	2,444	1310	655	19,207,875	-
B1: Schools reopen 2026, 3-years' recovery	4	3 years	1,303	1,310	655	10,244,200	30,732,600
B2: Schools reopen 2026, 1-year accelerated	4	1 year	3,910	1,310	655	30,732,600	-
<i>Note: This cost is only for the salary, which does not reflect training of teaching assistants. It is assumed that the teaching assistants will work under the mentorship of existing teachers.</i>							

Source: Authors' calculations.

Table 14 summarises the cost estimates under four recovery scenarios that vary by the timing of school reopening and the duration of learning recovery efforts. In the A1 scenario (schools reopening in 2025 with a three-year recovery period), the demand for teaching assistants is projected at 815, with a total salary cost spread across three years at approximately US\$19.21 million. The A2 scenario, assuming an accelerated one-year recovery in 2025, increases the workforce requirement to 2,444 assistants, although the total cost remains similar due to the shorter duration of employment. For a delayed reopening in 2026, the B1 scenario (three-year recovery) raises the demand to

1,303 assistants at a cost of US\$30.73 million, while the B2 scenario (one-year accelerated) projects 3,910 assistants with a comparable overall cost.

The total estimated cost to support the learning of West Bank and east Jerusalem impacted by the war is between US\$940.36 million and US\$952.0 million, depending on the scale of teacher replacement, the years of learning loss, and the recruitment of teaching assistants to support learning recovery for each of the two learning scenarios.

These findings suggest that the financial implications of recovery interventions are highly sensitive to the timing and duration of implementation. Shorter, accelerated recovery programmes may appear cost-efficient in the short term but require intense deployment of human resources. Conversely, multi-year recovery plans distribute costs over time, enabling more gradual pedagogical and institutional adaptation.

Attacks on education in the West Bank have destabilised education and the work of teachers. The analysis of this section suggests the recovery and reconstruction of education and teaching will require significant financial and human resources, capacity development and commitment. Teachers talk of an uncertain future in which, with each passing day, children, parents, communities and teachers lose hope in the future of the education system. Yet teachers talk of hope, of their commitment to supporting learning now and in the future, and to their steadfastness. Education in the West Bank, like the rest of Palestine, is at difficult juncture – of hope and resilience on the one hand, and despair on the other.

The actions of teachers in the West Bank speak to their steadfastness, their resilience and the ability to persist to affirm and support education as core to Palestinian identity and to resisting efforts at erasure. The most basic and vital need teachers spoke to in restoring the right to education in Palestine is the immediate and permanent cessation of attacks, detentions and arrests. Without the ending of attacks, education recovery and reconstruction is not possible. The right to return and the right to education is a call for dignity, independence and justice for all Palestinians in the West Bank.

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## Appendices

### Appendix 1: Remedial learning calculation for Gaza

*Remedial FTE (demand): Treating 100% of students per year:*

$$\text{FTE remedial} = \frac{N \text{ students to serve} \times S \times L}{H \times G}$$

N: students targeted for remediation

S: sessions per week per group

L: hours per session

G: group size (students per group)

H:<sup>xxxv</sup> teacher contact hours/week available for remedial ( $\approx 40$  if full-time remedial)

Let's assume we cover 100% of students (N) for remedial hours in a group of 40 students<sup>xxxvi</sup> (G) and conduct a 1-hour (L) session twice in a week (S). The teaching load per teacher (H) will be 40 hours/week.

To calculate:

$$\text{FTE remedial} = \frac{658000 \times 2 \times 1}{40 \times 40} = 823 \text{ FTE/year}$$

This shows we will need 823 teachers for remedial sessions who can teach students for an additional three hours for learning loss recovery.

All 658000 students get Tier-2 remedial (2<sup>xxxvii</sup> sessions/week, 1 hr, groups of 40).

Teacher weekly remedial capacity = 40 hrs = 1 FTE.

Annual remedial teaching assistants demand (baseline) = 823 FTE/year.

Learning loss if schools reopen in 2025 = 5 years.

$$\text{FTE adjusted} = \text{FTE remedial} \times \frac{Y}{T}$$

Where

Y = years of learning loss (here = 5)

T = years allowed for recovery (1, or 3)

#### Case A – schools reopen in 2025 (Y=5)

A1: 3-year recovery  $\text{FTE adjusted} = 823 \times \frac{5}{3} = 1371$

A2: 1-year recovery

$$\text{FTE adjusted} = 823 \times \frac{5}{1} = 4113$$

**Case B – schools reopen in 2026 (Y=7.5)**

B1: 3-year recovery

$$\text{FTE adjusted} = 823 \times \frac{7.5}{3} = 2056$$

B2: 1-year recovery

$$\text{FTE adjusted} = 823 \times \frac{7.5}{1} = 6169$$

## Appendix 2: Remedial learning calculation for the West Bank

*Remedial FTE (demand): Treating 100% of students per year:*

$$\text{FTE remedial} = \frac{N \text{ students to serve} \times S \times L}{H \times G}$$

N: students targeted for remediation

S: sessions per week per group

L: hours per session

G: group size (students per group)

H:<sup>xxxviii</sup> teacher contact hours/week available for remedial ( $\approx 40$  if full-time remedial)

Let's assume we cover 100% of students (N) for remedial hours in a group of 40 students<sup>xxxix</sup> (G) and conducted a 1-hour (L) session twice in a week (S). The teaching load per teacher (H) will be 40 hours/week.

To calculate:

$$\text{FTE remedial} = \frac{782000^{\text{xl}} \times 2 \times 1}{40 \times 40} = 978 \text{ FTE/year}$$

This shows we will need 823 teachers for remedial sessions who can teach students for as additional 3 hours for learning loss recovery.

All 782000 students get Tier-2 remedial ( $2^{\text{xli}}$  sessions/week, 1 hr, groups of 40).

Teacher weekly remedial capacity = 40 hrs = 1 FTE.

Annual remedial teaching assistants demand (baseline) = 978 FTE/year.

Learning loss if schools reopen in 2025 = 2.5 years.

$$\text{FTE adjusted} = \text{FTE remedial} \times \frac{Y}{T}$$

Where

Y = years of learning loss (here = 2.5)

T = years allowed for recovery (1, or 3)

### Case A – schools reopen in 2025 (Y=2.5)

A1: 3-year recovery  $\text{FTE adjusted} = 978 \times \frac{2.5}{3} = 815$

A2: 1-year recovery



$$\text{FTE adjusted} = 978 \times \frac{2.5}{1} = 2444$$

**Case B – schools reopen in 2026 (Y=4)**

B1: 3-year recovery

$$\text{FTE adjusted} = 978 \times \frac{4}{3} = 1303$$

B2: 1-year recovery

$$\text{FTE adjusted} = 978 \times \frac{4}{1} = 3910$$

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<sup>i</sup> This includes teachers in public, UNRWA and private schools. The data have been taken from UNRWA (OCHA oPt, 2025a).

<sup>ii</sup> To ensure safety and confidentiality, we have removed all personal and organisational identifiers from the report (Faculty of Education, University of Cambridge, Centre for Lebanese Studies & UNRWA, 2025).

<sup>iii</sup> Several studies have documented the negative impact of war-related trauma on student learning and its association with poor cognitive performance, which could further complicate the recovery process (Salah & Saxena, 2025; Ito et al., 2024). Salah & Saxena (2024) reported that pupils who had exposure to conflict demonstrated lower learning outcomes. The more years students experience conflict, the worse they perform. Ito et al. (2024) examined the impact of conflict in Sri Lanka and in the worst-case scenario of a household experiencing two conflict-related events when a child is school-aged, the probability that the child completes upper secondary or higher education decreases by 97.2 percentage points, lowering educational attainment by 3.49 years (29.4 percent of the sample mean). While it is not possible to ascertain from these available studies the exact impact of learning loss due to trauma, we estimate that it is likely to be equivalent to approximately a 0.5 year loss for every year of war.

<sup>iv</sup> As of 15 August 2025, Famine (IPC Phase 5) with reasonable evidence is confirmed in the Gaza Governorate. After 22 months of relentless conflict, over half a million people in the Gaza Strip are facing catastrophic conditions characterised by hunger and starvation, destitution and death. Another 1.07 million people (54 percent) are in Emergency (IPC Phase 4), and 396,000 people (20 percent) are in Crisis (IPC Phase 3) (IPC Integrated Food Security Phase Classification, 2025a).

<sup>v</sup> Canbolat, Rutkowski & Rutkowski (2025) reported that food insecurity significantly impacts students' academic performance in mathematics. This was equivalent to 2 years of learning loss globally. Country-level comparisons revealed that students in Palestine facing food insecurity have experienced a large decline (up to 10 points) in academic achievement. We have made a conservative assumption that the loss due to a year of hunger results in one year of learning loss. We acknowledge this is an underestimate, given there was a stranglehold on the supply of food since 2023.

<sup>vi</sup> Year of learning loss as calculated in Table 2 is total number of years lost due to COVID-19, war, trauma and hunger.

<sup>vii</sup> As presented in Appendix 1, the total number of teacher full-time equivalent (FTE) teachers required for learning recovery.

<sup>viii</sup> The World Bank (2014: 6) states that 'Although both public and UNRWA school systems require at least four years of college education to become a primary school teacher, UNRWA also requires classroom experience (built into the curriculum at their teachers' colleges). In addition, all new teachers must complete a mandatory two-year intensive and structured training program focused on classroom instruction after they are hired.'

<sup>ix</sup> While the exact figure is not available on many universities websites, some sources mentioned a yearly tuition fee of a 4-year undergraduate qualification (e.g. [An-Najah National University](#)).

<sup>x</sup> This is a one-time cost spread over the duration of 4 years.

<sup>xi</sup> Earlier, we made the assumption that the current teaching force will also contribute to 1 hour for remedial education. Their contribution of 1 hour per week will be equal to 0.5 day per month. The cost of half day salary is US\$32.75 (monthly 1,310 /20 working days= 65.5 per day. 65.5 per day / \* 0.5 (half day) = 32.75.

<sup>xii</sup> This assumes that teachers will need additional pay for the remedial education work they undertake.

<sup>xiii</sup> This assumes that teachers spend at least 10 percent of their working time on continuous professional development and hence the calculation has been based on 10 percent of their salary.

<sup>xiv</sup> Teaching assistants are those who are temporarily recruited to support learning recovery. This model assumes there are additional part time staff who are recruited and therefore costed. It is possible that those involved in the reconstruction may choose to use the existing teaching force for remedial education.

<sup>xv</sup> Years of learning loss as calculated in Table 2 equals the total number of years lost due to COVID-19, war, trauma and hunger.

<sup>xvi</sup> Two scenarios for recovering learning are presented drawn from Table 2.

<sup>xvii</sup> Teaching assistants \* 50 percent of salary \* 12.

<sup>xviii</sup> 3 years \* per year cost.

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- <sup>xix</sup> Calculations are based on treating 100 percent of the students of a group of 40 for additional tutoring, scaled to the total years of learning loss (for example, 2.5 years if schools reopen in 2025, 4 years if reopening is delayed to 2026).
- <sup>xx</sup> We present 2 scenarios based on the assumption that learning recovery could be consolidated in an accelerated manner in 1 year or completed over 3 years. The 3 years recovery window seems pedagogically more sound based on the experience of the authors.
- <sup>xxi</sup> Years of learning loss as calculated in Table 2 is total number of years lost due to COVID-19, war, trauma and hunger.
- <sup>xxii</sup> We estimated various scenarios for recovery. Due to the intensity of learning loss, the recovery period must be well structured.
- <sup>xxiii</sup> As presented in Appendix 2, the total number of FTE teachers required for learning recovery.
- <sup>xxiv</sup> In this modelling we only include teachers, although we recognise that there will be a need to increase the number of counsellors given the effects of the war on both children and teachers
- <sup>xxv</sup> The World Bank (2014: 6) states, 'Although both public and UNRWA school systems require at least four years of college education to become a primary school teacher, UNRWA also requires classroom experience (built into the curriculum at their teachers' colleges). In addition, all new teachers must complete a mandatory two-year intensive and structured training program focused on classroom instruction after they are hired.'
- <sup>xxvi</sup> While the exact figure is not available on many universities website, yet some sources mentioned yearly tuition fee of 4-years undergraduate qualification (e.g. [An-Najah National University](#); [Palestinian Territory](#)).
- <sup>xxvii</sup> This is one time cost spread over the duration of 4 years.
- <sup>xxviii</sup> Earlier we assumed that the current teaching force will also contribute 1 hour for remedial education. Their contribution of 1 hour per week will be equal to 0.5 day per month. The cost of half day salary is US\$32.75 (monthly 1,310/20 working days= 65.5 per day. 65.5 per day /\* 0.5 (half day) = 32.75.
- <sup>xxix</sup> This assumes that teachers will need additional payment for the remedial education work they undertake.
- <sup>xxx</sup> This assumes that teachers spend at least 10 percent of their working time on continuous professional development and hence the calculation has been based on 10 percent of the salary.
- <sup>xxxi</sup> Teaching assistants are those who are temporarily recruited to support learning recovery. This model assumes there are additional part-time staff who are recruited and therefore costed. It is possible that those involved in the reconstruction may choose to use the existing teaching force for remedial education.
- <sup>xxxii</sup> Year of learning loss as calculated in Table 2 is total number of years lost due to COVID-19, war, trauma and starvation.
- <sup>xxxiii</sup> Two scenarios are presented for learning loss recovery.
- <sup>xxxiv</sup> As presented in Appendix 2, the total number of full-time teaching assistants required for learning recovery.
- <sup>xxxv</sup> H = 18 is not the total working hours but the maximum weekly direct teaching load assumed for a remedial teacher.
- <sup>xxxvi</sup> The average class size in Gaza in 2021/2022 was 41.2 (UNRWA, 2022).
- <sup>xxxvii</sup> Plus 1 hour from existing teaching force.
- <sup>xxxviii</sup> H = 18 is not the total working hours but the maximum weekly direct teaching load assumed for a remedial teacher.
- <sup>xxxix</sup> The average class size in Gaza in 2021/2022 was 41.2 (UNRWA, 2022).
- <sup>xl</sup> OCHA oPt, 2024.
- <sup>xli</sup> Plus 1 hour from existing teaching force.

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