

SYRIA EDUCATION PROGRAMME



Importance of Teacher Pay and Its Impact on Learning Outcomes and Dropout Rates

JULY 2022

Disclaimer

This document has been redacted to protect the individuals involved in the Syria Education Programme. All names of people and locations have either been altered or removed, as has any information that may identify people or locations.

Project Description

The Syria Education Programme (SEP), also known as Manahel, provides access to safe, inclusive, and quality learning opportunities. Across its lifecycle the project will reach half a million primary-school-age children in Syria.

SEP enables teachers, school staff, and education sector leadership to deliver quality education. In response to the ever-changing landscape of conflict and crisis in Syria, SEP invests in and applies research to respond to the educational, psychological, and protection needs of Syria's children.

From the specialised requirements of disabled children to the psychological demands of childhood within conflict, students' needs are as diverse as they are urgent. SEP takes a broad and nuanced approach to the myriad needs of individual children and groups. By broadening educational access, promoting a safe and secure environment, and creating quality learning opportunities, SEP strives to meet children's holistic needs at scale.



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LIST OF ACRONYMS

EA	Education Assembly
ED	Education Directorate
KIIs	Key Informant Interviews
IDPs	Internally Displaced People
MERL	Monitoring, Evaluation, Research and Learning
NWS	Northwest Syria
INEE	Inter-Agency Network for Education in Emergencies
PISA	Programme for International Student Assessment

Executive Summary

The Manahel Monitoring, Evaluation, Research and Learning (MERL) team conducted a research exercise with the purpose of understanding the relationship between teacher pay, learning outcomes and dropout rates. The methodology of this research built on secondary data through a desk review of available research literature on teacher pay, and primary data from school records and perception surveys with teachers and headteachers. The school data and perception surveys focused on five indicators: teachers' attendance, teachers' dropout, students' attendance, students' dropout, and students' scores. The school data was collected from 11 supported schools (where teachers are paid) and 11 non-supported schools (where teachers are unpaid) in the second semester of 2020 and first semester of 2021, focusing on teachers of 4th grade students. In addition, Manahel conducted a total of 77 perception surveys with teachers and headteachers (20 headteachers and 16 teachers at non-supported schools, and 22 headteachers and 19 teachers at supported schools). The survey included quantitative data (using a questionnaire with Likert scale¹ responses) in addition to follow-up questions to collect deeper qualitative inputs on the perceptions of the respondents.

Limitations to this methodology included the poor-quality data collected from non-supported schools in comparison with supported schools. This was reported by the field researchers. Another limitation was related to the scarcity of literature in conflicted-affected countries on the research topic, as most research is from developed and stable developing countries.

The key finding is the positive and clear impact of teacher pay on teacher attendance, as both types of data showed more teacher attendance at supported schools than at non-supported schools. This was reinforced by the quantitative and qualitative perception surveys with teachers and headteachers, who agreed on the positive impact of teacher pay on teacher attendance. Moreover, findings show that teacher dropout rates are lower at supported schools than at non-supported schools, where turnover of teachers was reported to be common, affecting students' learning levels and curriculum completion. This was confirmed in the perception surveys, where respondents emphasised the importance of teacher pay on reducing teacher dropout rates. Additionally, teacher pay impacted student attendance with lower absence rates documented at supported schools than at non-supported schools, suggesting that teachers' consistent attendance motivated students to attend school. Teacher pay also positively impacted student dropout, as the number and percentage of dropout cases at supported schools was much lower than at non-supported schools. Evidence from the perception surveys found that regular teacher attendance reduced dropout rates, in the sense that fewer students dropped out at supported schools. As noted above, at supported schools, teacher attendance was more regular, and paid teachers undertook more follow-up on dropout cases than at non-supported schools. Finally, school data showed that students scored better in tests² at schools where teachers are paid than at non-supported schools. The perceptions surveys reinforced the reported findings from teachers and headteachers who noted better quality learning at supported schools as a result of consistent teacher presence, regular student attendance, and greater motivation among teaching staff.

The research exercise clearly documented that in the documented period teacher pay played a positive role in increasing teacher attendance, reducing teacher dropout, increasing student attendance, reducing student dropout, and improving student scores. The resulting recommendation is that teacher pay should be a key component in future schooling or education programmes in NWS.

¹<https://www.britannica.com/topic/Likert-Scale>

² The tests are based on guidance presented in teachers' guides, but are not fully standardised.

Importance of Teacher Pay and Its Impact on Learning Outcomes and Dropout Rates

1. Research Purpose

The purpose of this research is to:

- understand the link between teacher pay and real instructional time through understanding teachers' and students' patterns of attendance and presence at a sample of supported and non-supported schools;
- understand the relationship between teacher pay and students' dropout through understanding dropout rates and how they interact with teacher pay at supported and non-supported schools;
- understand the relationship between teacher pay and improved learning outcomes and results for students through understanding patterns of students' terminal exam results and how they relate to teacher pay at a sample of supported and non-supported schools.

For the purpose of this research, supported schools are those where teachers are paid via the Manahel programme. It is not meant to refer to schools that receive other types of support such as operational costs or training programmes.

2. Research Questions

The research exercise focused on the following research questions:

- Does teacher pay impact instructional time? How? What is the relationship between teacher pay and teachers' and students' patterns of attendance and absence at schools? How does this differ between supported schools and non-supported schools?
- What is the relationship between teacher pay and students' dropout given that dropout is an important indicator in INEE? How does dropout relate to teacher pay at sampled schools?

- What is the relationship between teacher pay and students' learning results? How do students' scores differ at schools where teachers are paid and at schools where teachers are not paid?

These research questions were used as a guideline for developing the methodology for this research exercise, guiding the analysis and reporting of the research findings. The research analysed the relationship between teacher pay and a number of indicators in order to better understand the relationship between teachers receiving regular pay and student patterns of attendance retention and performance.

3. Background

Since the start of the project, Manahel has reached 585,393 children (51.3% female) in both formal and non-formal education. The cumulative number of staff reached as of Q15 is 16,194 (55.1% female). Based on previous research, such as the Stipends Paper drafted in May 2019, there is a strong correlation between provision of pay to school staff and teacher attendance. Teacher presence in the classroom is closely linked to students' opportunity to learn. The Integrity Global 2019 report on education in Syria observed that "teachers are not available as often as they are needed to support learning and wellbeing."³

This research presents analysis of teacher pay and its interaction and relationship with a number of indicators that were selected by the Manahel team to understand comprehensively through primary and secondary data how teacher pay impacts these selected indicators. Manahel has been running a programme that rests on a complex methodology beyond solely teacher pay, as it also provides capacity building for teachers and the Education Directorates (EDs) along with operational support and governance support to ensure multi-dimensional impact.

4. Research Design and Methodology

The research methodology involved a mixed methods approach using primary data from schools, headteachers and teachers through collection of data from school records on the indicators outlined below, in addition to a perceptions survey with teachers and headteachers as detailed below. In addition, prior to the design of the specific methodology, Manahel conducted a desk review of available literature on the topic in question. Qualitative questions were integrated in the perception survey to collect sufficient qualitative inputs on the research topic. Below is a more detailed description of the methodology used in this research exercise.

4.1. Data Collection Methods

A. Desk Research/Literature Review:

Manahel conducted a light desk review at the request of FCDO by reviewing available literature on the impact of teacher pay. One key limitation to this methodology was the short amount of time for this phase and, as such, Manahel team did not

³ Integrity Global (2019). Research to Improve the Quality of Teaching and Learning Inside Syria.

find a wealth of literature on the specific topic. Rather, Manahel found a few pieces of research conducted on teacher payment and learning outcomes. None of the literature reviewed was focused on a similar context to that of Syria. This indicates that Manahel's research is unique in its application to the Syrian context. Despite this, the literature review helped inform the methodology. As a result of the literature, for example, Manahel included students' test scores as a key indicator in assessing the impact of teacher pay. A summary of the literature review findings is presented in the findings section of this paper.

B. Quantitative Data Analysis:

Manahel collected two types of quantitative data as detailed below: one drawn from school records and the other from perception surveys administered to teachers and headteachers that captured the same indicators using Likert scales.

B.1 Quantitative data analysis of available datasets at schools: second semester of 2020 and first semester of 2021 for teachers of 4th grade students

The Manahel team collected primary data from a sample of supported and non-supported schools in Province A. The data collected focused on five indicators that were developed by the research team. These indicators were the basis of the perception survey that asked questions on these same indicators for both teachers and headteachers. The survey generated a mix of qualitative and quantitative data as it included both closed and open questions.

For the first quantitative data collection, the Manahel team reviewed available datasets at a sample of 11 supported and 11 non-supported schools (control group) in Province A⁴ focusing on the following indicators:

INDICATOR 1: TEACHERS' ATTENDANCE

Analysis note: This indicator helps to give an idea about teachers' continued presence at and commitment to schools to see how teacher pay impacts their patterns of attendance or absence.

- **Type of data needed:** number of teacher absence days in comparison with total working days during both semesters in comparison with the total number of 4th grade teachers to calculate the percentage. This covered the second semester of 2020 and first semester of 2021 for both supported and non-supported schools. The objective was to track and compare teachers' attendance patterns in the two target groups.
- **Grade:** 4th grade
- **Status:** NA (host and displaced)
- **Gender:** both
- **Required indicator:** percentage of teacher absence days of both groups (paid and non-paid 4th grade teachers) during the second semester of 2020 and first semester of 2021 at both supported and non-supported schools.

⁴ Province B was not included as there were no non-supported schools in the basic education level, so the research focused on Province A.

INDICATOR 2: TEACHERS' DROPOUT

Analysis note: This indicator helps to give an idea about teachers' continued engagement in the teaching profession and how this differs between supported and non-supported schools. Our assumption was that at non-supported schools, more teachers were likely to drop out and leave the teaching profession to seek other forms of income generation.

- **Type of data needed:** number of teachers who drop out of the teaching profession in comparison with the total number of 4th grade teachers during the second semester of 2020 and first semester of 2021 for both supported and non-supported schools. The objective was to document the number and then percentage of teachers who leave the teaching profession to document how teacher pay impacts retention of teachers in the profession.
- **Grade:** 4th grade
- **Status:** NA (host and displaced)
- **Gender:** both
- **Required indicator:** percentage of paid and non-paid 4th grade teachers who dropped out of the teaching profession during the second semester of 2020 and first semester of 2021 at both supported and non-supported schools.

INDICATOR 3: STUDENTS' ATTENDANCE

Analysis note: This indicator helps to visualize the percentage of 4th grade student absences or non-attendance at supported and non-supported schools to see how this differs between the two groups, with the hypothesis that paying teachers motivates more students to attend given more regular teacher attendance.

- **Type of data needed:** number of host⁵ student absence days divided by the total school days in comparison with the total number of host students at the 4th grade level⁶ to calculate the percentage of absence days at both types of groups (schools where teachers are paid and non-paid). This covered the second semester of 2020 and first semester of 2021 for both supported and non-supported schools. The objective was to see how this percentage differs between schools where teachers are paid and non-paid.
- **Grade:** 4th grade
- **Status:** only host students
- **Gender:** both
- **Required indicator:** percentage of 4th grade student absence days of both groups (schools where teachers are paid and non-paid) during the second semester of 2020 and first semester of 2021.

Note: The reason only host students were selected was to remove the bias resultant from displacement, which could affect the number of students in a given location.

⁵Host students are those who are living in the host community and have not been displaced. The focus is on host students to avoid extraneous variables impacting on their attendance and performance.

⁶Total number of students in the 4th grade (to allow accurate percentage calculation given that schools vary in the number of students depending on area or location).

INDICATOR 4: STUDENTS' DROPOUT RATES

Analysis note: Student dropout is an important INEE indicator in conflict-affected countries. Manahel collected data on 4th grade student dropout to see how this differs between schools where there are supported and non-supported teachers. Two hypotheses are being tested: (i) that at supported schools, dropout rates would be lower than at non-supported schools as teachers are more motivated and attend school more regularly; and (ii) that paid teachers record and report cases of dropouts while those at non-supported schools record and report fewer cases of dropouts and so do not follow up on cases, with the consequent failure to get students back in school.

- **Type of data needed:** number of 4th grade host students who drop out of school in comparison with the total number of 4th grade host students during the second semester of 2020 and first semester of 2021 for both supported and non-supported schools to calculate percentage of dropout at both types of school. The objective is to see how this number differs between supported and non-supported schools.
- **Grade:** 4th grade
- **Status:** only host students
- **Gender:** both
- **Required indicator:** Percentage of 4th grade host students who dropout from both groups (schools where teachers are paid and non-paid) during the second semester of 2020 and first semester of 2021 for both supported and non-supported schools.

Note: The reason only host students were selected was to remove the bias resultant from displacement, which could affect the number of students in a given location.

INDICATOR 5: STUDENT AVERAGE TEST RESULTS

Analysis note: Manahel collected the number of 4th grade students with the following test ratings (weak, intermediate, good, excellent) in four key subjects (maths, Arabic, English, science) to calculate the percentage of students in each rating category, based on tests from the second semester of 2020 and the first semester of 2021. In the literature review, the most common method used to study the relationship between learning outcomes and teacher payment was to review students' grades to see how they differed between supported and non-supported schools. This enabled Manahel to obtain a clearer picture of student achievement at both supported and non-supported schools to see how teacher pay impacts this indicator.

- **Type of data needed:** number of 4th grade host students with the following rating results (weak, intermediate, good, excellent) in the four subjects during the second semester of 2020 and first semester of 2021 for both supported and non-supported schools for host students only (as displacement could affect this indicator). The objective was to see how this number differed between supported and non-supported schools.
- **Grade:** 4th grade
- **Status:** only host students
- **Gender:** both
- **Required indicator:** percentage of 4th grade host students with overall ratings (weak, intermediate, good, excellent) in four key subjects (maths, Arabic, English, science) at both groups (schools where teachers are paid and non-paid) during the second semester of 2020 and first semester of 2021.

Note: The reason only host students were selected was to remove the bias resultant from displacement, which could affect the number of students in a given location.

Manahel collected data from a sample of supported and non-supported (control group) schools in stable contexts (schools that did not have waves of displacement or security challenges) to allow for comparison between available datasets. Manahel’s field research team visited the schools after coordination with the headteachers. The field researchers sat with the headteachers and reviewed the school records. Using the data collection tool developed by the Manahel research team, the required data was collected and uploaded on KoBo Collect⁷. In addition, the research team collected some qualitative data from the teachers and headteachers to better understand and interpret the patterns emerging from the quantitative data in the school records.

Comparative analysis was conducted by the research team to see how teacher pay impacts on the two groups of schools.

Table 4.1.1 details the number of schools that were visited per Education Assembly (EA) by type of school in terms of support showing the number of surveys conducted.

Table 4.1.1 – Schools Visited by Type

Education Assembly	Number of non-supported schools surveyed	Number of supported schools surveyed	Total
District 7	1	1	2
District 3	3	3	6
District 4	2	3	5
District 8	5	4	9
Grand Total	11	11	22

B.2 Perception Survey

Manahel administered a perception survey on the above indicators with 4th grade teachers and their headteachers at 41 schools (21 supported schools and 20 non-supported schools). A total of 77 perception surveys were conducted. A portion of the perception surveys were conducted at the same schools where Manahel conducted the first type of quantitative data collection, and we added to this sample 19 surveys at six new schools. These schools were sampled using the same sample frame as the original 22 schools. The aim was to expand the sample size for the collection of qualitative data to allow for a more statistically rigorous analysis within the available time and resources. The perceptions survey asked questions using a Likert scale to show level of agreement or disagreement with a given statement related to the indicators examined.

The findings from the perception survey aimed to triangulate the school data with additional evidence. The perception survey was a supplementary tool that aimed to support the quantitative data with supplementary primary evidence reflecting teachers’ and headteachers’ experiences and views to substantiate the results of the quantitative data. The following tables detail those surveyed at supported and non-supported schools per assembly in terms of teachers and headteachers.

⁷<https://www.kobotoolbox.org/>

Table 4.1.2 - Number of Surveys by School Type and Role

Province A ED	Number of non-supported schools surveyed		Number of supported schools surveyed		Total
	Headteacher	Teacher	Headteacher	Teacher	
District 7	2	2	3	3	10
District 3	6	5	6	4	21
District 4	3	2	6	7	18
District 8	9	7	7	5	28
Total	20	16	22	19	77

Table 4.1.3 - Number of Surveys by Education Assembly

Province A ED	Number of non-supported schools	Number of supported schools	Total
District 7	2	3	5
District 3	6	5	11
District 4	3	7	10
District 8	9	6	15
Total	100%	100%	100%

43% of the sample were female and 57% were male. Table 4.1.4 shows the age ranges of the sample.

Table 4.1.4 - Age of Sample Respondents

Age of respondents	Non-supported	Supported	Total
20-29	33.3%	7.3%	19.5%
30-39	38.9%	39.0%	39.0%
40-49	8.3%	29.3%	19.5%
50-60	19.4%	24.4%	22.1%
Total	100%⁸	100%	100%

Table 4.1.5 shows the qualifications of the sample.

Table 4.1.5 - Education Level of Sample Respondents

Qualification of respondents	Non-supported	Supported	Grand Total
Master	0.0%	2.4%	1.3%
Diploma	0.0%	7.3%	3.9%
University degree	55.6%	61.0%	58.4%
Intermediate institute	30.6%	24.4%	27.3%
Secondary school	13.9%	4.9%	9.1%
Grand Total	100%	100%	100%

⁸For the purposes of the report, percentages were rounded to the nearest 10th

B.3 Qualitative data collection in the field

Due to time limitations and concerns about survey fatigue the research team used qualitative questions in the perception surveys for both teachers and headteachers, instead of the initial plan which was to conduct KIIs. The aim was to capture deeper qualitative evidence on the indicators through open questions following each Likert scale response. As a result, the perception survey generated a mix of quantitative and qualitative data.

4.2. Limitations

There are a number of limitations in this study:

1. The quality of data at non-supported schools could be of lower quality compared to supported schools. This is because in supported schools staff are perceived to be more accountable to the education directorates, as they regularly track and update data. The field researchers reported a general concern that attendance data at the non-supported schools was of poorer quality.
2. The scale and scope of the literature review was limited as the research team found limited data on the impact of teacher pay on attendance and performance in conflict affected countries or regions.

5. Findings and Analysis

5.1. Desk Review Findings

The literature review involved a review of research from both developed and developing countries, with a particular focus on research conducted in conflict-affected countries. In most of the research papers reviewed, the research methodology involved analysis of large datasets available within the global educational system, with limited primary data collection conducted. As such, this large dataset:

- provided access to a large volume of data over a considerable period of time;
- was 'natural' in the sense that it was collected not for the purpose of this research, but as part of a system that collects and analyses data regularly to complete governmental tasks such as payment of salaries or review of teacher performance.

Most of the literature on teacher pay is from developed countries and particularly the USA.⁹ This literature indicates a fairly consistent but relatively weak relationship between teacher pay and students' learning outcomes. More important in these countries, where teachers are being paid consistently and relatively well, there may be intrinsic and extrinsic factors such as performance-based bonus systems, teacher development, and other motivation-related factors.¹⁰ In addition, it is argued in a seminal paper that teacher retention and performance are related more to the profile of their students than to their pay (Hanushek et al. 1999¹¹). However, there is some evidence that as teacher pay increases, students' learning outcomes increase. In a research paper by

⁹ <https://journalistsresource.org/education/school-teacher-pay-research/>

¹⁰ Feng, L. & Sass, T.R. (2018). The Impact of Incentives to Recruit and Retain Teachers in 'Hard to Staff' Subjects. *Journal of Policy Analysis and Management*. 37(1), 112- 135.

¹¹ Hanushek, E., Kain, J.F. & Rivkin, S.G. (1999). Do Higher Salaried Buy Better Teachers. Working Paper for National Bureau for Economic Research.

Lukas & Samardzic (2014) entitled 'Impact of Teacher's Income on Student's Educational Achievements'¹² the researchers found that in richer countries where teachers are paid higher rates, students' educational achievements were higher; this research involved statistical analysis from PISA (Programme for International Student Assessment) data in ten countries: Canada, Denmark, France, Germany, Israel, Japan, Norway, South Korea, Spain, and Switzerland. By conducting a comparative analysis of PISA results, the researchers were able to prove that in countries where the teachers were paid more student results were better, mainly because the profession was able to attract more and better qualified teachers, thus yielding better results for students. This research also documented that students' sense of belonging increased as teacher pay increased. An American study¹³ outlined six proven benefits of increasing teacher pay including the finding that "high pay for teachers means students do better (and) teachers keep engaged in the teaching profession". In another paper,¹⁴ the researcher analysed student scores in Illinois, USA, and indicated that higher teacher pay leads to improved outcomes for students. Other research in America has shown that improved teacher pay has a direct relationship with an improvement in retention of students – dropout rates decrease with better paid teachers (Loeb & Page 2000¹⁵).

The developed world literature, therefore, generally supports the assumption that higher teacher pay is related to better student performance and to improved retention of students.

However, experiments with unconditional raising of teacher pay in Uruguay¹⁶, Indonesia¹⁷ and Zambia¹⁸ have shown no improvement in learner performance in the long term. They have, though, shown some improvements in teacher happiness levels and reduction in the need for teachers to seek second jobs to ensure a basic income. However, where teachers in developing countries who are used to being paid face periods of non-payment the effect can be detrimental to their students. Teachers in this situation tend to stop preparing lessons, marking students' work, and even attending school. In South Sudan there are reports of teachers, who are paid less than \$2.00 per day, fainting from hunger, abandoning teaching and facing family problems related to being unable to support their family adequately.¹⁹ This is related to the prevalence of conflict and pressure on the national fiscus related to funding a huge defence budget.

In a similar situation to Syrian teachers, teachers in Yemen have tried to carry on teaching through a decade of civil war. However, it has left many of them struggling to survive. As one teacher reported:

"How is it expected for a teacher to go to class and teach students while thinking about ways to feed their own children? Many of us do not even have money to pay for transportation to school. In addition to the psychosocial impact on

¹² <https://files.eric.ed.gov/fulltext/ED556718.pdf>

¹³ <https://www.weareteachers.com/benefits-to-increasing-teacher-pay/>

¹⁴ RAND Education (2006). Effect of teacher pay on student performance: Findings from Illinois.

¹⁵ Loeb, S. & Page, M.E. (2000). Examining the Link between Teacher Wages and Student Outcomes. *Review of Economics and Statistics*. 82(3), 393 – 408.

¹⁶ Cabrera, J.M. & Webbink, D. (2018). Do Higher Teacher Salaries Yield Better Teachers and Better Student Outcomes? MPRA Paper 86972.

¹⁷ De Rees, J., Muralidharan, K., Pradhan, M. & Rogers, H. (2018). Double for Nothing? Experimental Evidence of an Unconditional Teacher Salary Increase in Indonesia. *The Quarterly Journal of Education*. 133(2) 993 – 1039.

¹⁸ <https://econrsa.org/publications/working-papers/teacher-pay-and-educational-outcomes-evidence-rural-hardship-allowance>

¹⁹ <https://allafrica.com/stories/201908010146.html>

teachers, the current financial conditions of teachers have pushed some to go for mediocre and/or on-street works. How do you expect a teacher to have self-respect and to be able to stand in class in front of their students after seeing him working on street? How can we be role models to our students?"²⁰

While the research conducted in developed and even stable developing countries is useful in the sense that it highlights the relationship between higher teacher pay and student learning outcomes, it is less relevant to the NWS context where there is little doubt that a lack of teacher pay altogether will negatively impact instructional time, and so, learning outcomes. Given the desk research findings, it becomes clear that teacher pay is closely linked with students' learning outcomes, and even has a critical impact. Research in developed countries attempts to prove that higher teacher pay leads to improved learning outcomes. Following this line of thought, one can hypothesize that if teachers are not paid, students' learning outcomes will be highly negatively impacted.

The NWS context is unique in that minimal educational sector systems are in place, and in fact there was no formal system for providing teacher pay prior to efforts by the Manahel programme in coordination with EDs. Thus, in an ideal research scenario, focus should be on contexts similar to Syria, where teacher pay itself is a critical factor in teachers' attendance at schools. In conflict-affected countries, it is largely agreed that teacher pay is important and contributes to improved teacher attendance rates, and in turn instructional time. It should be noted that in the Syrian context, volunteer teacher attendance can be higher in expectation of some form of support (food baskets or other support programmes arranged by the EDs).²¹ Studies have shown that "learning outcomes are related to the amount of time students engage in learning tasks." However, visits to schools have revealed that students are often taught for only a fraction of the intended time, particularly in lower-income countries."²² One of the reasons for losses in instructional time is teacher absenteeism and missing lessons in lower income countries.²³ In many developing countries this is estimated at about 10% of teaching time lost due to absenteeism alone, with a UNICEF study indicating that 30% of teachers in South Sudan are absent regularly – at least once every week (ibid). These high levels of absenteeism are also seen in NWS, particularly in schools where teachers are not paid. Teacher absence relates directly to learner absence, as learners are less likely to attend school regularly if they know their teachers are unlikely to be in class. This, in turn, relates to time on task and so to learner coverage of the curriculum and overall learning achieved.

If one operates under this assumption that teacher presence within schools increases instructional time and that increased instructional time is tied to improved student learning outcomes, and if teacher pay increases teacher attendance, then the hypothesis that teacher pay contributes to improved student learning outcomes has validity. Hence, based on the desk research conducted, we can conclude that teacher pay is critical to both instructional time and by extension student learning outcomes.

5.1. Primary Research Findings

First analysis from the school records/data will be presented and this will be substantiated with data from the perceptions survey.

²⁰ <https://reliefweb.int/report/yemen/teachers-yemen-take-street-work-more-half-without-regular-pay>

²¹ Based on observation during the research

²² Abadzi, H. (2013). Absenteeism and Beyond: Instructional Time Loss and Consequences. World Bank.

²³ <https://www.unicef-irc.org/time-to-teach>

INDICATOR 1: TEACHER ATTENDANCE

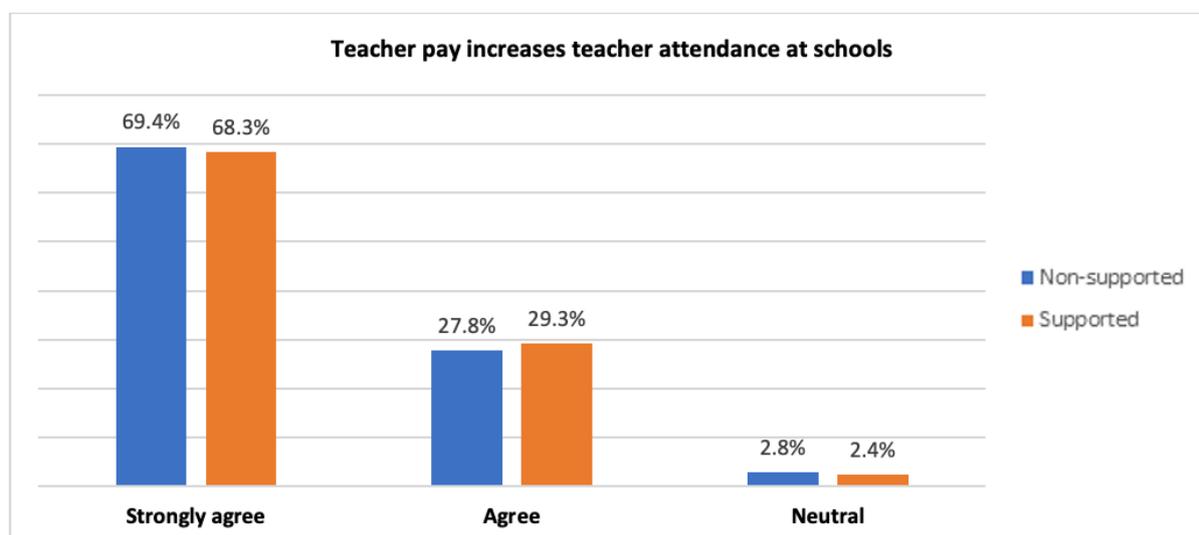
For this first indicator, Manahel calculated the total absence days of all 4th grade teachers amongst the two groups of schools.

Table 5.1.1 – Absence Days by School Type

Indicator 1	Supported		Non-supported	
	No.	%	No.	%
1. Teachers' absence (all absence days of all 4th grade teachers at both types of schools researched) ²⁴	68	1.6%	385	11.9%

This illustrates that absences at supported schools are much lower than those at non-supported schools.

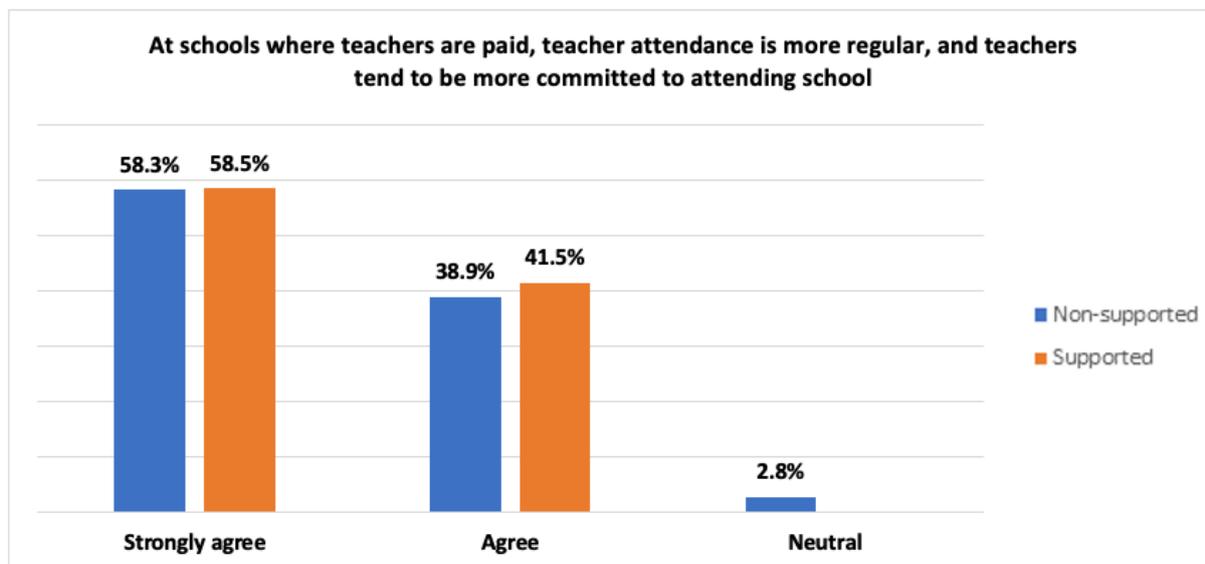
Figure 5.1.1 – Perceptions of Teacher Pay and Attendance



As can be seen above, perceptions of both teachers and headteachers support the statement that teacher pay increases teachers' attendance. None of the respondents selected "disagree" or "strongly disagree" to this statement in the survey. Qualitative evidence from the perceptions survey indicated that teacher pay helps teachers focus on the teaching profession as it enables them to meet their basic needs. In addition, respondents indicated that teacher pay helps the school and ED management hold the teachers more accountable as they are not voluntary employees. Respondents stated that when teachers are not paid, the headteacher and ED would not be in a position to hold them accountable for being present at schools. One headteacher at a supported school said, "When we pay a teacher, he or she would not be in a position to look for another part-time job to put food on the table for his or her family." This view was shared by other respondents.

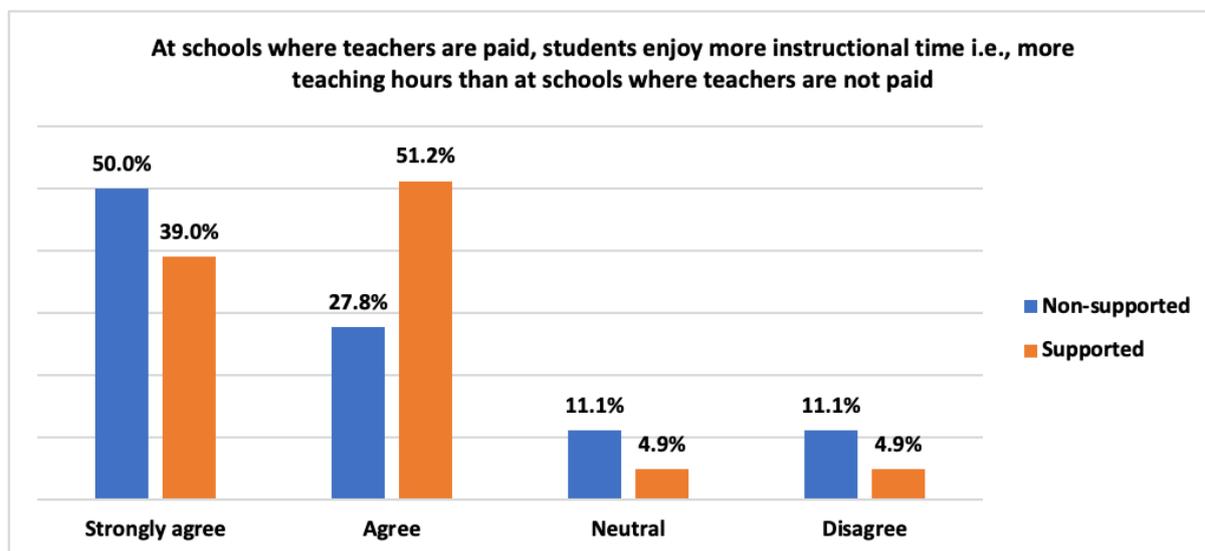
²⁴ Due to reasons of ease, absence days were collected instead of attendance days. By calculating the percentage of absence days, we can extrapolate attendance days.

Figure 5.1.2 – Perceptions of Teacher Pay and Commitment Levels



As shown in Figure 5.1.2, there was near unanimous agreement that teacher pay makes teachers attend more regularly and demonstrate a commitment to regular attendance. Qualitative feedback highlighted the reasons for this finding. These included that paid teachers could be held accountable and that having a stable source of income means they do not need to find alternative ways of generating an income and can focus on quality teaching. Only one teacher reported that teacher payment does not affect their attendance at school.

Figure 5.1.3 – Perceptions of Teacher Pay and Instructional Time

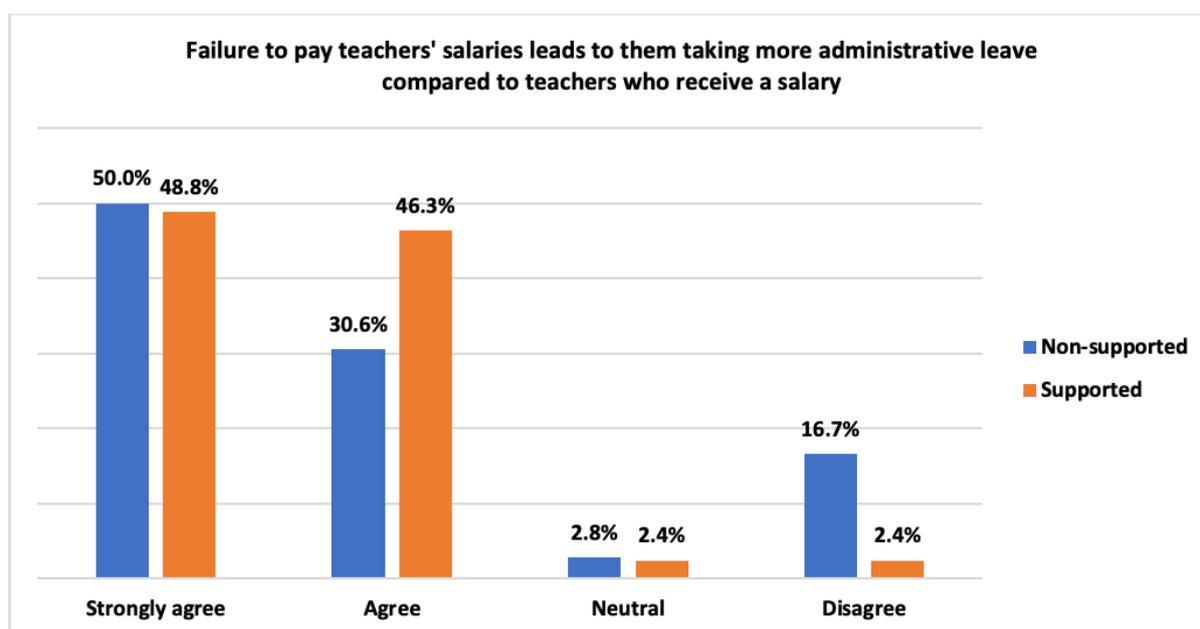


It is notable that a minority of teachers and headteachers disagreed with the statement that with pay teachers maximise instructional time. However, the majority of respondents at non-supported schools indicated that teacher pay makes teachers attend more regularly, and this in turn means that students enjoy more instructional time. Respondents added that it impacts student dropout and increases teacher's motivation to report dropout cases. They reiterated the earlier finding that teacher pay makes teachers more focused on teaching, as it is their main source of income. They added that it provides psychological relief derived from increased economic stability

from having a secure job and consistent income. According to one headteacher “a teacher who is paid attends during all working hours, but a volunteer teacher or a non-paid teacher does not attend regularly, and there is no one who can hold him/her²⁵ accountable because the school management would understand this i.e., he/she is not paid, and he/she has a family to support.” A teacher added: “The paid teachers are usually more committed during the academic year, and this is reflected positively on his/her students who enjoy more instructional time, but at schools or classes where teachers are non-paid, there is a high level of rotation as more teachers drop out, and this wastes precious time for students in terms of instructional hours.” Others mentioned that when parents know teachers are in attendance regularly, they are more motivated to send their children to school. Thus, turnover of non-paid teachers significantly impacts instructional time.

A question was asked in the perception survey on another dimension of teacher attendance: the use of administrative leave²⁶, as shown in the graph below.

Figure 5.1.4 - Perceptions of Teacher Pay and Administrative Leave

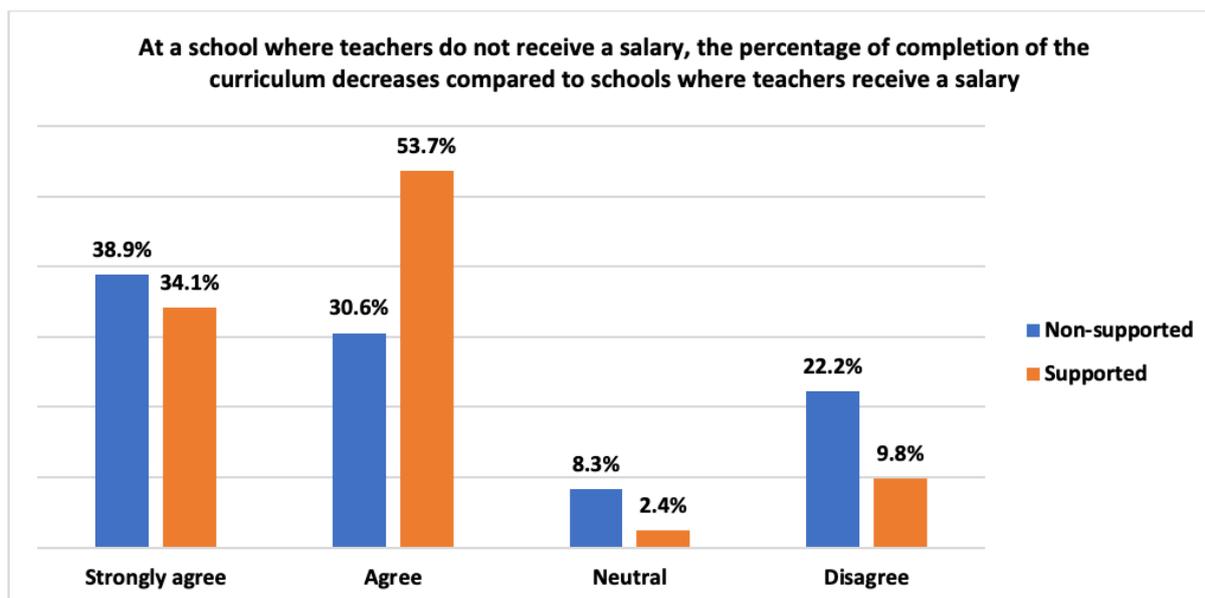


A final question was asked in the perception survey on curriculum completion and its relationship with teacher pay.

²⁵ In Arabic the quote refers to “him”, but implying both genders. It is therefore translated as “him/her”. This convention is maintained throughout the quotes.

²⁶ Administrative leave is unpaid leave while the job is kept.

Figure 5.1.5 – Perceptions of Teacher Pay and Curriculum Completion



Around 80% of the respondents agreed or strongly agreed that teacher pay has a strong relationship with curriculum completion. Qualitative feedback highlights that non-teacher pay reduces the possibility of curriculum completion given irregular attendance and the high teacher turnover rates. Literature from developing countries also shows that it is because teachers spend less time preparing and marking outside school time if they are not paid.

From this first indicator on teacher attendance, we have evidence from both school records and perception surveys that teacher pay increases attendance and commitment, increases the possibility of curriculum completion, and makes teachers more accountable to attend (as non-justified absences reduces the monthly payment that a teacher receives).

INDICATOR 2: TEACHER DROPOUT

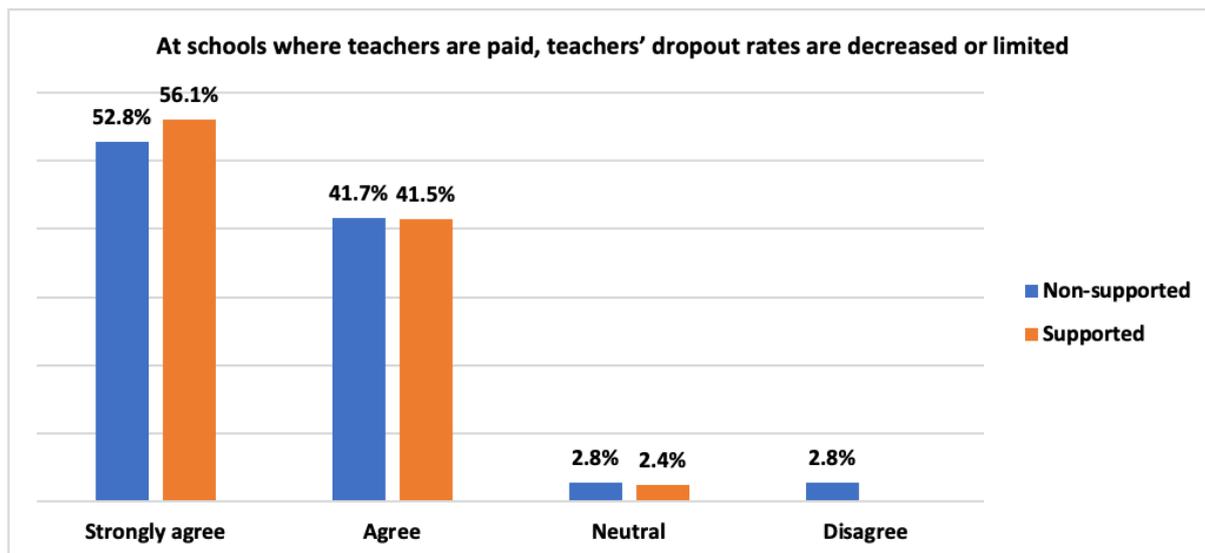
Another indicator examined was teacher dropout, given it was one of the key findings of the literature review.

Table 5.1.2 – Teacher Dropout by School Type

Indicator 2	Supported		Non-supported	
	No.	%	No.	%
2. Teacher dropout (number of 4th grade teachers who drop out of the teaching profession at the for all sampled schools)	3	0.9%	22	9.7%

As shown above, school records show the positive role of teacher pay on teacher dropout rates. The conducted literature review showed that preserving teachers in the profession was a key concern for governments or education ministries, as qualified human resources/teachers were found to be critical to increasing the quality of teaching and improving quality learning outcomes.

Figure 5.1.6 – Perceptions of Teacher Pay and Dropout



In line with the findings drawn from school data reflected above, perceptions show a high level of agreement with the statement that teacher pay decreases teacher dropout rates, with 96% of respondents agreeing or strongly agreeing with this statement. Qualitative evidence again highlighted that teacher pay helps schools retain teachers, as teaching is their main job and source of income. Those who disagreed with the statement stated that a teacher's level of commitment is more closely tied to the teacher's conscience. Those who agreed spoke of the fact that teachers have families and so they need to meet basic needs such as food and shelter, especially given the present economic crisis. These findings confirmed what the researchers found when they asked the respondents to respond to the following statement: "At schools where teachers are not paid, teachers' dropout rates are high", with which about 93% agreed, and 3% disagreed. One headteacher said, "More than three teachers in one of our classes left the teaching profession during the academic year in light of the fact that they were not paid." Qualitative feedback in the perception survey provided several examples of cases of teachers leaving the teaching profession, demonstrating a relationship between teacher pay and teacher dropout.

Overall, findings on this indicator from school data and from the perception surveys all reiterate the importance of teacher pay in keeping teachers engaged in the teaching profession.

INDICATOR 3: STUDENTS' ATTENDANCE

The third indicator analyses students' attendance patterns at supported and non-supported schools.

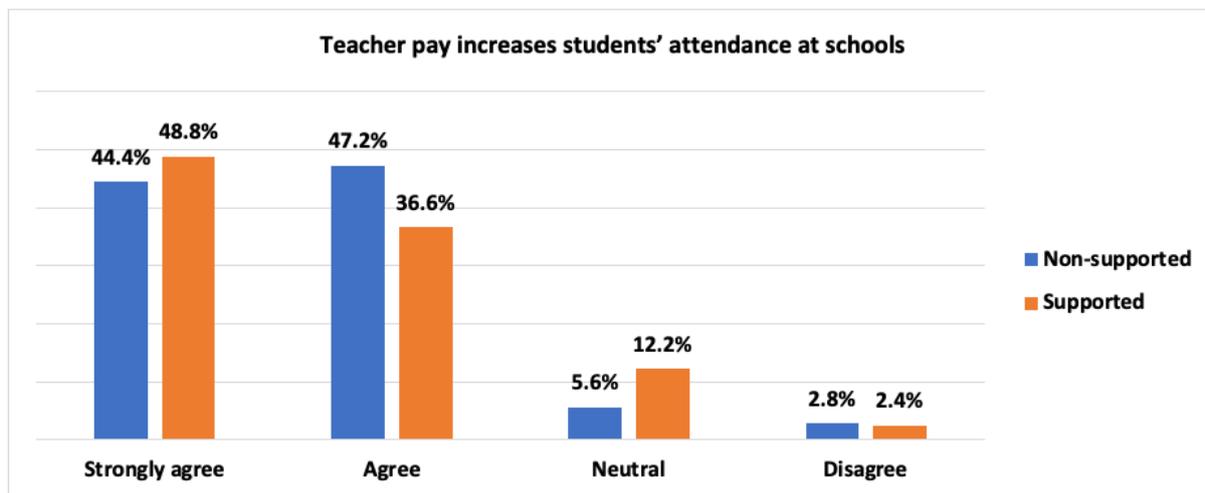
Table 5.1.3 – Student Absences by School Type

Indicator 3	Supported		Non-supported	
	No.	%	No.	%
3. Students' absence (absence days for all 4th grade host students)	703	1%	3088	3.2%

Table 5.1.3 shows significant differences in the absence of host students at supported and non-supported schools. The percentage of absence days at non-supported schools for host 4th grade students is three times higher than for those at supported schools, highlighting how teacher pay impacts student patterns of attendance and absence.

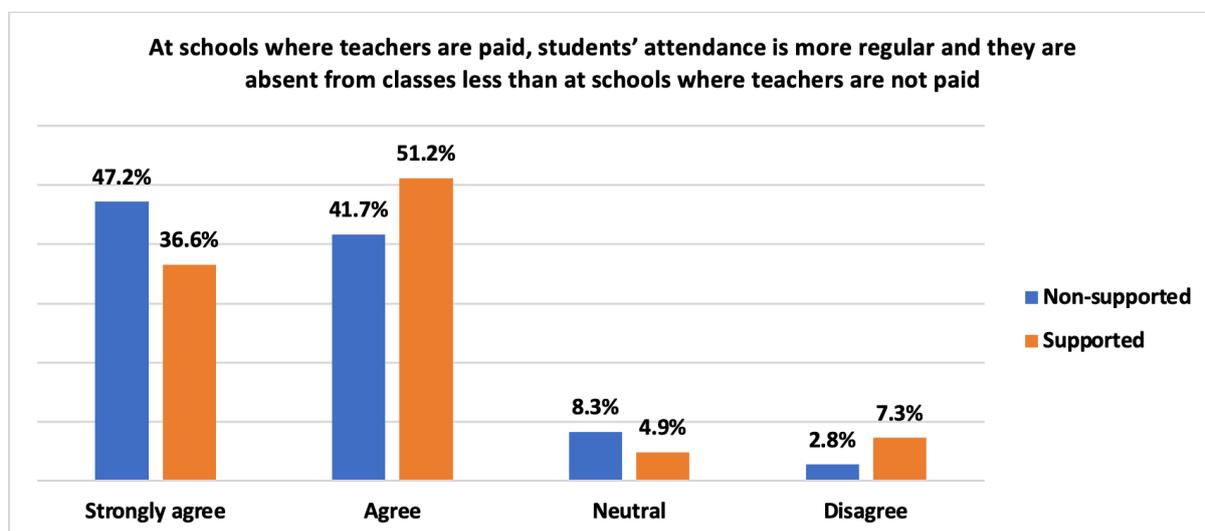
The research team further explored whether teacher pay increases students' attendance at school. The results are presented in Figure 5.1.7.

Figure 5.1.7 – Perceptions of Teacher Pay and Student Attendance



As shown above, the majority of respondents agreed that teacher pay increases student attendance at schools with around 89% agreeing or strongly agreeing with the statement. Qualitative evidence showed that paying teachers provides teachers with psychological stability and relief, which reflects positively on the students as the teacher attends regularly, and monitors student attendance more consistently, and follows up on students who are absent. One headteacher said, “Teacher presence is connected with student attendance: if the teacher attends, the student will attend and vice versa.” Others highlighted that teachers who are paid are more committed to reporting student dropout to the school management and to caregivers, and thus student attendance increases as a result of more follow-up on dropout cases. A similar question was asked in the perception survey, as shown below in Figure 5.1.8.

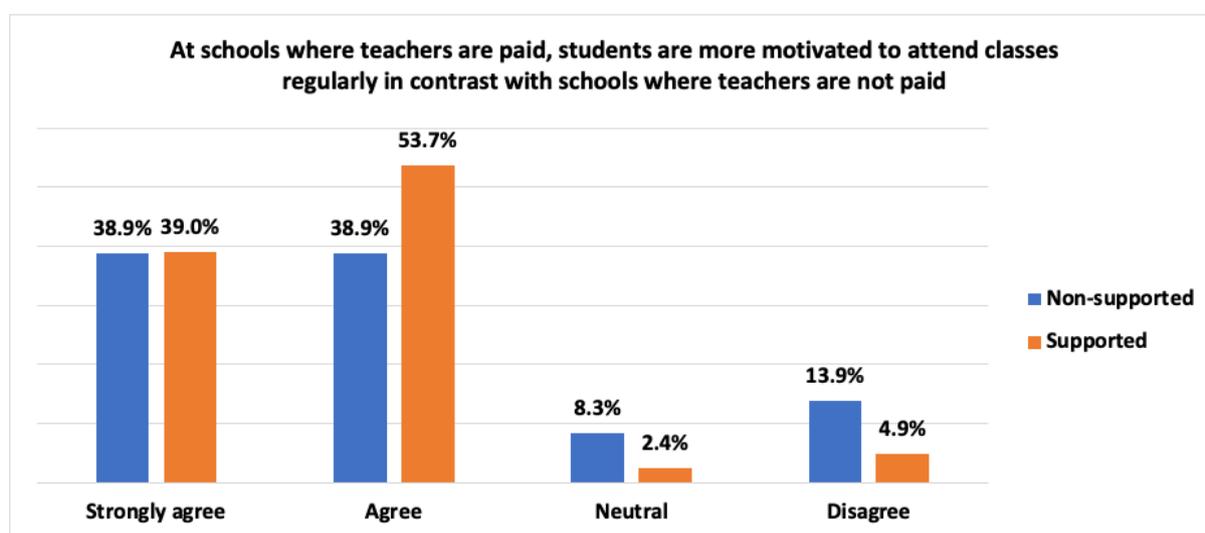
Figure 5.1.8 – Perceptions of Teacher Pay and Student Attendance Regularity



The analysis presented earlier supports findings in the graph above, highlighting again how the relationship between teacher pay and student attendance is reciprocal and implying that instructional time is, by extension, higher. More instructional time translates into more learning time. It should be noted that instructional time has two angles according to this research: student attendance and teacher attendance, both of which contribute to more instructional time and by extension better learning outcomes.

The research team attempted to understand whether student attendance at supported and non-supported schools is different when disaggregated by gender; however no notable differences were apparent. On average 86% of those surveyed reported students' attendance to be similar for both genders at both types of schools, while 14% agreed that this differed a little, with less male attendance. Reasons provided for this included that more male students are absent or do not attend because they work and support their families. This was reiterated by another group of respondents, who reported that male student dropout rates are higher due to the fact that they work to support their families instead of going to school.

Figure 5.1.9 - Perceptions of Teacher Pay and Student Motivation to Attend Classes



The majority of respondents in the perceptions survey (about 86%) agreed or strongly agreed with the statement in the graph above that where teachers are paid teacher and student motivation is better. One headteacher said, *“The paid teacher is more motivated and focused as he/she has nothing to distract him/her, and this is reflected positively on students who are motivated in turn to learn and achieve more results.”* Indeed, much of the qualitative feedback focused on the fact that teachers' motivation is transferred to their students. Part of this is due to the reduced psychological burden among paid teachers in comparison with a non-paid teacher, who loses interest over time given that they feel they are treated unjustly in comparison with those who are being paid. One teacher said, *“The focus and attention of the paid teacher is his or her students where teachers become more engaged with their students, and they apply different and more creative activities that engage students in a proactive way. There is nothing that distracts the paid teacher as his/her focus is his teaching job, and thus students are impacted more positively in terms of motivation.”*

In the perception review, respondents were asked whether student motivation is affected by gender. Only 5% of those surveyed agreed that motivation of students as

measured by attendance is affected by gender. They argued that female students are generally more motivated, and that male students are engaged in work outside the house and thus school is not a priority for them.

Overall, findings indicate that students' attendance and motivation is affected by teacher pay. In schools where teachers are paid, student attendance is more consistent and students show higher levels of motivation. This provides further evidence of the positive impact of teacher pay on student attendance, which in turn has impact on instructional time.

INDICATOR 4: STUDENT DROPOUT

Evidence from both types of primary data indicates there is a clear difference in dropout rates between supported and non-supported schools.

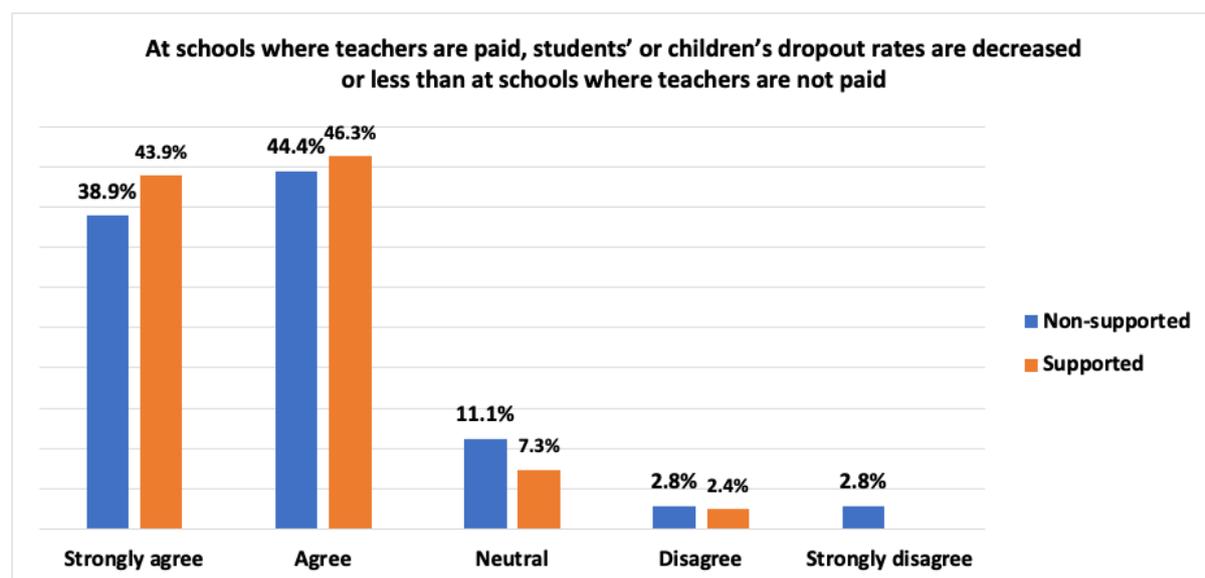
Table 5.1.4 - Student Dropout by School Type

Indicator 4	Supported		Non-supported	
	No.	%	No.	%
4. Student dropout out in 4th grade (for host community only)	21	4.6%	59	12.9%

As Table 5.1.4 shows, at supported schools where teachers are paid, there are significantly lower dropout rates in contrast to the control group. At the researched schools where there are non-paid teachers, a total of nearly 13% of students dropped out in the 4th grade compared to just over 4.5% at schools where teachers are paid. This indicates that students are almost three times as likely to drop out in schools where the teachers are not paid.

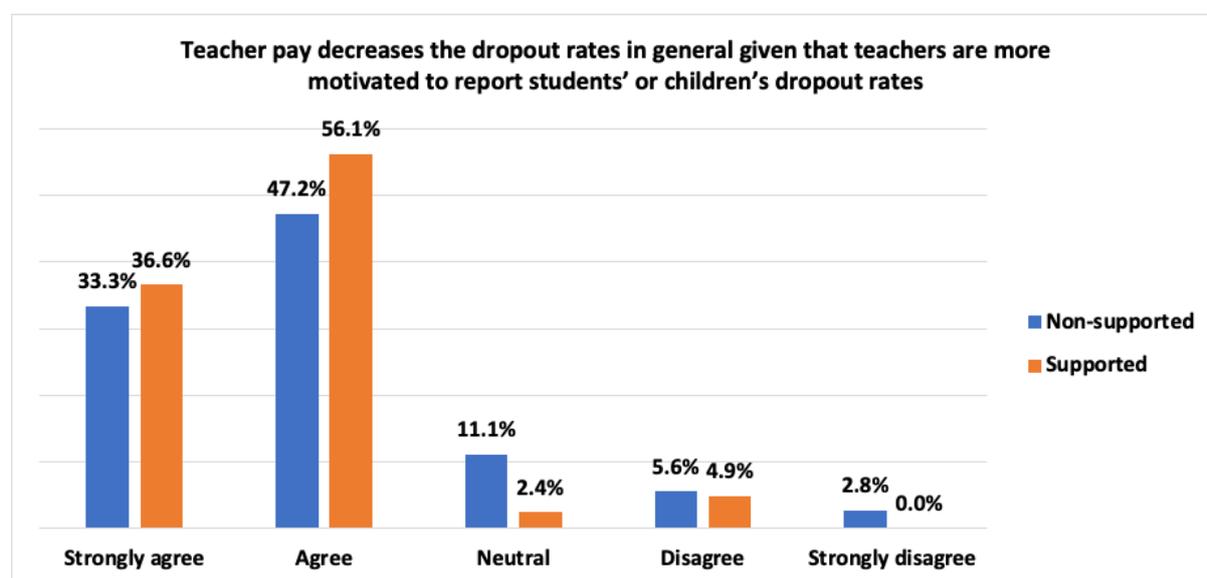
Evidence from the perception survey supported this finding with 77% of respondents agreeing or strongly agreeing that at schools where teachers are paid, students' dropout rates are reduced.

Figure 5.1.10 - Perceptions of Teacher Pay and Student Motivation to Attend Classes



Qualitative feedback highlighted that at schools where teachers are paid consistently they are more motivated and focused on their teaching. Also, they are more likely to follow up on cases of students dropping out than their unpaid counterparts. One headteacher said, “*The paid teacher feels more committed to students’ absence and dropout because he/she feels this is a moral responsibility first while the non-paid teacher is not as much committed as the paid teacher is.*” Another highlighted that a paid teacher rarely leaves the teaching profession, while at non-supported schools the turnover of teachers is high with students possibly being taught the same subject by “more than two or three teachers” during one academic year. This causes a loss of instructional time and may contribute to dropout as higher rates of teacher dropout seem to be related to increased student dropout rates. Respondents also reported that paid teachers undertake more follow-up with dropout cases, and check with parents and caregivers to understand the cause of dropout in order to coordinate with protection or safeguarding teams. Paid teachers also contribute to more stability in their school, which also appears to help retain students.

Figure 5.1.11 – Perceptions of Teacher Pay and Motivation to Report Dropout



In a similar vein, about 87% of surveyed respondents agreed or strongly agreed that teacher pay reduces student dropout rates, given that teachers are more motivated to report dropout cases, and take an active interest in that student.

Finally, respondents were asked whether student dropout rates vary between genders in schools where there are paid and non-paid teachers. While 94% reported that it is not different, 6% reported differences. Those who reported differences argued that male students drop out more than female students because they work outside the home, or that parents are generally more reluctant to send their daughters to school due to security reasons. Overall, gendered impact of teacher pay on student dropout seems to be minimal.

The findings against this indicator generally support the hypothesis that teacher pay impacts students’ or children’s dropout rates, providing evidence of the need for teacher pay. Children’s dropout leads to additional protection concerns such as child labour or recruitment into armed groups, reflecting how teacher pay has a positive impact on the protection sector. As such, it may be more cost-effective for donors and funding agencies to focus on teacher pay, as it helps to address other protection issues

that are usually addressed through child protection projects such as those dealing with child labour or armed recruitment.

INDICATOR 5: STUDENT AVERAGE TEST SCORES

For the final indicator examined in this research, the research team examined student ratings in specific core subjects: maths, Arabic, English, and science. The literature review found that comparing students' scores using internationally accredited or accepted exams or tests such as PISA has been used to document the impact of higher teacher pay in specific countries. The finding was that as teacher pay increased, students' scores or results increased. As a result of this literature, the research team decided to collect data on student scores over two academic semesters at sampled schools to compare how results differed between supported and non-supported schools. Table 5.1.5 compares the final exam results in the selected subjects among the two groups of schools²⁷.

Table 5.1.5 – Student Ratings by School Type

Indicator 5. Student ratings based on scores (for host students only) ²⁸	Supported		Non-supported	
	No.	%	No.	%
Maths				
Weak	55	8.4%	165	26.5%
Intermediate	148	22.7%	176	28.3%
Good	209	32.1%	144	23.2%
Excellent	239	36.7%	137	22.0%
Arabic				
Weak	55	8.4%	134	21.5%
Intermediate	116	17.8%	183	29.4%
Good	197	30.3%	158	25.4%
Excellent	283	43.5%	147	23.6%
English				
Weak	37	5.7%	210	33.8%
Intermediate	171	26.3%	153	24.6%
Good	212	32.6%	144	23.2%
Excellent	231	35.5%	115	18.5%
Science				
Weak	74	11.4%	110	17.7%
Intermediate	149	22.9%	162	26.0%
Good	189	29.0%	189	30.4%
Excellent	239	36.7%	161	25.9%

²⁷ The assessments are conducted at school level based on a teachers' guide using a standardised process of developing tests. The results are not based on a unified and standardised national or sub-national exam.

²⁸ For the purposes of the report, percentages were rounded to the nearest 10th

The results indicate a clear difference in student scores at the two types of schools. For example, the percentage of students with weak scores in maths at supported schools is 8.4%, while it is 26% at non-supported schools. Similarly, the percentage of students with excellent scores in this subject at supported schools is 36.7% while it is 22% at non-supported schools. This level of variation in student scores between the two types of schools is reflected in other subjects: Arabic, English, and science. Figure 5.1.12 shows these differences graphically.

Figure 5.1.12 – Student Average Ratings Based on Scores

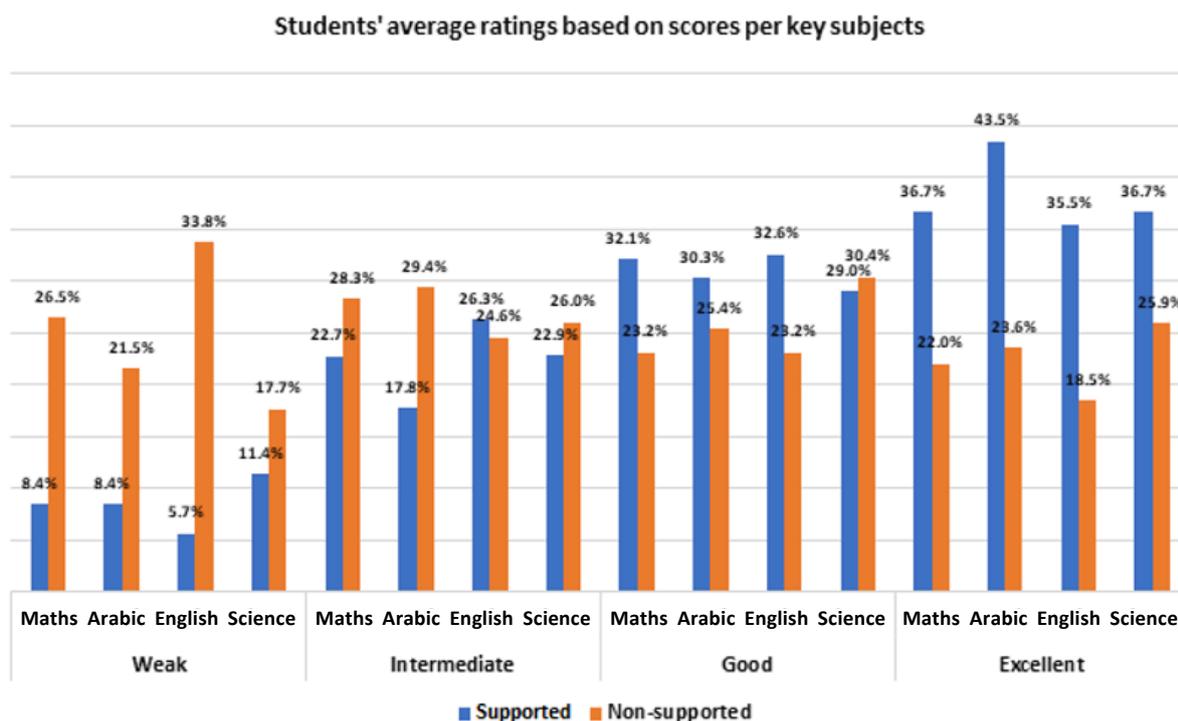
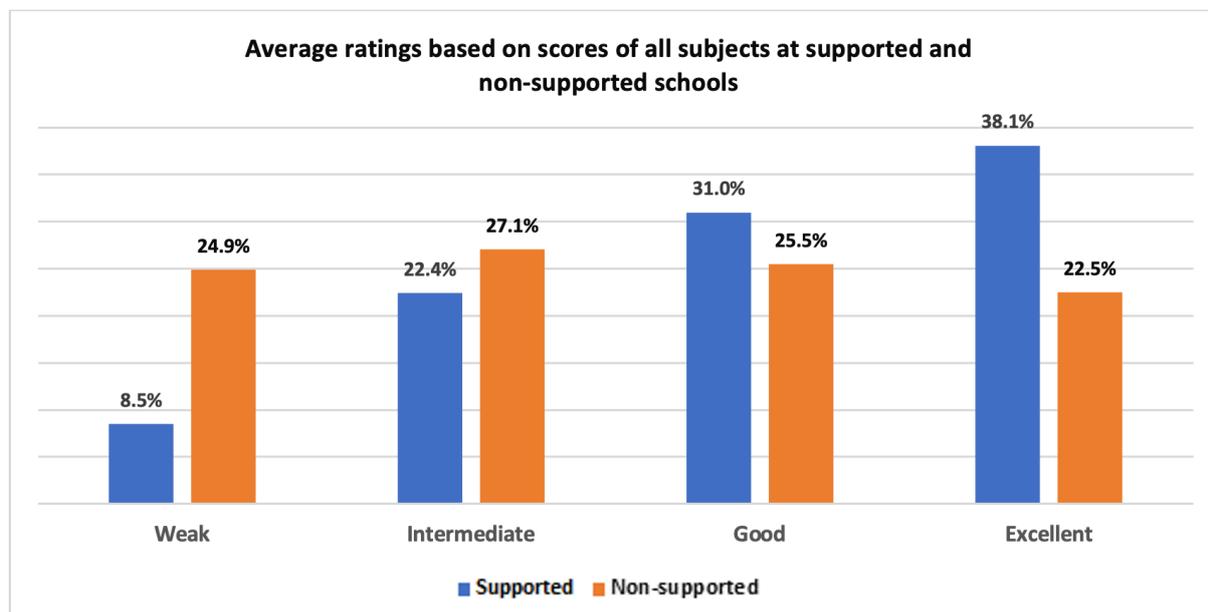


Figure 5.1.13 presents the average score for all subjects.

Figure 5.1.13 – Student Average Ratings Based on Scores by School Type



In the perception surveys, Manahel asked questions to gauge the views of teachers and headteachers in relation to these results.

Figure 5.1.14 – Perceptions of Teacher Pay and Student Average Ratings

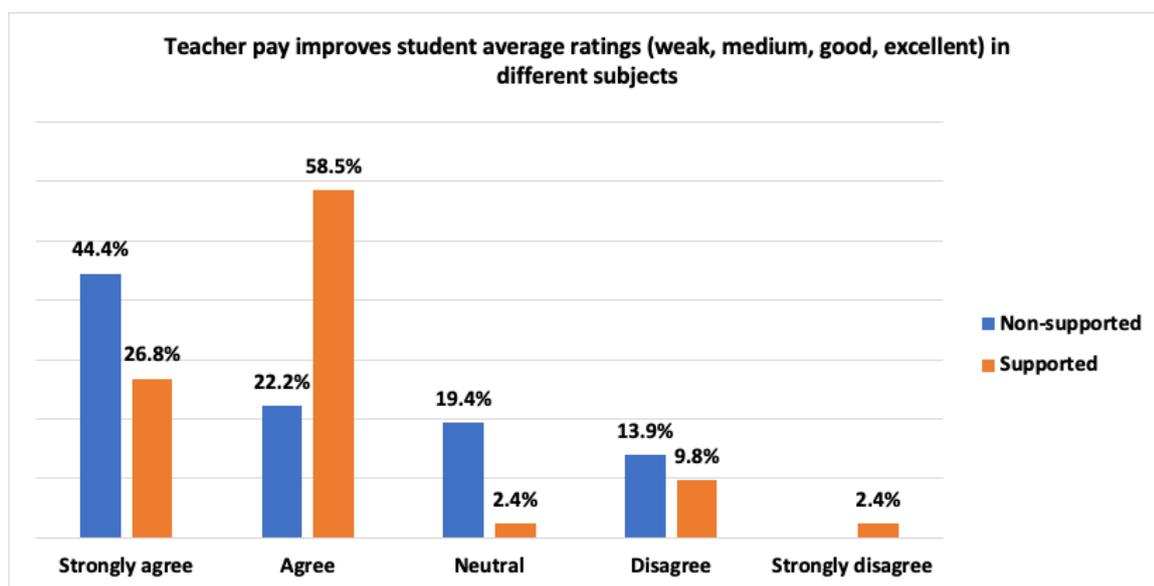
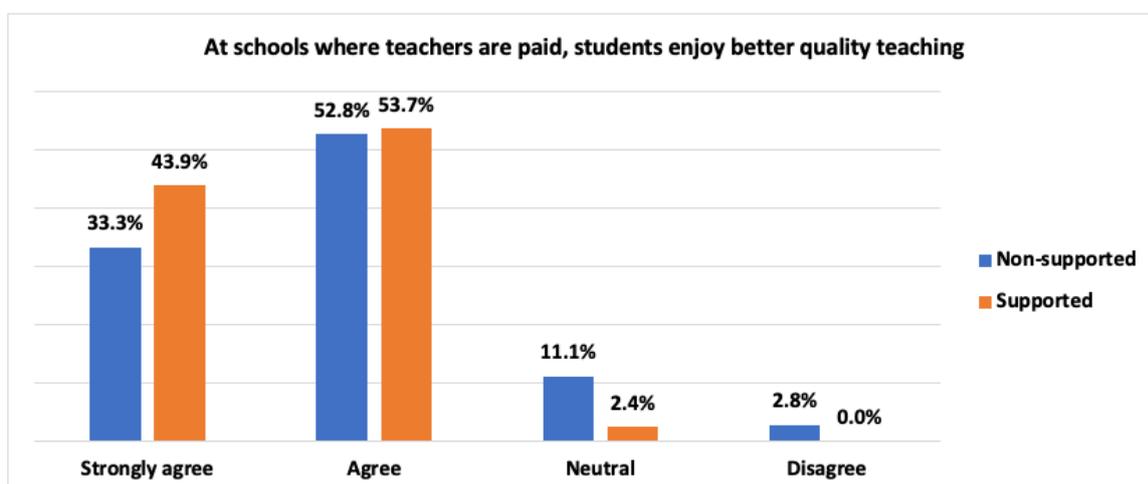


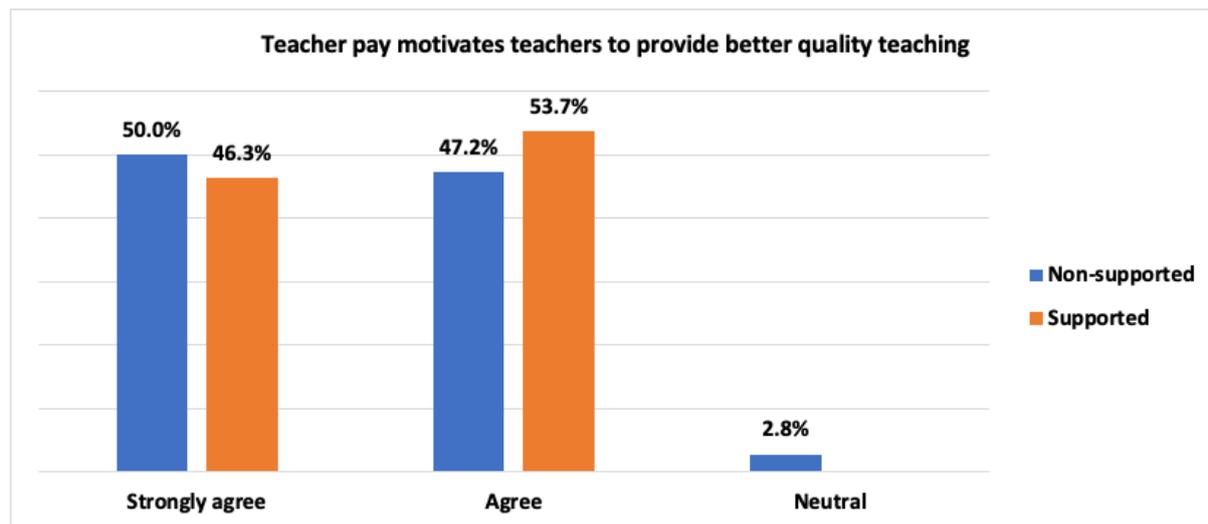
Figure 5.1.14 shows agreement or disagreement levels with the statement: “Teacher pay improves students’ average scores (weak, medium, good, excellent) in different subjects.” About 77% agreed or strongly agreed that teacher pay improves students’ average scores which are usually associated with the student’s learning level. Qualitative feedback indicated different reasons why students’ scores at supported schools are better than those at non-supported schools. The first reason mentioned was the high rate of teacher turnover at non-supported schools, where students are taught by more than one teacher during the academic year. Second was the fact that paid teachers are more motivated to teach, given that teaching is their main source of income. Third was that at supported schools, curriculum completion is higher, which impacts students’ learning results. A final reason provided was a higher level of teacher accountability within supported schools as school management holds the paid teacher more accountable to attend and provide quality teaching. At non-supported schools, the school management cannot hold the teacher accountable to the same degree, as they are volunteering.

Figure 5.1.15 – Perceptions of Teacher Pay and Quality Teaching



In line with the findings above, Figure 5.1.15 shows that at supported schools, students enjoy better quality teaching. On average, 92% agreed or strongly agreed with this statement. The following graph shows how motivation differs between supported and non-supported schools.

Figure 5.1.16 - Perceptions of Teacher Pay and Motivation for Quality Teaching



None of the respondents disagreed with the statement above, providing further evidence on the positive impact of teacher pay on quality teaching and by extension quality learning. One teacher said, *“A paid teacher is more motivated to provide better quality teaching given the sense of economic and resultant psychological stability due to receiving a payment at the end of the month. He/she becomes more committed to attend, more motivated to improve and learn and more focused on his profession or job given that he/she feels a moral responsibility. The paid teacher is also more creative as he/she constantly tries to improve himself/herself to keep his/her position and job.”*

Overall, findings from both school data and the perception surveys support the hypothesis that teacher pay leads to quality learning.

Conclusions

This quantitative and qualitative data has shown that teacher pay has positive impact on teacher attendance, teacher dropout, student attendance, student dropout, and student test scores or exam results. The data, from both school records and perceptions of teachers and headteachers, showed a clear and consistent difference between supported and non-supported schools: supported schools performed considerably better on all the indicators compared to non-supported schools. The perception data provided by head teachers and teachers provided context and rich narrative to the quantitative data gleaned from school records. Coupled together, evidence from both sources of data indicates the importance of teacher pay for lower levels of student dropout, more time on task and better student performance. Further, it can be assumed that reducing student dropout reduces the exposure of school-age children to dangers inherent in a society in conflict.

The study also found that the data collected in schools where teachers get paid is consistently of better quality and collected more consistently than in schools where teachers are not paid or not paid consistently. This shows the value of teacher pay in increasing accountability of schools in NWS. This may be an unintended consequence of paying teachers, but it is an important one.

Recommendations

The research conducted by Manahel on the importance of teacher pay and its impact on learning outcomes through increased instructional time, teacher and student attendance, and reduced teacher and student dropout shows the importance and significance of paying teachers. Based on the findings in this report, a number of recommendations can be made:

- It is important to ensure systematic and consistent teacher pay as it impacts teacher attendance and absence patterns, which by extension impact instructional time and student performance.
- It is important to increase the number of paid teachers, as this reduces teacher turnover and retains more experienced teachers within the profession, mitigating risk of 'brain drain' amongst the better qualified and most experienced educators. This, in turn, will directly improve the quality of teaching and so improve student learning outcomes in NWS.
- As teacher pay appears to have direct impact on the quality of education data collected by schools, providing pay to teachers helps ensure improved data quality for reporting and research purposes.
- Finally, there is a clear relationship between children and youth dropout rates from school and their exposure to dangers present in an environment of conflict. So, teacher pay, which this study has shown keeps teachers working and children in school, has a positive impact on protection concerns such as child labour, early marriage, or recruitment into armed groups. Thus, paying teachers can provide a cost-efficient approach to improve child protection. Instead of designing new separate programmes for child protection it may make more sense for education and child protection programmes to invest in paying teachers.

Disclaimer

This document has been redacted to protect the individuals involved in the Syria Education Programme. All names of people and locations have either been altered or removed, as has any information that may identify people or locations.



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