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## MODEL SCHOOLS NETWORK PROGRAM

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## FINAL REPORT

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### Executive Summary

The concept of the Model Schools Network (MSN) Program was originally developed by the USAID West Bank/Gaza Mission's Education Development Office in the spring of 2007. In May 2007, USAID issued a competitive RFA outlining a pilot basic education initiative targeting up to 20 private schools in the West Bank. AMIDEAST won the competitive RFA and negotiated a grant with USAID in September 2007. The initial focus on private rather than public schools reflected the political context at the time in which the U.S. government did not recognize the de facto Palestinian government because its membership included Hamas elected officials. This political context dramatically changed in February 2007, with Hamas controlling the Gaza Strip and Fatah controlling the West Bank. The U.S. government then recognized the Palestinian Authority's technocratic cabinet in the West Bank. This political shift allowed USAID to resume its support for the local government in the West Bank with some important limitations, such as forbidding the direct payment of any funds to individuals employed by the Palestinian Authority. With this development, MSN was expanded to include public schools.

This overarching political context fundamentally shaped the development and implementation of the MSN Program. In a region where political upheaval and changing leadership is not unusual, AMIDEAST was able to guide the MSN Program on a successful trajectory during the nearly six years of the project's existence. During a vast majority of the performance period, the same leadership team at AMIDEAST, USAID and the Ministry of Education remained in place. This leadership provided a remarkable level of continuity for the project. Although the project changed in scope and size, this consistent leadership, particularly USAID's Education Development Office and AMIDEAST's MSN Program management, kept the project true to its original objectives.

The MSN Program sought to introduce a student-centered, 21<sup>st</sup> century approach to teaching and learning that integrated child development at the physical, cognitive, psychological, and social levels. The major emphasis of the program was to improve the quality of teaching and learning in the disciplines of English, science, and mathematics. MSN's network of schools were to serve as a foundation for replicating lessons learned and best practices for other Palestinian schools.

The MSN Program had three main objectives:

- Introduce educational concepts, teaching approaches, techniques, and resources that would measurably improve student learning outcomes at participating schools
- Develop an expandable network of private and public schools that embraced a comprehensive, systemic approach to teaching and learning
- Evaluate and document the program results for future replication and scaling up

Early in the development and implementation of the MSN Program, five core components took shape that framed the school interventions for the subsequent years.

These components included:

- School Leadership
- Professional Development and Networking
- School Physical Capacity Building
- School and Community Involvement
- Monitoring and Evaluation (M&E)

These five types of intervention were implemented in somewhat different ways based on the changing roster of beneficiaries. At its inception, MSN focused on 17 private schools in the West Bank. This was followed by 40 public schools also in the West Bank and then another 15 private schools in Gaza. In sum, AMIDEAST supported 72 public and private schools (two new schools replaced two schools in Gaza in the final year). The number and composition of beneficiaries reflected four pivotal transitions that were captured in three of the sixteen modifications to the MSN grant. These are summarized below.

**Phase One: October 2007 – December 2009:** A network of 17 private schools was created with a focus on in-service teacher training for math, science and English teachers, professional networking among educators, renovation of science and computer labs and provision of extracurricular activities for students after school.

**Phase Two: July 2009 – September 2010:** During this phase, an additional \$2 million from USAID in July 2009 enabled the incorporation of 18 public schools into MSN. An additional \$6.2 million in September 2009 resulted in the inclusion of another 32 public schools across the West Bank. This phase of the project reflected an expansion of interventions across the network of 57 public and private schools. The variety of interventions expanded to include significantly more procurement for schools, a greater variety of extracurricular activities, a fully developed school improvement planning process linked to a principal leadership program, and a robust monitoring and evaluation approach. In terms of teacher training, this period also saw significant engagement with two local universities to provide in-service teacher professional development tied to a thoughtful integration of technology in the classroom, as well as the introduction of a carefully crafted education technology strategy.

**Phase Three: September 2010 – April 2012:** During this third period, engagement with the West Bank private schools concluded and activity focused fully on the 40 public schools. A new Gaza component that involved working with 12 private schools<sup>1</sup> was added, funded through an additional \$1.7 million. This phase also saw increased integration and consultation with the Ministry of Education in Ramallah. AMIDEAST's West Bank efforts became more systemic with the inclusion of District Leadership Teams linked to School Improvement Teams. Significant efforts were made to document and analyze the learning [or program?] outcomes in the public schools. In Gaza, the focus was on the distribution of thousands of local scholarships

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<sup>1</sup> Initially 12 private schools were added, although 3 additional schools replaced three of the original 12 schools during the last six months of the grant, thus bringing the total to 15 private schools that were supported in Gaza.

and a steady increase of activities roughly mirroring those that AMIDEAST was already implementing in the West Bank schools.

**Phase Four: April 2012 – June 2013:** This fourth and final phase was marked by a winding down of activities in the West Bank. AMIDEAST hosted four concluding events with key stakeholders in Ramallah where specific program outcomes were presented along with strategic recommendations. In Gaza, AMIDEAST continued providing a range of leadership and teacher training for another full year. Distribution of equipment for new computer labs and renovations continued right up to the close of the grant on June 21, 2013.

### **Defining Issues over the Life of the Project**

Upon reflection on nearly six years of implementing the MSN Program, several key issues are worth highlighting. These are outlined below.

- The USAID West Bank/Gaza Mission's funding, priorities and portfolio of engagement is closely tied to U.S. Congressional oversight. Further, there is a complex inter-relationship between U.S. domestic politics and the broader Palestinian-Israeli peace process, as well as the U.S. State Department's perceptions of internal Palestinian politics. These factors translated into a working environment that changed very rapidly, and a great deal of flexibility was required to effectively accomplish project objectives. During more than one period, a major influx of funding required AMIDEAST to change course and ramp up activities and staff quickly, while at other times, AMIDEAST was required to suspend most activities and stretch obligated funds over an extended period. The changing political landscape and its repercussions on program activities and funding created significant challenges in implementation.
- Two particular U.S. government requirements had a particularly significant influence on the project. The prohibition of cash assistance to Palestinian Authority (PA) employees, which included all teachers and low-level MoE employees, required very careful attention and concerted measures to ensure that project activities were implemented effectively and legally. Similarly, Mission Order 21 – an internal policy directive specific to the USAID West Bank/Gaza Mission – introduced additional compliance requirements, including extensive procedures for the vetting of all beneficiaries and vendors that became a major consideration in program planning.
- The MSN Program began as a private school initiative just after USAID had lifted a No Contact policy with most Palestinian Authority employees. Engagement and communication with the Ministry of Education (MoE) in the initial year of the project was limited. This relationship changed dramatically over time, as public schools were added to the program. New initiatives were designed that required engagement and close integration with MoE staff at the school, district and central level. AMIDEAST ended the program with a very close level of cooperation with the MoE. Therefore, over nearly six years AMIDEAST's management and implementation approach changed from relatively

autonomous interaction with the private sector to a much more cooperative and coordinated relationship integrated with MoE priorities.

- The MSN Program was a novel effort in Palestine in terms of its objectives, scale, scope and complexity. USAID had never engaged in the basic education sector in this manner, and the education community – both private and public – had never experienced a donor-funded effort of this stature. Smaller, more limited assistance projects for schools were common, such as refurbishment or short-term training of teachers. MSN’s objectives were holistic in nature and required a high degree of engagement from many stakeholders in the education community. In addition, USAID designed MSN as an initiative where piloting of school improvement initiatives was encouraged in order to create a repository of successful experiences that could be built upon. This in itself provided AMIDEAST with an unusual degree of flexibility in adapting to events and opportunities as they unfolded.
- Several macro education reform outcomes warrant highlighting. Importantly, these outcomes gained further traction through USAID’s investment of significantly more resources in education development through its award of the Leadership and Teacher Development Program that AMIDEAST began administering in 2012.
  - The MSN Program began with a model for in-service teacher training that depended on a local non-governmental organization. During a later stage of the project, two local universities were contracted to provide in-service teacher professional development. Lessons learned along the way included a recommendation that the Ministry develop the in-house capacity to do large-scale, long-term teacher training using a modular curriculum and a combination of formal face-to-face instruction linked to reflective learning circles. This basic approach was fully adopted by the MoE, ultimately at the exclusion of other approaches, including a major university-based in-service teacher training effort sponsored by the World Bank.
  - The MSN Program expanded and clarified the policy debate regarding education technology in important ways. The MoE had struggled to identify a concrete educational technology strategy that made sense for schools. MSN showed how the combination of Internet connectivity, teacher training and basic investments in hardware could result in creative approaches to teaching and learning. This effort focused the conversation on teaching and learning rather than on technology hardware.
  - The MSN Program prioritized decentralization of decision making at the school and district level, while emphasizing the professionalization and accountability of school principals. The MoE has embraced this concept because it was accomplished sensitively and effectively within MSN through the

institutionalization of the Leadership Diploma Program. This feature of MSN offered new pathways for educators to engage in school improvement.

- The role of monitoring and evaluation was explicit from the outset of the MSN Program. There was a clear mandate and expectation that MSN would lead to evidence-based recommendations. USAID and the MoE had never experienced such a comprehensive evaluation effort that was publically shared and debated for purposes of influencing policy making. The result is reflected in how the MoE approaches current strategic planning with an overt priority toward more effective monitoring and evaluation.

Holistic school improvement models typically include engagement of parents in school affairs, community support and integration of student extracurricular activities. However, the MSN Program largely evolved without focused interventions involving parents and local communities. Palestine lacks a culture or history of parent-community engagement in schools. This factor challenged early MSN efforts, and neither AMIDEAST nor the MoE succeeded in fully developing this dimension of school improvement. The MSN Program offered varied and successful student extracurricular activities, but these lacked sustainability in most cases and were not integrated into broader school improvement efforts.

This report is structured in two parts. The first part focuses on an analysis of MSN interventions among 40 public schools in the West Bank. This part of the report was specifically written as a means of putting forth recommendations for action to the MoE. This section of the report is highly analytical and based primarily on the evidence derived from extensive monitoring and evaluation of the core program components. The second half of this report captures the activities, outputs and some outcomes of the MSN Program in Gaza involving 15 private schools. The Gaza program evolved very differently from its West Bank counterpart beginning two years later and continuing for one year longer. MSN Gaza began as a humanitarian effort supporting private schools through local tuition scholarships and psychosocial support to children, but later incorporated school improvement efforts similar to those conducted with the 17 private schools in the West Bank. The Gaza report is more descriptive and meant to provide a summative account of interventions.

### West Bank Public Schools—Final Report and Analysis

Over a three-year period, the MSN Program embarked upon a series of capacity-building interventions aimed at enhancing the quality of school leadership and teaching practices through in-service professional development among principals, teachers, supervisors and district-level staff representing 40 public schools. MSN also introduced innovative approaches to education technology in schools and strengthened the role of student extracurricular activities and community engagement. A key objective was to document and evaluate these interventions in order to develop evidence-based recommendations that the MoE could act upon to improve student learning outcomes in Palestinian schools. As a consequence, MSN evolved into one of the most robustly evaluated education initiatives in Palestinian history.

In July 2012, AMIDEAST produced a final report for this phase of the MSN Program that highlighted key outcomes with a particular focus on achievements pertaining to the 40 public schools. The conclusion of this report includes 20 policy recommendations that were presented and discussed in draft form with key stakeholders during four separate events in June and July 2012. Since then, AMIDEAST has been able to help advance some of these



recommendations through the USAID-funded Leadership and Teacher Development (LTD) Program. The LTD Program began in May 2012 and is a larger-scale capacity-building initiative working with 300 public schools in the West Bank. Some of the core objectives of the LTD Program deliberately build on MSN Program achievements. Consequently, the contents of the MSN Final Report on West Bank public schools has been updated and revised herein to include references to areas where the LTD Program has had a material impact in furthering efforts begun under MSN.

Overall, the evidence gathered during the MSN Program points to a successful effort in developing a holistic model of institutional capacity-building that improved schools. However, the degree to which the approaches and interventions are replicable for all Palestinian schools varies considerably. In some cases, much can be accomplished if the MoE revisits education policies and reconsiders how issues of autonomy and authority are managed in a school setting. In other cases, the ability to scale up worthwhile interventions is simply a question of resources and priorities for the Palestinian Authority.

Perhaps the single most important policy dimension emanating from the MSN Program is the recognition that improved school leadership, increased knowledge and skills of teachers and greater community involvement in schools have far greater impact when integrated under a

single vision for school improvement. In other words, interventions that collectively target improved instruction in the classroom, as opposed to activities conducted in isolation, offer far greater reward in terms of creating a school climate and classroom environment that lead to improved learning outcomes. Comprehensive school improvement must also be supported by an alignment of policies and procedures at the local, district and national levels that engenders motivation and commitment for educators to change their current practices.

The most significant contributions of the MSN Program can be summarized in four key thematic areas as outlined below.

### Outcomes in School Leadership

- The Leadership Diploma Program (LDP) was established as an accredited professional diploma managed and delivered by the National Institute of Educational Training (NIET).
- Principals' satisfaction with the LDP increased by the conclusion of the program.
- Principals used multiple opportunities to engage their school community, including teachers and parents, in the school reform process through the School Improvement Teams and District Leadership Teams. These efforts resulted in substantive changes to the daily teaching practice of participating teachers.
- MSN's professional development programs created opportunities for principals and teachers to understand the key interrelationship between school leadership and classroom instruction, particularly in terms of the principal's role as an instructional leader who reinforces a common vision toward improving teaching and learning.

### Outcomes in Teacher Professional Development

- Professional Certificate programs for teachers of math, science, and English resulted in measurable increases in learner-centered approaches to teaching and learning, as well as increased capacity of teachers to integrate new technology into their classroom instruction. Professional development also promoted a community of practice among teachers in the network.
- Observations of MSN teachers in actual classroom settings provided strong empirical evidence of increased learner-centered instruction over teacher-centered practices.
- Teachers demonstrated a shift in practices toward more formative types of classroom assessments that encourage critical thinking and collaborative problem solving.
- The most consistently recurring practice among MSN teachers was the enhanced use of visual aids and/or educational technology, which provided students multiple entry points to engage with the curriculum.
- Findings from surveys, focus groups and in-depth interviews highlight how MSN's model of professional development assisted teachers to critically evaluate, self-reflect, and change their fundamental assumptions and practices about their own and their students' learning.

### Outcomes in Educational Technology in Schools

- MSN's provision of computers and Internet connectivity among its network of schools noticeably improved teachers' capacity to access and incorporate electronic resources into the curriculum and instruction.
- Students' use of educational technology also increased impressively.
- Use of technology for both administration and teaching and learning purposes registered a 54% gain over the course of the program.
- MSN's introduction of connectivity in schools provided a national model that is effective, reliable, affordable, and that can be scaled to hundreds of schools.
- The MSN experience demonstrated that added value is provided when teachers and trainers have sufficient technology skills, easy access to computers and the Internet, and when online tasks are deliberately woven into in-service teacher training.

### Outcomes in Community Engagement and Extracurricular Activities

- MSN's extracurricular activities improved student engagement and academic achievement, particularly among low-achieving students.
- Students were exposed to new opportunities for learning enrichment that improved their confidence.
- Teachers developed a better appreciation for extracurricular activities, which resulted in increased teacher motivation to support activities. This support was present despite the fact that teachers were not paid to facilitate after-school activities.
- The integration of classroom learning tasks and extracurricular programming improved, with activities most directly linked to academic subjects being the most sustainable.
- Existing Parent Teacher Associations (PTAs) of MSN schools became "activated" as a result of MSN, and for many parents, the performance of their PTA was seen as improving.



### School Leadership

The School Leadership component was a major dimension of AMIDEAST’s approach to creating an effective model school network involving professionally certified principals and teachers committed to a process of school improvement. AMIDEAST’s approach was a capacity-building effort targeting the school and district levels to engage in a collaborative, problem solving approach to school reform, rather than a top-down bureaucratic approach. To this end, AMIDEAST created two types of leadership teams as part of the MSN Leadership Program: School Improvement Teams (SITs) and District Leadership Teams (DLTs) representing the collective leadership at the school and district levels, respectfully. The intent was to infuse the appropriate educational leadership with understanding of, appreciation for, and commitment to systemic change. All leaders were charged with the task of improving the quality of education offered in MSN schools. Another aim of this collective leadership structure was to better ensure that instructional leadership goals were recognized as important by school principals and district staff. The teams provided support and structure in the implementation of new procedures and processes that were agreed upon by all team members. Building the capacity and facilitating the functioning of these teams was a joint effort between the MoE and MSN Program staff.

### Professional Development and Networking

The Professional Development and Networking component comprised two tracks to effectively create mutually supportive communities of practice among school leadership and teachers: the Leadership Diploma Program (LDP) for principals and the Professional Certificate Program for teachers. The primary aims of the LDP were to significantly improve the quality of school leadership in MSN schools, as well as to develop a culture of continuing professional development among school principals. The program focused on three key actors within Palestinian basic education: principals, district administrative staff, and supervisors. Framing this approach was the LDP for the 40 MSN public school principals. The LDP required a total of 320 hours divided among a practicum, action research, face-to-face training, reflective learning circles and a leadership project. These components occurred over eighteen months, with approximately 50% of the hours involving face-to-face meetings with homework assignments, and the other 50% constituting an on-the-job practicum. The LDP was designed to be highly relevant by integrating real issues in the daily life of school principals with theories of leadership. The LDP was developed and delivered locally with NIET staff taking the lead. This program is now accredited by Accreditation Quality Assurance Commission (AQAC) and has been scaled up for national delivery by NIET. Under the LTD Program, a further 100 principals have already been enrolled in the program, and NIET’s staff are quickly becoming respected as leadership trainers.



The Professional Certificate Program (PC) was delivered to teachers of English, math, and science at participating MSN schools. The PC combined monthly face-to-face training events throughout the academic year; learning circles held at local and district levels; individual observation and feedback sessions; activities on the MSN Virtual Learning Environment (VLE); and online support to assist the teachers in completing certificate requirements. The blended framework was developed and delivered by AMIDEAST. The program required teachers to participate in four activity strands: 1) at least 96 hours of face-to-face training; 2) 36 hours of district or regional learning circles/communities of practice wherein all subject teachers in the network had the opportunity to share and discuss themes, challenges, and issues; 3) 36 hours of school- and district-level learning circles/ communities of practice; and 4) approximately one hour weekly of VLE activities.

The curriculum for the PC program was based on a common set of core themes. Each of these themes was explored by the teachers within the context of their specific subjects using discussion, reflective practice and hands-on activities. The core themes included the following.

- Student-centered learning
- Strategies for promoting critical thinking
- Assessment theory and techniques
- Curriculum analysis as it applies to the classroom environment
- Information technology in the classroom
- Materials design, focusing on low-cost alternatives

### **School Physical Capacity Building**

The School Physical Capacity Building component was a major initiative to improve the infrastructure and physical capacity of the schools. The objective was to better support the implementation of new educational concepts, teaching approaches and techniques for improved teaching and learning, as well as to generally enhance the quality of education in the schools. It included supplying schools with all the equipment necessary for project participation, as well as assisting them in improving the infrastructure of their facilities in order to optimize the learning environment. The MSN team administered a comprehensive needs assessment in cooperation with schools' management and MoE directorates. With input from the SITs, the needs of each school were categorized within the following areas: books, renovation, maintenance, and refurbishment; net books for teachers; computer lab equipment (IT), science lab supplies, and wireless Internet services. The total estimated cost for capacity building projects at the 40 schools was about \$3 million, with an average of approximately \$66,000 for each MSN school.

### **School and Community Involvement**

The School and Community Involvement component aimed to improve the learning environment and school climate at MSN schools through a holistic approach toward strengthening partnerships between schools and their communities. A large part of this component involved providing students with greater access to extracurricular programming. The Youth Enrichment

Program (YEP) engaged students and school communities in creative, collaborative and competitive activities through a variety of interactive learning experiences. Between January 2009 and April 2012, MSN sponsored over 1,500 activities involving over 18,000 students at the 57 participating public and private schools in the West Bank. These activities aimed to do the following: promote student motivation and achievement; encourage critical thinking; strengthen the link between schools and communities; and create more child-friendly schools by enhancing the variety and quality of extracurricular activities available to students. MSN also engaged PTAs and created national guidelines for parent engagement in schools. The MoE then distributed copies of national guidelines to schools throughout the West Bank.

### Monitoring and Evaluation (M&E)

Finally, the MSN M&E component included formative and summative assessment approaches for the purpose of evaluating, documenting, and sharing the multi-component MSN initiative. This objective facilitated the adoption, modification and selection of appropriate components to create a model of best practices in a Palestinian context. As such, M&E, including an external program evaluation component, was an integral part of all project activities.

MSN's M&E team conducted an annual satisfaction survey of principals, teachers, students and parents in six key domains. This annual satisfaction survey gathered over 23,000 responses over the life of the program. M&E also carried out the following.

- 12 written evaluations of specific extracurricular activities
- 43 observation visits to these activities
- 210 oral interviews of participants in activities

In addition, M&E activity also involved a phone survey of principals to gain their opinion of the Youth Enrichment Program. Furthermore, sixty-seven interviews were conducted on MSN's procurement activities with principals, teachers and students in ten participating schools. The M&E team administered two surveys related to educational technology: 1) a survey on MSN procurement activities for almost 5,000 principals, teachers and students; and 2) a survey on netbook use for all 448 teachers and principals who received a netbook as a part of the program. Over the life of the program, the M&E team conducted five written evaluations of its in-service teacher professional development program, as well as two evaluations of the leadership program for principals and supervisors. A sample of participating teachers from all districts also took part in focus groups to review the professional development program. Finally, the M&E Department carried out a phone survey with a random sample of supervisors regarding the leadership program.

For most survey collection, MSN used purposive sampling to distribute surveys to all participants or relevant stakeholders. The only exception was for the annual satisfaction surveys, in which 20% of the student and parent responses were randomly selected after collection due to the large volume of responses. Qualitative data was coded to give additional depth and explanation to quantitative findings, particularly in cases where quantitative data was ambiguous or unexpected. The qualitative data often provided useful insights as to why a particular pattern

emerged in the quantitative data. This internal data was triangulated and integrated with the pre- and post-study.

The external evaluation component, which included technical input and data gathering from the MoE’s Assessment and Evaluation Department, was conducted by the MSN M&E Department. The Assessment Team designed a mixed-methods approach for its research. Quantitative data collection consisted of surveys, while qualitative methods included focus groups, in-depth interviews and narrative comments from classroom observations.

A pre-intervention study took place at the start of the MSN Program to establish baseline data and was followed by a post-intervention study at the program’s conclusion. Furthermore, ten schools outside the MSN network were selected by the MoE for inclusion in the pre- and post-study to provide a more robust basis for determining whether changes were the result of MSN’s interventions or other factors at the 40 MSN schools.<sup>2</sup> Table 1 shows the sample sizes for the groups comprising the survey research.

Table 1 Sample sizes of research groups

	MSN Schools	
	Pre	Post
Teachers	521	655
Principals*	57	40
Supervisors	NA	14
Parents	918	1603
Students, grades 4-5	147	726
Students, grades 6-9	739	1799

\* The sample of principals in the pre-study included a subsample of deputy principals: 17 from MSN schools and 3 from control schools.

## Major Achievements

This report presents the major achievements of AMIDEAST’s Model Schools Network Program. While many challenges still remain, research-based evidence demonstrates that MSN succeeded in achieving its core aim of building a holistic model of institutional capacity-building leading to the development of a school improvement network to serve as a model for basic education in Palestine. In the sections that follow, the report presents findings of MSN’s extensive evaluation of capacity-building interventions aimed at enhancing the quality of school leadership; teaching and learning through in-service professional development among teachers, principals, supervisors and district-level staff; supporting education technology and physical capacity-building; and strengthening school and community involvement through student affairs and extracurricular activities.

<sup>2</sup>The comparability of the ten control schools to the 40 MSN schools was confirmed through an ANOVA analysis comparing the means of key variables.

### School Leadership

This section presents findings from capacity-building interventions aimed at enhancing the quality of school leadership through in-service professional development and networking among school principals, supervisors and district-level staff. Extensive evaluation by MSN’s M&E research points to the significant success of MSN’s interventions aimed at effectively creating mutually supportive communities of practice for school leadership and classroom instruction.

#### MSN Principals’ Satisfaction with their Professional Development Experiences

Based on internal evaluation surveys, principals’ satisfaction with the Leadership Diploma Program was consistently high. The most significant percentage changes between the beginning (pre-) and end of program (post-) evaluations were reflected in the overall framework and logistics (4%) and results (3%), as well as the role of facilitators (3%). AMIDEAST also created the Scale of Principals’ Satisfaction with Professional Development, which consisted of seven questions designed to gauge principals’ perceptions about the effectiveness of their professional



development experiences with regard to their relationships with teachers, students, and other principals; how new ideas and skills improved their work performance; how well their professional development aligned with the objectives of the school improvement plan (SIP); and how satisfied they were with the overall quality of the professional development activities. Based on these indicators, principals’ overall satisfaction with the impact of their professional development experience on their leadership capacity had increased by 7.6% at the conclusion of the program.

Despite these positive levels of satisfaction, some principals were unable to complete the MSN Leadership Development Program because they were transferred to schools outside the MSN network. Over the course of MSN’s leadership program, 35% of the principals were transferred to other schools. This instability occurred even after specific understandings had been reached with the MoE about the importance of continuity in school leadership. Clearly, Ministry policies and procedures regarding principal and teacher transfers need to be revisited for any nationally scaled program of in-service professional development.

A principal noted the following: “At the start of the MSN project, we were told that we wouldn’t be transferred and that we would be able to continue our [school improvement] plans to fruition. I feel I am playing catch-up here and there is no time. Three out of five of the MSN principals in my district were transferred during the course of the project.”

These comments are echoed by a parent in a focus group: “I am concerned, as a parent, about the transfer of teachers and principals at the beginning of school. Moving a principal from one

school to another and bringing a new principal who needs time to get to know the school causes student achievement to suffer and can even increase fights at the school.”

For those principals who did complete the program, changes in the mean scores for the individual questions on the scale indicate, as seen in Table 2, that MSN principals credit their professional development experiences with improving two key dimensions of school management and leadership. Firstly, their experiences fostered more productive and meaningful relationships with teachers, students and fellow principals. In other words, MSN’s leadership development provided conditions in which principals could enhance their connection with their own school as a community of learning, as well as with principals from other schools in a broader community of practice. Secondly, MSN principals were not only exposed to new ideas about school leadership, but many felt motivated to apply their new learning in ways that resulted in substantive changes to their work as principals. Finally, MSN principals indicated their professional development experiences were closely aligned with their SIP, an opinion that remained mostly consistent from the beginning to the end of the MSN Program.

Table 2 Principal’s satisfaction with their professional development

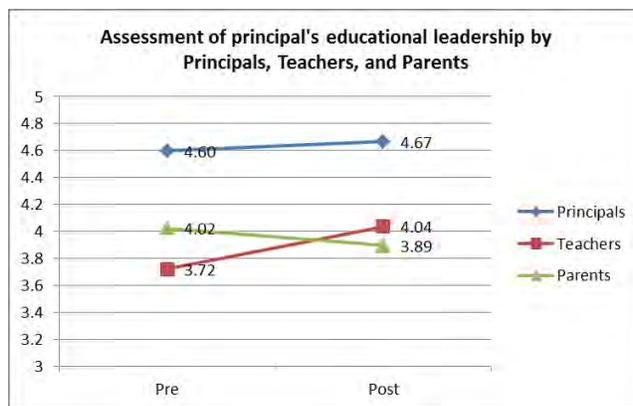
Professional development experiences this year...	Pre	Post	%change
Included opportunities to work productively with teachers at my school	3.74	4.25	14
Helped me understand my students better	3.8	4.19	10
Included opportunities to work productively with principals from other schools	3.76	4.14	10
Led me to make changes in my work	4.02	4.39	9
Included enough time to think carefully about, try, and evaluate new ideas	3.7	4.03	9
Were closely connected to my school’s improvement plan	4.3	4.36	1
Were sustained and coherently focused, rather than short-term and unrelated	4.17	4.22	1

A principal from the Hebron District noted, “It was good training. The newest aspect for us was the participation of teachers, students, and the local community in writing the vision of the SIP. It was hard at first to do the planning, but by the end we were really happy.”

### Stakeholders’ Views about the Overall Quality of School Leadership

MSN created the Scale of Principal’s Leadership. This scale consisted of six questions designed to assess the perceptions of principals, teachers and parents on the quality of school management and leadership.<sup>3</sup> The questions elicited opinions about the leadership role of principals in promoting school reform; new methods of instruction; professional development of

Figure 1 Results for the Scale of Principal’s Leadership



<sup>3</sup> The scale was based on a 5-point Likert agreement scale.

teachers; shared decision making; the school as a community of learning; and parental and community involvement. Results overall for the three groups of stakeholders are generally positive, as shown in Figure 1. Principals offered the most positive opinion of their leadership, a view that remained constant throughout the study. The mean score for teachers—the stakeholder group with the most substantive contact with principals—was not only positive, but also improved 8% by the end of the study.

Although the leadership structure of MSN schools attempted to integrate the community in the planning of school improvement, parents nevertheless had some misgivings about this effort. Survey results for parents showed a slight decrease of 3% in their assessment of the principal’s leadership. Two areas appeared to be of chief concern for parents: the capacity of principals to promote broader educational reforms in their children’s schools, and their capacity to build stronger connections between schools, students’ homes and the larger community. Although anecdotal evidence revealed many positive examples of parental engagement, the MSN experience highlights that the nexus between parents, principals and teachers needs further research, awareness raising, advocacy and action.

A review of the individual questions within the scale shown in Table 3 reveals that the principals believe they encourage teachers to try new methods of instruction, an opinion substantiated by survey results for teachers and parents. Results also indicate principals believe they have improved their efforts toward increasing parental and community involvement. Principals also indicate they are taking more direct interest in the professional development of teachers. Indeed, teachers appear to agree fully that their principals’ attention to their professional development increased markedly. Likewise, they also credit principals for being more proactive in encouraging parental and community involvement.

The Scale of Principal’s Leadership also points to a promising change. When asked to assess the extent to which principals are strongly committed to shared decision-making, the mean score for teachers increased 11% by the end of the MSN program. This surprisingly strong increase suggests that MSN’s LDP has had measureable success in helping principals use multiple opportunities for engaging teachers in school reform through the SITs and DLTs.

A principal from Ramallah District commented, “When I first became a principal, I concentrated on the administrative side of things. The MSN leadership course made me focus on educational

Table 3 Questions Comprising the Scale of Principal’s Leadership

At this school, the principal...	Principals			Teachers			Parents		
	Pre	Post	% Change	Pre	Post	% Change	Pre	Post	% Change
Encourages teachers to try new methods of instruction.	4.82	4.93	2	3.99	4.27	7	4.12	4.12	0
Works to create a sense of community in this school.	4.82	4.83	0	3.74	4.02	7	4.05	3.87	-4
Takes a personal interest in the professional development of teachers.	4.61	4.78	4	3.76	4.14	10	4.01	3.78	-6
Promotes parental and community involvement in this school.	4.3	4.53	5	3.74	4.07	9	4.04	3.86	-4
Is a strong leader in school reform.	4.49	4.5	0	3.78	4.07	8	4.15	3.95	-5
Is strongly committed to shared decision making.	4.53	4.45	-2	3.31	3.66	11	4.15	3.95	-5

improvement and the needs of the teacher. I went and observed the classes and instead of asking about the light bulb and if it is working and if the window is closed, I started asking, ‘Why aren’t you getting the students to participate? Where is the critical thinking? Where are the questions? You are talking too much.’ The MSN leadership program opened my eyes to these things. The workshops and training made me a better leader.”

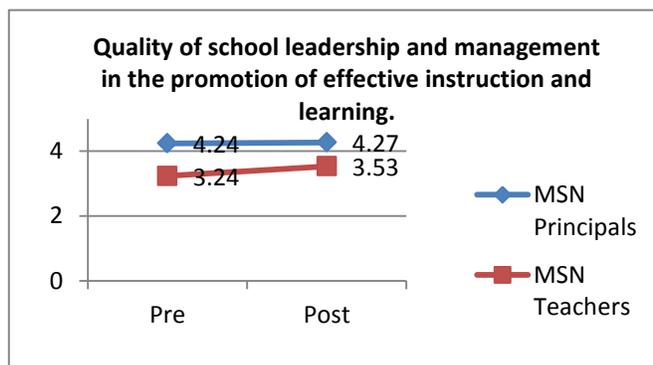
### Leadership and Teacher Performance

Enhancement of student learning outcomes was a major goal of the MSN Program. Consequently, the LDP focused on instructional leadership that pertains to the ways in which a principal of a school encourages educational achievement by prioritizing instructional quality.

The Scale of Educational Leadership was designed to gauge the perceptions of both principals and teachers about their schools’ capacity to enhance teachers’ instructional performance through the provision of greater autonomy, supportive supervision, and constructive feedback.<sup>4</sup> Thus, the scale sheds light on the effectiveness of the principal in creating a supportive professional environment for teachers to practice new learner-centered strategies and assume more responsibility in making decisions on matters of curriculum and instruction.

The results of the scale shown in Figure 2 indicate that principals rate their school’s leadership in support of good teaching to be quite positive. Even though this assessment remained virtually unchanged by the end of the MSN program, it highlights how seriously principals take their role in providing educational leadership to support teachers’ efforts to improve their instructional performance. Results for the teachers on this same scale support this conclusion. Although teachers were more restrained in their assessment, their recognition of educational leadership rose 9% by the end of the MSN program. This increase suggests that teachers perceived their principals to be making an increased effort to support their work in the classroom. Interviews with principals highlight this aspect of the LDP training.

Figure 2 Results for the Scale of Educational Leadership



A principal from the Jerusalem Suburbs District observed, “I became more involved in how teachers teach and how students learn, my observations and follow-up is no more limited to administrative issues but expands to other academic issues.”

<sup>4</sup> The scale consisted of 11 questions and was based on a 5-point Likert agreement scale.

A Ramallah District principal further noted, “I started to see changes in the quality of assessment in my school, exam papers and worksheets are different than what they were before the program. I see more focus on critical thinking. Teachers start to share their papers and only after they get the feedback from their colleagues they the final design version. Teachers use the resource library a lot.”

A review of specific questions comprising the Scale of Educational Leadership, as shown in Table 4, reveals that teachers felt most positive about the capacity of school leadership to enhance their teaching performance through supportive supervision and constructive feedback. For instance, teachers gave the highest scores in the case of support offered to new teachers; the provision of constructive feedback to improve teaching; feeling empowered; fostering an atmosphere of trust and mutual respect within the school; feeling comfortable raising issues and concerns important to teachers; fairness in how teacher evaluations are conducted; and finally, opportunities to participate in leadership roles.

Table 4 Results for selected questions about leadership and teaching

	Pre	Post	% Change
<b>School leadership makes a sustained effort to address teacher concerns about new teacher support.</b>	3.78	4.09	8
<b>Teachers receive constructive feedback that helps them improve teaching.</b>	3.65	4.01	10
<b>Teachers feel empowered by the leadership of this school.</b>	3.68	3.98	8
<b>School leadership promotes an atmosphere of trust and mutual respect within the school.</b>	3.58	3.97	11
<b>Teachers feel comfortable raising issues and concerns that are important to them.</b>	3.67	3.94	7
<b>Procedures for teacher performance evaluations are applied fairly and consistently</b>	3.66	3.82	4
<b>Teachers pursue opportunities to participate in school leadership roles</b>	3.07	3.39	10

On the other hand, Table 5 shows that questions measuring the extent of teachers’ autonomy in matters of curriculum and instruction received the lowest assessments—an indication of some dissatisfaction. However, the percent change on the three questions is significant and can be explained as a result of program interventions. For example, although teachers did not feel they had sufficient opportunity to determine the content of their in-service professional development program, they did take advantage of their opportunity to provide feedback and evaluate the modular curriculum. Four different evaluations over the course of the teachers’ training provided important feedback and led to some changes in content and delivery methods.

Table 5 Results of selected questions about leadership and teachers’ autonomy

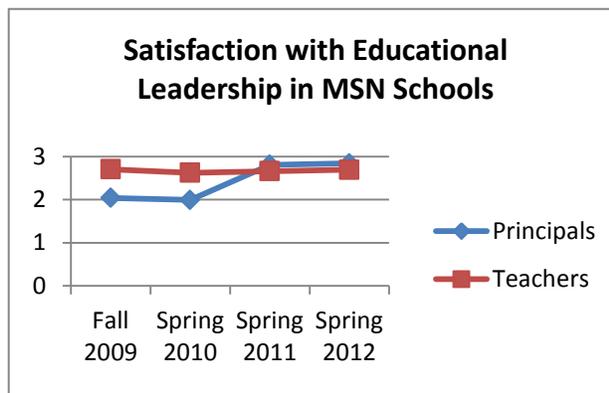
	Pre	Post	%Change
<b>Teachers are provided with opportunities to determine the content of in-service professional development programs</b>	2.95	3.34	13
<b>Teachers are integrally involved in decision-making about educational issues.</b>	2.59	2.91	12
<b>Teachers are trusted to make sound professional decisions about instruction.</b>	3.07	3.33	8

Teachers also registered a 12% increase in their involvement in decision-making, which may reflect their contribution to the school improvement planning process. Finally, teachers also showed an 8% increase in terms of being able to make decisions about classroom instruction. This may be a reflection of an increase in their knowledge and skills based upon MSN’s teacher

in-service professional development program. In sum, the reflective and participatory nature of the in-service leadership and teacher professional development programs clearly provided new opportunities for teachers to increase their sense of autonomy in matters of curriculum and instruction, although there is also room for improvement.

MSN also created a scale to measure the satisfaction with education leadership. This scale consisted of three questions from the surveys given to principals and teachers. The questions explored stakeholders' perceptions of overall school management and leadership; the school's capacity to support teachers and provide for professional development; and the school's capacity to consider the needs of teachers.<sup>5</sup> The surveys were administered at four intervals over the course of the MSN Program.

Figure 3 Results of MSN's Scale of Leadership Satisfaction



The results suggest the MSN professional development programs for both principals and teachers reinforced a common vision toward improving teaching and learning. Evidence of this common vision is illustrated in Figure 3. At the inception of the MSN program, a substantial gap in perception existed between principals and teachers. However, during the course of the LDP, principals broadened their view of their responsibilities to include instructional leadership and better responding to teachers' needs. In other words, MSN's professional development programs created opportunities for principals and teachers to recognize the important interrelationship between school leadership and classroom instruction, particularly the principal's role as an instructional leader. A principal from a Jerusalem suburb made these remarks about this process: I feel that I have a better understanding of what I do. I learned that I should do things in comprehensive ways that include students, teachers and administrative staff. As a school leader, I am now more aware for my role in teaching and learning in addition to administration role.

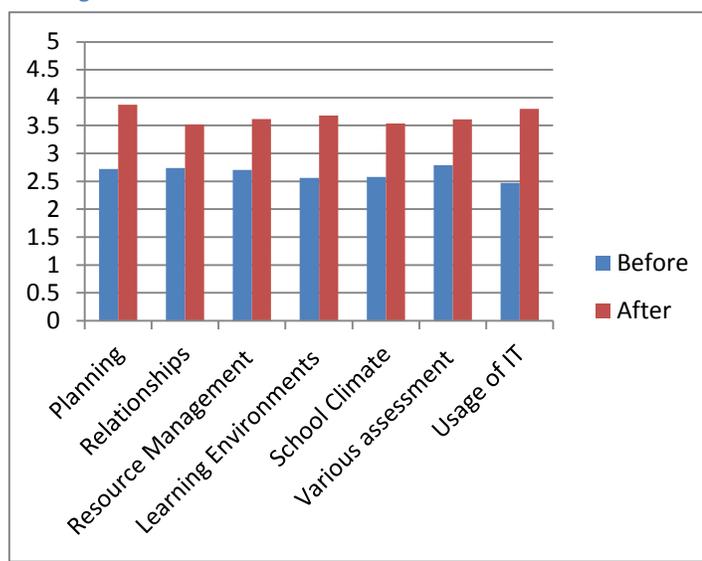
<sup>5</sup>The alpha reliability coefficient for the three items in the principals' scale: alpha = .603; and for the teachers' scale: alpha = .857

### School Improvement Teams

The school improvement planning process involved creating a comprehensive improvement plan that outlined school priorities and needs. The outcome was a plan that detailed each school’s major priorities; specific areas of improvement; and institutional initiatives that would be revised annually. It also included an explanation of the school’s vision, internal professional development needs, and detailed new equipment and renovation needs. This document was then used as a blueprint for the MSN Program to procure high-priority items for each school.

The School Improvement Teams (SITs) were charged with two core responsibilities. First, they conducted a school self-assessment based upon a set of seven Effective School Standards developed by NIET. The school self-assessment helped set school priorities and was linked to the second

Figure 4 Results of Effective School Standards self-assessments



responsibility of participating in a school improvement planning process. Survey results from teachers and principals representing 30 of 40 pre- and post-school self-assessments revealed an average 38% increase across seven domains<sup>6</sup>. Figure 4 illustrates these dramatic increases between January 2010 and May 2012. Use of technology for both administration and teaching and learning purposes registered the largest gain, 54%. Two other domains that changed dramatically were: planning based upon a school vision and mission, which increased 42%, and changes in school climate, which increased 44%. The areas of alternative assessment and external relationships changed the least and need further support from the MoE. Overall, teachers and principals who served on their school’s SIT highlights their strong belief that their schools are more effective institutions as a result of participating in MSN’s interventions.

Based on a pre- and post-evaluation from each School Improvement Team, 32 of the 40 MSN public schools (80%) completed at least 70% of their school improvement plans. A further eight schools believe they accomplished at least 90% of their goals. Given that more than a third of MSN schools saw a transition in leadership during the program, as well as the fact that AMIDEAST was not able to fully fund some desired school improvements due to funding limitations, this outcome is considered quite positive.

<sup>6</sup> All 40 MSN schools conducted a pre-self-assessment; however, 10 schools did not submit the post-self-assessment. Thus, these results reflect a completion rate of 75%. Principals from five of these ten schools were transferred to other schools during the MSN program which affected the continuity of this process.

The following impressions of a principal in Hebron illustrate the value of this process: “In the beginning, we studied the needs of the school, both material and otherwise. Then the local community got involved and we met to get the opinions of the teachers, the families and the students. Step by step. Before we would meet only with the teachers, but MSN got us to consult with the community and the students as well. What changed is our way of thinking. Before everything was routine, but now we have a work plan to change the atmosphere, to remove violence and make students love school.”

### **The Role of Supervision**

The MoE assigned 42 district supervisors to follow up with the math, science and English teachers in MSN schools. The supervisors participated in four orientation sessions relevant to the aims of the teacher in-service professional development program in general, and to the specific learner-centered approach. Supervisors were also asked to support teachers in promoting and using technology in classrooms.



Each supervisor, as well as the head of the supervision department in each district, received a netbook in order to facilitate communication with teachers and colleagues. The supervisors also conducted at least two classroom observations per teacher in their respective disciplines. To assess the impact this component had within MSN’s leadership initiative, a questionnaire consisting of 29 closed-ended and 3 open-ended questions was administered to 14 randomly selected supervisors. Though small in size, a purposive sample of 6 women and 8 men provided a balanced representation of supervisors of math, science, and English subjects from schools in all seven districts of the West Bank.

Results of the closed-ended questions indicate the supervisors were very pleased with the impact of MSN’s interventions on enhancing their professional capacity and skills. In particular, the program significantly improved the capacity of supervisors to use ICT to carry out their work more efficiently and effectively. Responses to the open-ended questions revealed that the use of technology and the Internet was credited with enhancing the supervisors’ capacity to network with fellow supervisors and facilitate follow-up communication with teachers after classroom observations. With regard to the formal process of conducting classroom observations, the supervisors uniformly agreed that MSN’s classroom observation form was practical, easy to use, and comprehensive. Supervisors found it consistent with the MSN observation form used by principals.

An important result from the survey indicates the supervisors’ agreement that MSN’s workshops helped advance their self-confidence in providing not only improved supervision to teachers, but

also increased the role supervision plays in fostering positive change in the classroom. Under the LTD Program, AMIDEAST expects to expand this type of intervention and target all supervisors within the Department of Supervision and Qualification. This perception of a more cooperative working relationship with teachers is highlighted in the open-ended responses whereby several supervisors credited MSN's leadership training in creating an atmosphere of professional trust and respect between supervisor and teacher. In the words of one supervisor, the MSN workshops for supervisors "broke down the barrier of fear between the supervisor and the teacher, and helped restore teachers' confidence and courage."

In sum, the structures and practices that MSN put in place involving DLTs and SITs supported the implementation of the program in important ways. Sustaining these structures and their school-based reform mandates requires changes in MoE policy and practice. In order to work in tandem these teams need to become part of the district structure in order to create an institutional mechanism that ties school improvement to in-service professional development. This in-service professional development would include both school leaders and teachers.

## In-Service Teacher Professional Development

This section of the report presents findings from MSN’s M&E research on capacity-building interventions aimed at enhancing the quality of teaching and learning through in-service professional development among teachers. By all accounts, MSN’s eighteen-month long Professional Certificate (PC) programs for teachers of math, science, and English resulted in measurable increases in learner-centered approaches to teaching and learning; increased the capacity of teachers to integrate new media and digital technology into their classroom instruction; and promoted the development of a community of practice among teachers in the network.

### MSN’s In-Service Teacher Training Framework

The primary aims of the Professional Certificate programs in math, science and English were to 1) significantly improve the quality of teaching and learning in the targeted subjects in MSN schools; and 2) develop a culture of continuing professional development among teachers in the network. The National Teacher Education Strategy notes, “There is a need to adapt continuing professional development and in-service education to meet the needs and characteristics of the teachers. There is also a need to link this training to the teachers’ and schools’ needs.” The MSN approach carefully considered this perspective.

The content for the discipline-specific certificate programs included six practical multidisciplinary themes: student-centered learning; strategies for promoting critical thinking; assessment theory and techniques; curriculum analysis as it applies to the classroom environment; information technology in the classroom; and materials design, focusing on low-cost alternatives.

Furthermore, in an MSN survey of 791 public school teachers, eight out of ten teachers preferred a training schedule that involved meeting once a month on a school day, as opposed to other more intensive options or during a teacher’s weekend. In the same survey, integrating an online element to the training received teacher support, but only as a supplementary or minor part of the training program. School-based, face-to-face instruction received the highest priority.

Consequently, AMIDEAST used a blended framework, described in Figure 5. Full-day, face-to-face sessions were held once a month, and the modular curriculum was distributed over 16 monthly sessions held on weekdays. No training occurred in the summer months. Similarly, reflective learning circles were held after school hours at a participating school for sessions lasting 2–3 hours. Professional networking comprised attendance and presentation at two national conferences.



Every element of the certificate programs reflected an effort to adhere to international best practice: small class sizes of no more than 15 teachers; trainings co-facilitated by carefully recruited university faculty with relevant credentials and experience; meticulously managed logistics with free transportation to the training site; and a modular curriculum blending theory and practice and that was independently evaluated and updated. A variety of teacher incentives were provided, including the ability to earn nine credits from a local university toward a bachelor's or master's degree, participation in professional conferences, and the provision of a teacher resource library in each school. Netbooks were distributed to participating schools for use by teachers involved in the professional development program. This allowed teachers easy access to Moodle and other Internet-based communication.

A lasting accomplishment of this in-service professional development program was the overall approach described above. The Ministry of Education has adopted and expanded this approach to address the professional development of math, science, English, Arabic and technology education teachers throughout the West Bank. Thousands of teachers are now expected to be trained using the model developed under the MSN Program. Based upon AMIDEAST's recommendations, and through continued USAID support, the MoE has also enabled the National Institute for Educational Training to assume a lead role in all in-service professional development of teachers, principals and supervisors. These developments since the formal conclusion of the MSN Program in the West Bank reflect how significantly the program has influenced MoE strategic planning with respect to tens of thousands of civil servants.

### Results of Teachers' Survey

Results from the Learner-Centered Scale, in addition to other research evidence, point to an incremental upward trend in learner-centered practices among MSN teachers. Data produced from the Learner-Centered Scale revealed a 4% overall change for MSN schools. This measure was strongly supported by qualitative research and suggests that MSN teachers perceive their students as increasingly engaged, both critically and collaboratively, in the classroom.



These improvements point to a shift in teachers’ practices toward more formative types of classroom assessments that encourage critical thinking and collaborative problem solving. Table 6 ranks the 10 (out of 18) indicators from the Learner-Centered Scale with the most increase. The single most dramatic change is seen regarding students’ use of computers at school. This increased 30 percent—nearly three times more than the next most affected indicator. The dramatic change is certainly associated with MSN’s procurement program, which provided fully equipped computer and science labs for every MSN school.

A 9<sup>th</sup> grade student explains what a difference the labs have made: “Our lessons are more developed now. The science lab helps us to understand the material better, and that is of course the most important thing. In technology class, there used to be only two computers. Now there are 21 computers, with one or two girls using each one. We use them once or twice a week, depending on the lesson, in science and technology class.”

Although MSN teachers are making tangible progress in adopting learner-centered

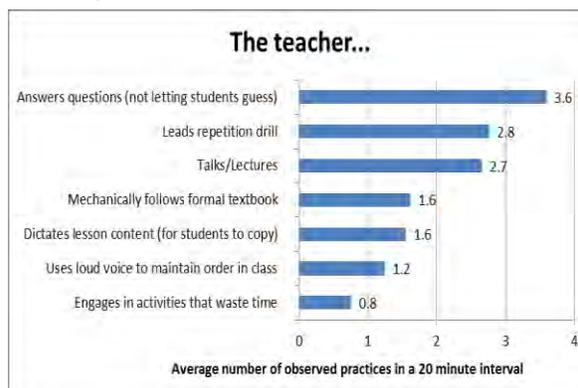
instructional practices, the survey points to a number of desirable learner-centered practices that teachers appear to be using less frequently. These activities include giving students more opportunities to work independently in the classroom without monitoring by the teacher; having students write essays in which they are expected to explain their thinking or reasoning at some length; and engaging students in project-based assessments that require at least one week to complete.

Furthermore, the persistence of teacher-centered approaches to curriculum and instruction remains formidable despite well-intentioned in-service professional development. Results from classroom observations, as shown in Figure 6, and teachers’ responses to the questions relating to teacher-centered practices indicate that teacher-centered practices remain stubbornly persistent in the instructional habits of many teachers. Teachers are still spending a good deal of class time teaching curriculum content in

Table 6 indicators from the Learner-Centered Scale

Learner-Centered Practices	MSN Teachers		
	Pre	Post	% Change
Students use computers at school to work on class assignments.	1.8	2.34	30
Students are asked about what they already know about a topic before new or more advanced information is presented.	3.82	4.16	9
Students work on projects to be displayed or performed for others.	2.85	3.08	8
Students hold debates and argue a particular point of view which may not be their own.	3.23	3.49	8
Students are allowed time to participate in classroom discussion.	3.96	4.2	6
Students are asked to evaluate and reflect upon their own work and progress.	3.32	3.51	6
Students are asked to suggest or to help plan classroom activities or topics.	3.25	3.41	5
Students are given feedback about their assignments that help them improve their learning.	4.16	4.36	5
Students discuss the link between the subject matter and real world situations.	4.01	4.2	5
Students respond to open-ended questions to encourage class discussion.	3.95	4.13	5

Figure 6 Results from classroom observations



ways that encourage memorization of facts from lectures and textbooks for later summative assessments, such as quizzes or tests. For example, the practice of having students perform oral repetition drills to help master skills actually increased 5% between pre- and post-measurements. Similarly, a reliance on quizzes and tests to assess student learning also increased 4%.

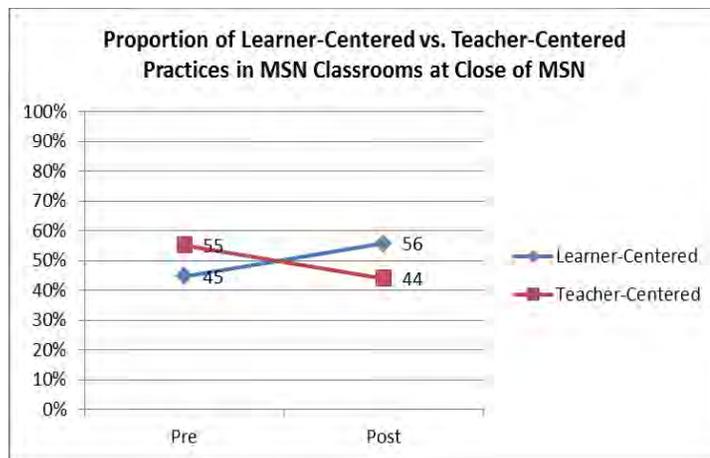
Some teachers admitted feeling pressure from their own students to stick to conventional teacher-centered assessments, explaining that while many students welcome more authentic, learner-centered assessments, others do not: “My high-performing students refused the alternative assessment. They said I am giving too many points to low-performing students and they asked me to apply more tests.”

These results highlight the challenge of expecting too much from in-service professional development alone to transform instruction. Investments in professional development may have little effect on teacher practice if the only change is individual teacher’s knowledge and skills. If the curriculum, assessment approach and general classroom conditions remain the same, teachers may become frustrated when trying to introduce new ideas.

### Classroom Observations of Teachers’ Performance

Observations of MSN teachers in actual classroom settings provides strong empirical evidence that systematic and sustained professional development of the kind offered by MSN can make a difference. The results of 90 hours of classroom observations of MSN teachers provide empirical evidence supporting the findings of the Learner-Centered Scale discussed in the preceding section.<sup>7</sup> As shown in Figure 7, by the end of the MSN professional development program, the relative proportion of learner-centered to teacher-centered practices had improved noticeably. MSN’s research also revealed learner-centered teaching practices varied among subjects, with higher levels exhibited in English and science instruction compared to math instruction.

Figure 7 Proportion of learner-centered vs. teacher-centered practices in MSN classrooms at close of MSN



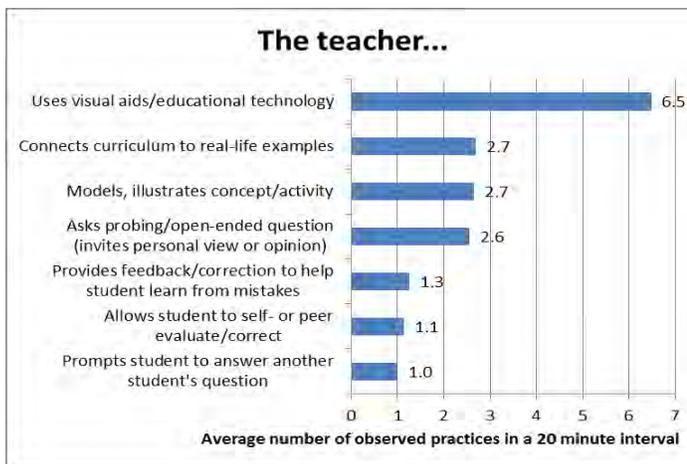
Evidence from classroom observations suggests that MSN’s strategy of systematically blending professional development and teachers’ access to educational tools and resources such as

<sup>7</sup> The sample of teachers was based on a random selection from 8 MSN schools. Baseline observations took place in March 2010 and a second round took place in March 2012.

netbooks, the Internet, newly renovated and equipped science and computer labs, and Teacher Resource Libraries improved overall impact. Of the seven descriptors used to record learner-centered practices, the most consistently-recurring practice among MSN teachers is the use of visual aids and/or educational technology, as seen in Figure 8. In other words, when professional development is accompanied by access to educational tools and resources, teachers are more empowered to provide students multiple entry points to engage with the curriculum.

“The training made me capable of using new teaching methods, not just the traditional one. I started using extra activities in addition to the activities in the textbook. In the past we used exams as the only evaluation method, but now we are using additional methods, including educational games and lesson activities where we as teachers can notice, observe and evaluate the individual abilities of our students more accurately.” —Science teacher from Hebron

Figure 8 Average number of observed practices in a 20 minutes



Furthermore, MSN’s introduction of a variety of theories relating to curriculum and learning enhanced teachers’ capacity to better meet the differentiated learning needs of students.

“The training enriched our teaching methods by teaching us how to use new teaching aids and asking students to prepare them, it helped us also in recognizing the concept of the multiple intelligences. All these new skills enriched our teaching performance.” —Math teacher from Nablus

“I’m aware now of the idea of cooperative learning and that’s why I started making mixed groups of students during the class, and I’m making sure that the groups have different levels of students. In addition to this I believe that using educational games as a teaching method has a good influence in students learning.” —Science teacher from Ramallah.

### Students’ Perceptions of Classroom Instruction

Student perceptions provide added evidence that MSN’s professional development has helped some teachers to transform their classrooms into more learner-centered environments. The surveys administered to students in grades 4–9 included the Scale of Learner-Centered Instruction.<sup>8</sup> Between the pre- and post-measurements, students in grades 4–5 at MSN schools reported a 7.2% increase in their perception of a learner-center classroom climate. Table 7 shows that by the end of the MSN Program, fourth and fifth-graders credited their teachers for creating a more interesting classroom climate, one in which students are encouraged to explore new knowledge and express ideas through a variety of assessment activities. Virtually all of these positive changes in Table 7 mirror those from the teachers’ survey.

Table 7 MSN Students (Grades 4–5)

MSN Students: Grades 4-5			
My teacher...	Pre	Post	% Change
Uses a style of teaching that makes the class interesting.	2.62	3.07	17.23
Allows me the freedom to express my ideas and opinions.	2.75	3.16	14.91
Encourages me to ask questions in class.	3.05	3.35	9.84
Makes learning interesting by teaching in different ways.	3.20	3.42	6.87
Helps me when I do not understand something.	3.35	3.58	6.87
Cares a lot about what I think.	2.80	2.99	6.79
Encourages me to think and solve problems.	3.33	3.53	6.01
Grades my work (assignments, projects, and tests) fairly.	3.07	3.25	5.86
Clearly explains new topics or skills so that I learn them easily.	3.31	3.38	2.11
Lets me work in small groups with other students.	3.12	3.09	-0.96

Table 8 MSN Students (Grades 6–9)

MSN Students: Grades 6-9			
My Teacher...	Pre	Post	%Change
Asks students to work in groups to complete assignments or projects.	2.60	2.87	10.38
Uses activities that make me think.	3.01	3.11	3.32
Gives us topics that are interesting and challenging	2.85	2.93	2.81
Allows me to share my ideas or opinions about what we are learning.	2.99	3.07	2.68
Takes time in class for students to discuss what we are learning.	2.93	2.97	1.37
Assigns projects that require several days or more to complete.	2.56	2.57	0.39
Clearly explains new topics or skills so that I learn them easily.	3.14	3.13	-0.32
Encourages me to ask questions in class.	3.11	3.08	-0.96
Uses a style of teaching that make the class interesting.	2.60	2.52	-3.34
Gives me helpful feedback after tests, quizzes or assignments.	2.91	2.74	-5.84

The survey results for students in grades 6–9 present a more complicated picture. As seen in Table 8, the top six indicators reflect positive strides in using activities that encourage students to take more responsibility for their own learning through multiple opportunities—both individually and collaboratively—and to critically explore, question and share their ideas and learning. However, the bottom four indicators registered a net decline by the end of the MSN program. The sharp drop in the scores of the bottom two indicators implies that students may be experiencing greater teacher-centered instruction than in grades 4–5. This suggests that support for learner-centered instructional strategies needs more emphasis for teachers of grades 6–9.

<sup>8</sup> The scale included 10 identical items for grades 4–5 and grades 6–9. The scale is a 4-point Likert agreement scale: 1 = Disagree Strongly, 4 = Agree Strongly

### Teachers’ Satisfaction with MSN Professional Development

A total of 291 public school teachers began the 18-month long program, and 85% successfully completed it and received certification. Table 9 provides the breakdown of completion rates and earned credits, which were based on seven graded and weighted criteria: 1) development of a teaching portfolio; 2) classroom observations; 3) essays; 4) presentation of action research; 5) Moodle participation; 6) a final exam; and 7) school principal’s evaluation.

Table 9 In-Service Teacher Enrollment

291 In-Service Teacher Enrollments		
Teacher Enrollments	Credits Earned	Percent
215	9	74%
22	6	8%
9	3	3%
45	0	15%

The three most common reasons why 15% of the teachers did not complete the program are the following: a) transfer to another school; b) maternity leave; c) insufficient motivation. Teacher motivation was tied closely to how relevant teachers found the training. MSN’s small-scale program size did not allow for more specialized training and content specificity between subjects, such as grouping physics, biology, and chemistry teachers. In addition, its small scale meant that content was general and could not address the needs of teachers teaching specific grade levels. NIET is now engaged in a nationally-scaled program involving a first cohort of 540 teachers and will embark on a second cohort of more than 800 teachers in the fall of 2013. Evaluations of this program will provide rich data and will likely result in further improvements to the overall delivery approach.

Findings from surveys, focus groups and in-depth interviews suggest that MSN’s model of professional development contributed to assisting teachers to critically evaluate, self-reflect, and change their fundamental assumptions and practices about their own and their students’ learning. Compared to their prior in-service experiences, and based on results from the Scale of Professional Development Satisfaction, MSN teachers were largely pleased with the effectiveness of MSN’s professional development.<sup>9</sup> Other quantitative and qualitative evidence supports this conclusion and suggests teachers valued the MSN approach for the following reasons.

- Enhanced their capacity for professional networking
- Fostered a culture of learning in and across school;
- Provided a variety of opportunities for learning with others
- Encouraged collegial relationships
- Helped teachers take greater responsibility of their professional growth

These five areas of improvement are reflected in Table 10. Results for the specific questions are ranked according to the degree they changed.

<sup>9</sup>Prior to start of MSN, the mean score for teachers on the Scale of Professional Development Satisfaction was 3.2, which increased to 3.5 by the end of the program a year later.

The biggest change relates to the teachers’ capacity to integrate new media and digital technology into their classroom instruction. By the end of MSN, 57% of MSN teachers “somewhat agreed/agreed” that professional development increased their capacity to use computers and educational technology. The significance of this change probably has much to do with teachers’ use of educational technology inside and outside the classroom. Focus groups and interviews revealed that technology expanded their capacity for professional networking through the use of netbooks and digital media.

In focus groups and in-depth interviews, MSN teachers credited the collegiality that often developed in the face-to-face meetings and learning circles as a chief reason for gaining new knowledge and skills and even for improving their self-confidence as teachers. On the survey, a majority of MSN teachers indicated that their professional development experiences improved their knowledge and skills for more effective instruction (59%) and gave them enough time to think carefully about, try and evaluate new ideas (55%).

Table 10 Areas of improvement

Professional development...	MSN Teachers		
	Pre	Post	% Change
Increased your capacity to use computers and educational technology.	3	3.53	18
Increased the capacity of teachers and parents to cooperate in your school's improvement plan (SIP).	2.78	3.06	10
Delivered training that was sustained and coherently focused, rather than short-term and unrelated.	3.12	3.4	9
Increased your content knowledge and skills for more effective instruction.	3.46	3.63	5
Helped you to understand your students better.	3.41	3.56	4
Included enough time to think carefully about, try, and evaluate new ideas.	3.39	3.53	4

“The learning circles were wonderful. The main purpose was the discussion and gaining knowledge through the discussion and not just covering material. We benefited a lot from exchanging information with others. Also, during the conference we benefited from networking a lot, particularly during the first conference when private school teachers shared their experience with us.” —English teacher from Jenin

The variety of opportunities for learning with others through MSN’s professional development also helped some teachers gain a sense of belonging to a community of practice. In focus groups and interviews, MSN teachers often spoke glowingly of what they gained as professional educators via meetings with co-teachers, visiting other schools (a favorite), classroom observations, attending conferences, and communicating online.

“I love teaching and I feel committed to my profession. The training enhanced these feelings and succeeded in connecting me to my school in a better way. I notice that the principal and the rest of my colleagues value my new skills and performance, and in return I’m very collaborative and always offer help to my colleagues, especially in using the technological tools.” —Math teacher from Jericho.

A science teacher spoke of the continuing impact of networking: “The program assisted us in meeting through the VLE and also through the face-to-face sessions and learning circles. A great deal of communication among the participants got built over time. Even now that the training has concluded, we still communicate.”

### Lessons Learned from MSN's In-Service Teacher Professional Development

The findings from MSN's M&E research suggest that effective large-scale teacher professional development should go beyond improving teachers' knowledge and skills. While effectively designed and administered in-service professional development can clearly result in tangible benefits to teachers, a systemic approach to raising student achievement should also include improved school leadership and school-based management reform that directly addresses school and district resources, capacity and teacher incentives.

One of the most important lessons learned from MSN involves structuring an in-service teacher professional development program that addresses teacher motivation and retention. Training location and timing are also important factors for teacher participation. The time, effort and money associated with reaching a training site influences teacher attendance and attitude toward the program. While teachers may prefer to receive professional development during regular teaching hours, this also poses a major challenge for the



MoE, since a pool of substitute teachers to cover classes while teachers receiving training does not exist. An MSN English teacher remarked in-service activities sometimes came with a price: “The absence of the teachers from their classes while attending MSN trainings was a problem. There were no substitute teachers and students lost a lot of class time this way. The curriculum was not completed each semester.”

Within the LTD Program, NIET has chosen to address this issue by requiring teachers to attend the monthly face-to-face session on Saturday, which is their day off. It remains to be seen if this strategy will work in terms of teacher motivation and learning.

The MSN Program also attempted to go beyond providing teacher training alone by successfully piloting the newly accredited, non-credit-bearing LDP. The program immersed 40 MSN principals in a process of leadership development closely tied to their school environment. The effort linked the in-service professional development of teachers to a modest but explicit involvement with forty School Improvement Teams and seven District Leadership Teams. The intention was to concentrate resources, training and capacity building among district administrative staff, supervisors, school principals and teachers in a school-based reform effort.

In sum, a flexible, decentralized delivery system is needed whereby MoE policies at the district and school level directly support voluntary teacher participation; allow teachers and principals the latitude to apply changes in teaching practice; and encourage the use of new models of supervision and evaluation would greatly facilitate real reform.

**Student Achievement Results**

Students in MSN schools were included as a sub-sample in the MoE’s national tests in math and science in 2010 and 2012. In 2010, students in grades 4 and 10 were sampled, one section per grade in each of MSN’s 40 schools. In 2012, all grade 4 and 10 students in MSN schools participated in the testing. Table 11 shows the mean scores for each grade level and subject over both

Table 11: Science and Math Student Achievement Results

Test	Group	Average Scores		Percentage increase
		2010	2012	
Math 10	MSN	29	33	13%
	National Schools	31	29	-6%
Science 10	MSN	34	36	7%
	National Schools	34	34	0%
Math 4	MSN	27	29	9%
	National Schools	28	32	14%
Science 4	MSN	50	48	-4%
	National Schools	48	45	-6%

years, as well as the percentage change between the two years. In all tests but grade 4 math, MSN schools’ change was more positive than the national average. In grade 10 math, for example, MSN schools’ scores actually increased by 12%, while the national average declined by 7%. In grade 10 science, MSN schools’ scores increased, while they held constant for the national average. In grade 4 science, while all schools experienced a decrease in scores, MSN schools’ scores decreased less than the average. The more positive trends in grade 10 may be related to a greater focus within MSN interventions on improved classroom instruction at the higher grade levels. Importantly, these results represent only a two-year period. A more accurate indication of trends in student achievement is best understood over a much longer period of time.

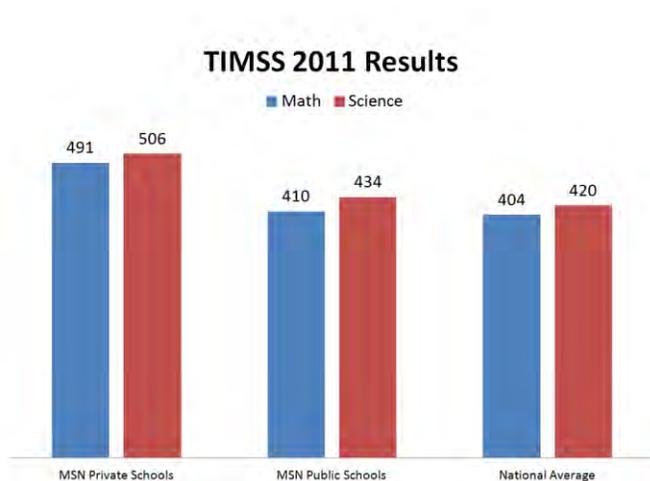
**2011 TIMSS Results**

Palestine took part in the last three cycles of the Trends in International Mathematics and Science Study (TIMSS) in 2003, 2007, and 2011. The test was conducted by the Ministry of Education’s Assessment and Evaluation Department (AED). Out of the 201 public, private and UNRWA schools that participated in the test, forty-one MSN schools (with grade eight) took part in the 2011 cycle, including 12 private and 29 public schools. The inclusion of MSN schools in the 2011 sample was meant to provide a comparable approach, as well as to help measure the impact of the MSN intervention on student achievement in math and science using an international renowned exam.

MSN private and public schools have maintained an average that is higher than the national average in both the science and math subjects in 2011. MSN private schools, in particular, scored 87 and 86 points higher than the national average in math and science respectively. For the MSN public schools, the difference between their scores and the national average was much less: namely 6 point plus in math and 14 points plus in science (See Figure 9).

The significant difference in test scores between the MSN private schools and both the MSN public schools and other schools included in the national sample can be possibly explained by two main factors: 1) many of the private schools that participated in the MSN program had historically achieved higher scores in the district- and national-level tests, perhaps related to the socio-economic and educational advantages of these students; and 2) the MSN public schools did not join the program until the end of 2010, and the full impact of the MSN interventions were still unfolding at the time the TIMSS took place in 2011.

Figure 9 MSN Schools TIMSS 2011 Results



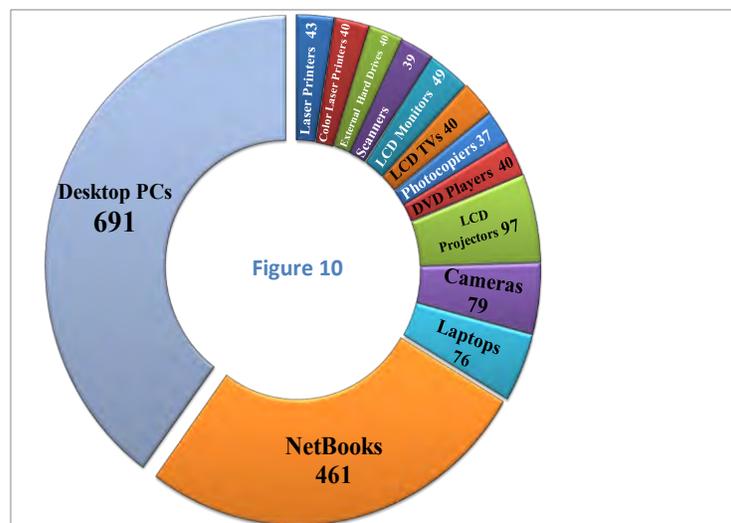
## Education Technology in School: Computers and Connectivity

This section of the report presents evaluation findings regarding the impact of MSN’s School Physical Capacity Building component and the relationship to the Education Technology Strategy (ETS). MSN refurbished and upgraded computer and science labs, brought all schools online with Internet connectivity, and supplied netbooks to all participating teachers and principals as well as to district school supervisors. Evidence from MSN’s M&E research indicates that MSN’s physical and technology capacity-building strategy succeeded in connecting classrooms and teachers to the wider world, enabled professional networking among teachers, fostered communities of practice among teachers, principals and supervisors, and improved teachers’ capacity to integrate technology in classroom instruction to the benefit of their students’ learning experiences.



### Renovations and Procurement

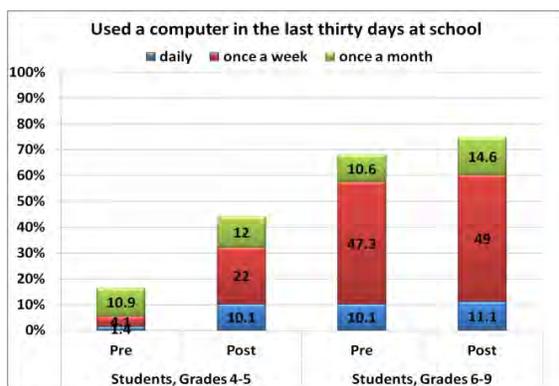
MSN renovated 29 school computer labs and provided all new equipment for 38 schools. As shown in Figure 10, MSN also provided 461 netbooks to math, science, technology and English teachers, as well as to principals and some supervisors. Netbooks enabled teachers to practice the integration of technology to support instruction and learning in their respective subjects. Teachers were expected to draw on content and resources available to them on the Internet, as well as to encourage collaborative learning using netbooks among their students and colleagues. Teachers also used their netbooks as a vital tool to support their participation in MSN in-service professional development.



Procurement of computers and the provision of Internet connectivity have made a dramatic improvement in the IT infrastructure of MSN schools. The MSN experience demonstrated that the introduction of netbooks was relatively easy. Although skill levels varied considerably among teachers, many required little to no basic computer training in use of the netbooks. Schools reported more requests for advanced training and increased access to the Internet following netbook distribution and Internet provision. Based on reporting by principals, all of the MSN schools had Internet connectivity, while only 20% of the control schools reported this asset. This disparity is highlighted by the fact that there is virtually no difference in the availability of computers or the Internet in students' homes. Eighty percent of students from both MSN and control schools reported having a computer at home, with 50% having Internet access.

Students' use of educational technology in MSN schools increased impressively with the addition of refurbished or new computer labs and the provision of Internet at school. Figure 11 highlights the frequency of student computer use over time. Until more households can be connected to the Internet, schools with Internet connectivity are the most accessible and affordable source of educational technology for Palestinian students. MSN's provision of computers and Internet connectivity among its network of schools noticeably improved

Figure 11 Used computer in the last thirty days at school



### Connectivity in Schools: A National Model

MSN's approach to connectivity in schools was to design a national model that was affordable, easily scalable to hundreds more schools, and could be centrally monitored and maintained for quality assurance. A local area network was installed at each school to allow Internet via WiFi access in all classrooms and administrative areas. AMIDEAST created a broadband, virtual private network (VPN) at each of the 40 schools with the following key features.

- 3 Mbps upload/download speed with a maximum capacity of 20 Mbps within the VPN
- Ability to use high-bandwidth technologies between schools (e.g. video conferencing)
- Symmetrical connections so that students and teachers can create content at all locations

The MoE's central network monitoring and management system allows the following.

- a. Access to a "dashboard" showing in near-real-time the status of all connected sites
- b. Filtering and blocking inappropriate sites and setting Internet bandwidth allocation rules for each school
- c. Links to other MoE online resources and internal content

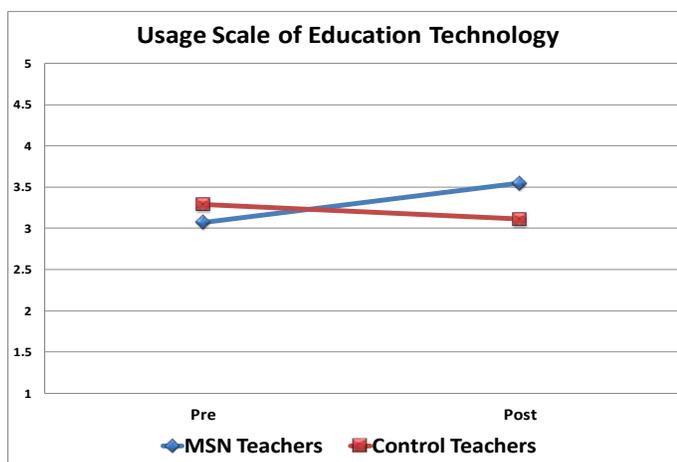
Internet service has been continuous since November 2011 and the local Internet service provider, Coolnet, will continue providing all 40 schools with Internet until September 2014. The total annual cost per school, including all installation fees, was \$3,017. The average student body of each school is 432 students, therefore, annual per pupil costs are approximately \$6.98/26 NIS.

teachers' capacity to access and incorporate teaching resources into the curriculum and instruction. The survey for teachers and principals included a Usage Scale of Education Technology comprised of seven question based on a 5-point Likert frequency scale (1 = never, 5 = always). The questions asked teachers and principals to indicate how often they used a computer at home or in school for the following activities.

- Create instructional materials (e.g., handouts, tests, multimedia presentations)
- Gather information from the Internet for planning lessons
- Access model lesson plans from the Internet
- Access best practices for teaching from the Internet
- Participate in professional development activities/courses via the Internet
- Download software from the Internet to use in class
- Give multimedia presentations in class

The results of the Usage Scale shown in Figure 12 indicate that MSN teachers, compared with their control school peers, increased their use of computers and software for school and related educational purposes. An analysis of the discrete questions comprising the Usage Scale revealed that among the most dramatic changes for MSN teachers was their enhanced capacity to access resources from the Internet for use in class, as well as improved opportunities to participate in online professional development. The results also indicate that teachers improved their capacity to create instructional materials and give multimedia presentations in class.<sup>10</sup>

Figure 12 Usage scale of education technology

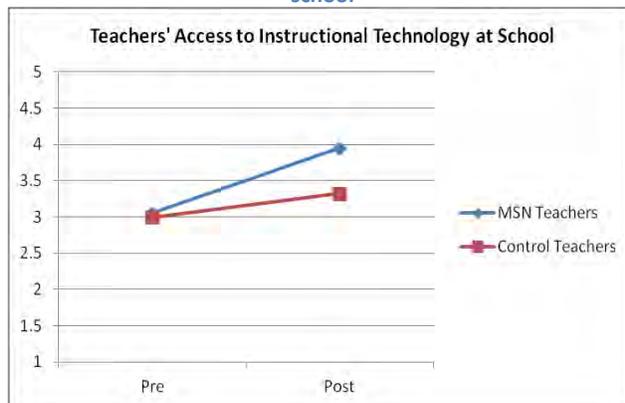


Furthermore, the frequency of netbook use in classrooms was correlated to three factors: 1) the background of the teacher, particularly educational attainment; 2) prior home computer ownership; and 3) access to the Internet at home. These factors influenced teachers' frequency of netbook use in their classrooms. The most frequent use came from individuals where all three of these factors were present. The two most common types of netbook usage involved classroom related tasks, such as lesson preparation and using the netbook in tandem with an LCD projector to teach a unit or lesson.

<sup>10</sup>Statistical evidence from a t-test of variance shows that the differences between the pre-post means of the Usage Variable are statistically significant, providing further evidence of MSN's likely influence:  $t(614.01) = -7.67$ ,  $P = .000$ .

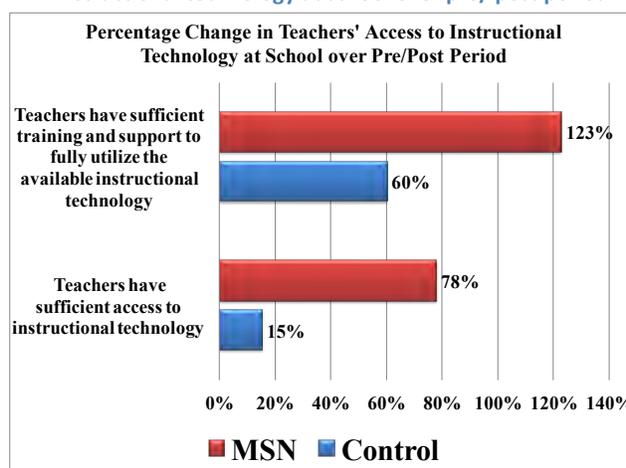
The MSN survey created a second composite variable to measure the availability of and access to instructional technology for teachers at their schools. This included computers, printers, software and Internet access, including sufficient training and support to fully utilize the available technology resources. As shown in Figure 13, MSN teachers exhibited greater improvement in this domain compared with their counterparts in the control schools. Results for principals regarding the same variable mirrored those of teachers, but with even larger gains in satisfaction over the pre- and post- periods.<sup>11</sup>

Figure 13 Teachers' access to instructional technology at school



The positive impact of MSN's procurement strategy on teaching and learning is further illustrated in Figure 14, which shows the dramatic increase in the number of MSN teachers who believe they have both sufficient access to education technology and sufficient training and support to use it. On the other hand, though MSN teachers' assessment of technology training markedly improved, still less than half the teachers feel they have sufficient training and support in this regard. Indeed, most teachers and administrators had only a rudimentary understanding of basic computer use for educational purposes, and they required significant training and supervised contact with their netbooks in order to use them most effectively. This finding, which is confirmed in other MoE studies, highlights a clear imperative to provide sufficient and ongoing training when introducing education technology. On the other hand, simply having access to the technology served to motivate further learning and interest in obtaining more advanced training.

Figure 14 Percentage change in teachers' access to instructional technology at school over pre/ post period



One year after the conclusion of interventions in MSN public schools, AMIDEAST conducted an analysis of how many schools were effectively using the Internet bandwidth provided to them for free. A total of 37 of the 40 schools remained very active in their usage. Furthermore, the MoE's Department of Network Engineering, which has staff trained to monitor and support the network,

<sup>11</sup>The differences in the means from pre-post for the MSN teachers and principals are statistically significant Teachers:  $t(1052.40) = -17.25, P = .000$ ; principals:  $t(74.35) = -8.23, P = .000$

remained aware and engaged with the schools. The MoE also had negotiated to greatly expand the network through a PalTel Group grant for free connectivity for 1,000 schools. The LTD Program intends to build on this initiative and ensure that the 300 LTD schools also have comparable access to Internet connectivity.

Lastly, a major challenge during the MSN Program was ensuring that netbooks and computer labs remained functional. The netbooks were frequently infected with viruses, particularly from the use of flash drives, underscoring the need for continuous antivirus protection or alternative solutions, as well as effective technical support. Although teachers were trained in how to mitigate computer viruses on their netbooks, frequent misuse reduced the efficiency and functionality of the machines.

### **Teacher Professional Development and the Virtual Learning Environment (VLE)**

The MSN Program blended face-to-face learning experiences with synchronous and asynchronous activities and assignments on the MSN Virtual Learning Environment (VLE). The VLE is a Moodle-based platform used for assessment, communication, content sharing, collaborative work, and reflection. An important aim of the VLE was to create virtual communities of practice within each discipline. Two of sixteen professional development modules for math, science and English teachers specifically addressed the integration of technology in the classroom, while the IT teachers participated in specialized skills sessions, such as designing and maintaining a school's presence using Moodle and managing the VLE. The results of these efforts are apparent in a variety of research data collected by MSN's M&E team.



The results of these efforts are apparent in a variety of research data collected by MSN's M&E team.

The provision of Internet connectivity at MSN schools greatly facilitated teachers' capacity to access online resources and integrate them into their instruction. Overall, MSN teachers reported nearly a 20% increase in their participation in online professional development (PD) activities. The percentage of teachers reporting frequent online PD participation doubled. Over the same period, teachers in the control schools reported nearly stagnant rates of participation in online PD activities. The total number of VLE logins by teachers and trainers in both public and private schools during the PD program exceeded 600,000, and the total number of posts to the VLE approached 70,000. This level of activity reflects the blended nature of the PD program.

Increased Internet connectivity and use of technology provided the foundation for a more collaborative community of learning among students and teachers. An English teacher from Hebron remarked, “The students have started to bring us PowerPoint presentations that they have produced. We take them, edit them and improve them and then show them to the class as the work of the student. This has encouraged the students to use technology more.” Another teacher also alluded to how educational technology is bringing the students’ homes into the larger community of learning: “I learned that by using technology students will try to imitate me and they go home and try to do things that we did in the classroom, and do an online search. If they struggle, they get their parents involved, and that is an overall learning experience for all of us.”

Teachers are eager to integrate instructional technology into their teaching practices. MSN’s evaluation provided examples of how technology in schools improves learning. For example, comments by some teachers illustrate that they believe the use of a netbook, an LCD projector and a well-equipped computer lab allows a teacher to provide good conditions for student learning: “I noticed when the students see the videos they understand the material in a different way. We use technology to motivate the students to try harder.”



Students found the classes using technology more exciting. The link between encouraging student motivation and higher student achievement should not be underestimated. A Ramallah principal’s feedback also highlighted how teachers’ use of computers minimized individual differences, encouraged group work, enhanced research skills, and made students think beyond the prescribed textbook.

Subject teachers actively integrated technology into their instruction. One student remarked, “In math class, we learned about the Pythagorean Theorem. [The math teacher] made the lesson not just lecture, lecture, lecture, but engaged us so that we were all involved. We came to the computer lab and researched it on the Internet.” Furthermore, comments received from teachers in focus groups and interviews reinforce the perception that MSN’s interventions in instructional technology have contributed to improving teachers’ professional self-esteem. “I enjoy using technology as I discover new things that enhance my knowledge. Now I’m using the computer to access scientific websites that help me in delivering my lesson to my student. And on the personal level I have new information as well.”

Teachers’ level of satisfaction with the professional development provided by MSN in the use of computers and related instructional technology increased. The post-intervention survey indicated an 18% increase in teachers’ satisfaction with their capacity to use IT as developed under the

MSN professional development program. As one teacher noted, “We took another IT course, but it was short and brief. The MSN training was longer and it covered various issues. The use of technology during the training was for a longer period than any other previous training so it enhanced our skills more.”

Despite the very positive responses from teachers and students to the introduction of educational technology in classroom instruction, more research is needed to determine whether teachers at MSN schools are using instructional technology in learner-centered ways. Teacher and student interviews and focus groups frequently describe how teachers use technology and new media (i.e., netbooks, LCD projectors, PowerPoint slides, and YouTube videos) to “show” students content, but it remains unclear if students were using technology to actually demonstrate they understood the ideas or concepts being taught. For example, one student observed: “The teachers want to show us lessons in color and sound, and using the computer does just that.”

A similar context was described by a teacher: “We used to use overhead transparencies, but the new LCDs are with color and project things differently and get the students’ attention better.” This ambiguity about the effect of technology on student classroom learning is telling when a student compliments her teacher’s use of technology to help her to “remember” rather than to understand content and ideas: “[Teachers] are trying to advance by taking us to the computer lab and that is certainly good and definite progress. [But] it’s the teacher that makes the lesson interesting; if she does it in an interesting way, we remember better.”

Other challenges to the effective introduction and effective use of technology include the issue of overcrowded classrooms and persistence of teacher-centered habits in the classroom. The chronic problem of overcrowded classrooms continues to hamper effective teaching and learning even in schools with newly equipped computer labs. “We have 25 computers, but we have some classes that have up to 47 students. It is difficult to get the students’ attention when there are so many of them in a classroom.” Teachers’ assessment approaches do not readily take into account the assessment of students using technology, such as when students conduct research projects using the Internet, use a computer lab for other subject classes, or conduct group work in class. These types of activities are often not assigned a grade or given suitable weight for a student’s effort and learning. Furthermore, teachers and principals sometimes acknowledged that pressure to prepare students for tests undermines their capacity to integrate technology in ways to support learner-centered curriculum and instruction.

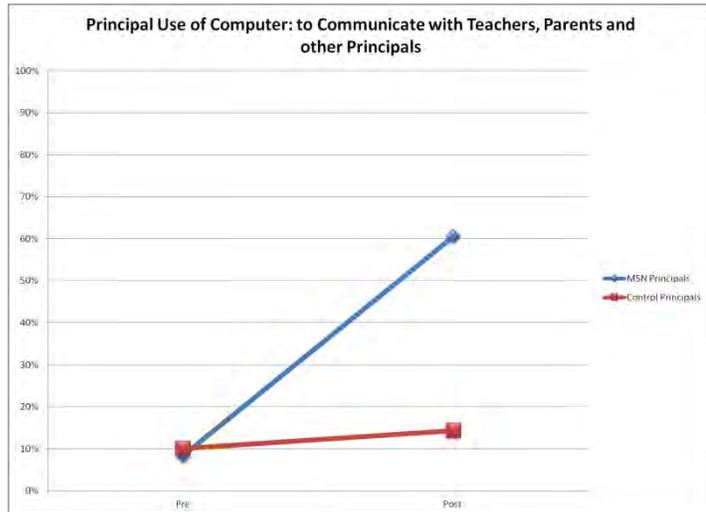
In sum, the continuing challenge of how to effectively integrate rapidly changing forms of new media and digital technologies in education is evident in Palestinian schools, as it is in much of the rest of the world. These challenges are especially difficult in the education systems of low resource countries such as Palestine. What the MSN research findings reveal is that easy access to Internet connectivity and mobile technology, such as netbooks in classrooms, combined with teacher professional development, can be a powerful catalyst for practical change in Palestine’s public schools. The findings highlight the importance of establishing strong national and district-wide policies to support in-service professional development for assisting teachers to effectively integrate technology in learner-centered approaches to instruction and assessment.

### Technology and School Leadership

Finally, it bears mentioning that principal responses highlight the benefits to school leadership from the integration of technology and training in their schools. Ninety-four percent of the public school principals felt they had learned how to utilize the VLE upon completion of their LDP. Furthermore, Figure 15 illustrates how the introduction of information technology and Internet connectivity in schools dramatically influenced their online communication with teachers, parents, as well as with fellow principals. The implications of this

change point to the expanded leadership capacity of principals to foster not only improved communications among teachers, staff and district supervisors, but also their enhanced capacity to strengthen home-school connections and community outreach.

Figure 15 Principal usage of computers



### **Online Instruction in Teacher Professional Development**

The National Teacher Education Strategy recommends that in-service programs use e-learning or online instruction to allow the training of large numbers of teachers. MSN integrated an online component using Moodle, although this element only amounted to about 5% of the overall time requirements. Trainers posted assignments and resources, as well as engaged in online discussions with teachers. Several issues emerged regarding the value added and viability of the online component.

University trainers were not recruited for their specific experience and skills facilitating online instruction, although they did receive training on Moodle. A survey of trainers at the conclusion of the program revealed that some trainers struggled with using Moodle. This is reflected in the fact that a quarter of the trainers were responsible for more than 75% of all views and posts on Moodle. One quarter of the trainers was highly active, 42% were occasionally active, and the remaining one third was minimally active or never used Moodle. In short, a university trainer's IT skills and high comfort level in using an online platform are essential.

Teachers' access to the Internet was a further serious obstacle. According to the Palestinian Central Bureau of Statistics, in 2011 only 30% of Palestinian households had access to the Internet. In contrast, 50% of MSN teachers had Internet access at home, Internet access at school provided by MSN, and were issued a netbook. In short, MSN attempted to provide the necessary inputs for online delivery and teacher participation. However, these resources were expensive and trainers and teachers still remarked that Internet access was problematic.

Teachers also received Moodle training, although their ability and motivation to engage in online elements of the program varied markedly. A 2009 study conducted by the MoE revealed 75% of teachers did not use any education technology and motivation to adopt it was low. On the other hand, a majority of teachers agreed or strongly agreed to the MSN survey question, "I use technology to connect with other teachers/educators as a result of my participation in this training program."

MSN's experience highlights some important considerations. Access to technology and the Internet, as well as teachers and trainers having the necessary IT skills, are necessary for integrating an online component. However, these factors alone do not guarantee successful implementation of an online component. Creating mechanisms that directly address trainer and teacher motivation are essential. The importance of recruiting university trainers with experience and an interest in facilitating online instruction should be proportional to the importance such a component has in the overall implementation of professional development. In this regard, an online component should be carefully integrated with other forms of training, thus assuring that online tasks and assignments are proportionally assessed and linked to the overall curriculum. The virtual platform must be simple and user-friendly, private and, ideally, free.

In sum, the current Palestinian context presents some significant challenges to effective implementation of online teacher training, particularly if it is a required component and constitutes a major part of an in-service professional development program. The MSN experience demonstrates it can provide added value so long as teachers and trainers have sufficient technology skills and easy access to a computer and the Internet. Finally, online tasks must be deliberately woven into the in-service program.

## School and Community Involvement

This section presents findings of MSN’s extensive evaluation of capacity-building interventions in school and community involvement, with special attention given to student affairs and extracurricular activities. Evidence from MSN’s M&E research indicates that MSN’s approach largely succeeded in creating conditions that promoted student motivation and achievement; encouraged critical thinking; strengthened the link between schools and communities; and fostered more child-friendly schools by enhancing the variety and quality of extracurricular activities available to students. Unfortunately, MSN’s capacity-building efforts to empower PTAs ultimately did not evolve into the priority for engagement that was expected. Despite this, MSN did succeed in producing a set of national guidelines for parent engagement in schools.

Table 12 Participation in Extracurricular Activities

Activity	Number of Participants	
	40 Public Schools	17 Private Schools
Environmental club	360	350
Theater club	396	220
Photography club		45
Sesame Street performance	1,164	1,076
Bike race	270	225
Debate	144	66
First Lego League	60	54
Visits to historical sites	1,190	265
Museum visits	11,543	7,159
Visits to TVET institutes	978	155
Visits to local institutions		1,700
Q&A competitions		836
Summer camp		1,373
Subtotal	16,105	13,524
<b>TOTAL</b>	<b>29,629</b>	

### Outcomes of MSN’s Extracurricular Activities

Adult stakeholders—teachers, principals, and parents—and students at MSN schools give a generally positive assessment of both the variety and provision of opportunities for extracurricular activities.<sup>12</sup> Survey results indicate that the views of MSN teachers and principals, when compared with the control schools, show a modest improvement from the pre- to post-periods.

Interviewees and survey comments highlighted how the MSN activities exposed them to new opportunities and improved their confidence and self-efficacy. The diversity of experience the provided activities enabled students who had not been “academic all-stars” at their schools the chance to show and develop abilities that had not been previously recognized by their teachers or within the school community. MSN’s extracurricular activities were also associated with improved classroom outcomes and learning. Approximately a third of those interviewed remarked on how student participation in activities, especially among low-achieving students, improved academic achievement. Eight percent of those interviewed remarked on the tangible

<sup>12</sup> The survey did not distinguish between co-curricular activities such as a fieldtrips to complement a math or science unit and extracurricular activities.

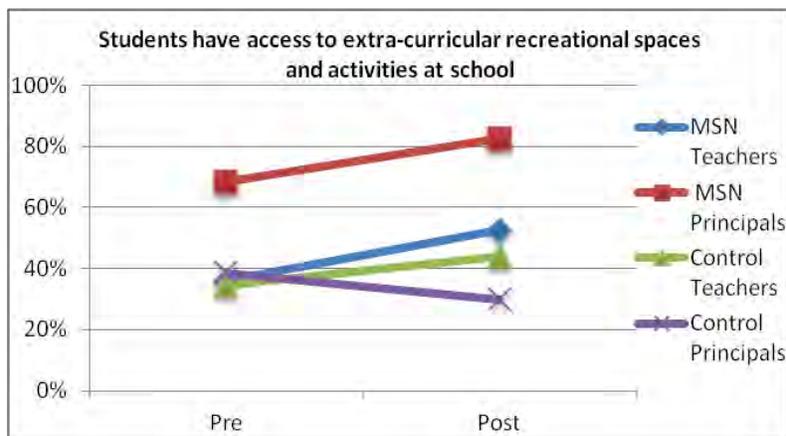
experience extracurricular activities gave students in cementing their understanding of academic concepts and connecting theory to real world situations.

“The projects we do here are very connected to what we study now and what will we study next year.” (Ahmad, student at 2011 First Lego League competition)

In response to a survey question about whether students have access to extracurricular recreational spaces and activities at school, MSN teachers and principals, as shown in Figure 16, are dramatically more likely to respond “somewhat agree/agree” compared to their counterparts from the control schools.

Moreover, scores for the principals from the control schools decreased in the post-survey. This may be a result of their recognition that MSN schools had greater opportunities and variety in extracurricular programming.

Figure 16 Students have access to extracurricular recreational spaces and activities at schools



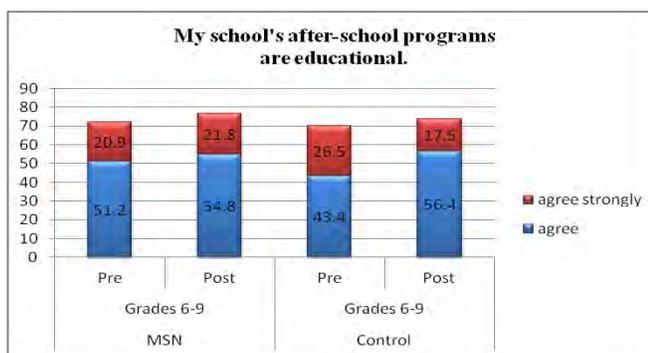
Another noteworthy trend is that MSN schools seemed to succeed at building the capacity of a larger number of teachers to facilitate extracurricular activities. The number of hours MSN teachers reported supervising extracurricular activities decreased from 5 to 3.7 hours per week, whereas teachers’ commitment from the control schools increased from 3.1 hours to 4.4 hours. In essence, as activities increased at MSN schools, the overall workload was distributed over a greater number of volunteers. Furthermore, teacher interviews revealed that some teachers developed an intrinsic interest in extracurricular activities as they evolved and showed promise resulting in increased teacher



motivation to support extracurricular activities. This is significant because public school teachers were not paid to participate or facilitate after-school activities. Nine percent of comments from interviewees noted an increase in teacher awareness of the importance of extracurricular activities. Furthermore, twenty percent of those interviewed said that MSN’s efforts had increased teacher professionalism and interest toward supporting extracurricular activities in their schools.

MSN students from grades 4 to 9 judged their schools’ after-school programming as exhibiting variety as well as educational and recreational value. MSN students in grades 6 to 9, as seen in Figure 17, appear more likely than students from control schools to “agree strongly” that their schools’ extracurricular programs are educational. This trend suggests that MSN interventions contributed to improving the integration of classroom learning tasks and extracurricular programming.

Figure 17 My school's after-school programs are educational



Anecdotal evidence from in-depth interviews and focus groups further support this statement. A number of students and teachers reported that teachers now make a conscious effort to integrate fieldtrip activities with learning concepts and skills in their curriculum. Students reported being asked to work on projects and reports demonstrating what they learned from participating in activities. Principals also observed that the integration of curriculum and extracurricular activities provided opportunities for students to develop critical thinking and problem-solving skills, while also improving students’ communication and leadership skills.

While solid majorities of students in both MSN and control schools report participating at least once a month in some form of extracurricular activity for “fun and recreation,” rates of participation among MSN students in grades 4–5 were significantly higher for activities related to math and science relative to their peers in the control schools. MSN’s interventions seem to have had some impact on strengthening students’ engagement with specific subject areas. Qualitative data from focus groups and in-depth interviews with students, teachers, and parents help contextualize the trends about participation in after-school programming. Most students interviewed welcomed the variety of extracurricular and co-curricular programming as opportunities to enhance not only their learning experiences, but also to build on personal hobbies and interests such as art, music and computers. In addition to fostering a child-friendly environment and building stronger school-community relationships as a part of recreational activities, the survey results demonstrate MSN’s interventions most likely did help to strengthen students’ engagement with specific subject areas.

### Challenges to Implementing Extracurricular Activities

Specific challenges to implementing extracurricular activities emerged from the research and evaluation. For example, teachers often requested more training for their facilitation role. Eight percent noted that the sustainability of the program could have been increased by training teachers to implement all of the activities. In contrast, AMIDEAST subcontracted certain activities to outside local organizations without engaging teachers directly. Similarly, a small number of interviewees noted the need to include school teachers, not just principals, in planning activities.

Another challenge involved creating the right balance of activities for each age group and engaging a broader cross-section of students. Some students said they chose not to participate in extracurricular



activities because they didn't see the academic benefit. As one student explained, "We have drama club at my school, but I like to concentrate on my classes. I don't like to participate in extracurricular activities. I don't feel like they are beneficial." Another reason heard from students and parents is that some activities privilege students who excel academically or athletically, making less talented students feel unfairly left out. Based on attendance, registration documents and photos, it is clear some students participate in multiple activities, while others do not participate at all.

"We have noticed that the students' personalities are showing some development but still there is a problem we have faced: that is, most of the students who participate in the activities are always the same." —Hamza, district student activities staff member

There were also indications that some students may be selected to participate in activities as a reward for good grades. This selection process could explain why some students participate in many activities while others do not. Other reasons for why students chose not to participate ranged from shyness, expense, and personal time constraints. Encouraging all students to participate includes recognizing the barriers to voluntary participation when planning activities.

The availability of resources presented a constant challenge, although significant resources were provided as part of the MSN program. Importantly, the availability of space at the right time was

a major challenge. Schools offered their space for extracurricular activities by either scheduling the activity during the school day so that the school facility would be open, or extending school opening hours into the afternoon and weekends to accommodate extracurricular activities.

Some parents in focus groups commented that low participation of students in extracurricular activities could be linked to poor teacher motivation. They noted this was a consequence of teachers being underpaid and overworked and thus unable or unwilling to devote extra time and effort without the school's reasonable accommodation for time and compensation. For their part, teachers believe that pressure from their supervisors to cover the official curriculum is a major disincentive to volunteering for extracurricular activities. Such concerns are supported by the fact that over half of MSN schools made use of breaks between classes for some extracurricular activities. Nearly three quarters of schools scheduled at least some of their extracurricular activities during class time and in related classes.

About 60% of school principals or coordinators mentioned the importance of intrinsic teacher motivation in support of extracurricular activities. In this context, the value of acknowledgement and praise for a teacher's contribution was important. AMIDEAST requested that each MSN school designate a coordinator for extracurricular activities. In this regard, principals recognized the importance of clear delineation of roles. By assigning a central contact person, as well as different teachers for each activity, personal 'ownership' of each activity was promoted. If given the resources, 88% of MSN school principals indicated they would like to have a teacher dedicated part-time to coordinating extracurricular activities. Furthermore, principals and coordinators both acknowledged in retrospect that they should have been more strategic in choosing and planning the appropriate activities for their schools.



Sustainability of extracurricular activities is contingent upon many factors. The majority of MSN schools expressed their intention to continue to implement eight of the ten extracurricular activities initiated by MSN. The activities most directly linked to academic subjects received the strongest support for continuation.

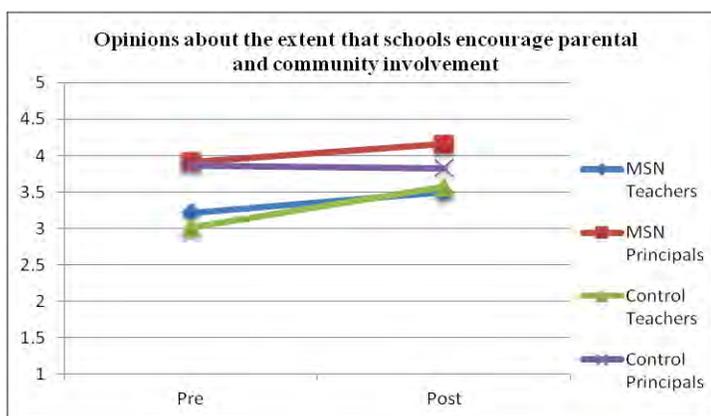
In sum, key factors that contributed to the successful delivery of extracurricular activities include: teacher motivation and training; parent awareness and support; strategic scheduling and management of limited resources; and open student participation.

## Community Outreach and Parental Involvement

Research findings indicating that teachers, principals, and parents believed MSN schools made improved efforts toward community outreach were tempered by other indicators that suggested these efforts did not fully translate into actual parent and community involvement. Trends over the pre-post period provide some evidence of positive momentum in the direction of mobilizing better community involvement. Figure 18 shows that scores for teachers from both MSN and control schools trend in the same modest upward direction. Scores for principals of MSN schools increased while those for control schools remained static. This latter trend may be attributed to MSN’s leadership training and its emphasis on community outreach.

Survey results show that teachers and principals from MSN schools responded positively on questions pertaining to two-way communication between home and school, as well as on the school’s efforts to provide parents with useful information about their child’s learning. The introduction of education technology within MSN participating schools was a key factor in encouraging principals to increase their outreach efforts to families. With Internet connectivity, it became easier for MSN principals and teachers to communicate with students’ families, including parents who might not visit their child’s school regularly. Comments by adults and students in focus groups and in-depth interviews noted that some parents became better informed about school events and calendars due to the use of text messaging and web-based social media with secure login features like Facebook and Twitter.

Figure 18 Options about the extent that schools encourage parental and community involvement



Parents describe their MSN schools as having become more proactive in soliciting and integrating their participation and input in some learning-related activities. Importantly, while some parents credited efforts by their principals and teachers in promoting better home-school involvement, others observed that the high rate of transfers of principals and teachers at the beginning of the school year seriously undermined the capacity of a school to develop and strengthen the trust and respect necessary for effective home-school-community relations and partnerships.

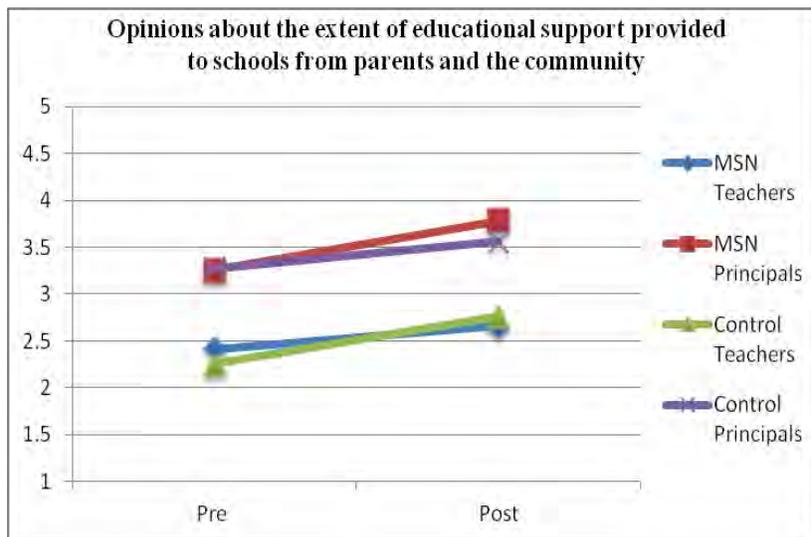
Despite the overall positive impressions of principals, teachers, and parents concerning their schools’ efforts toward community outreach, research findings paint a less certain picture of actual parent and community involvement. Nearly one-third of MSN principals remarked that by the end of the MSN Program, they were still dissatisfied with the level of parental engagement at their schools.

However, principals' favorable opinions about the extent of educational support provided to schools from parents and the community increased 10%, which was double that of principals from the control schools. This upward trend illustrated in Figure 19 suggests, once again, that MSN leadership development may have had some impact.

Though survey results of teachers' views of educational support from parents were lower than that of principals, several teachers in interviews commented they had seen improvement after their schools offered educational workshops for parents. For example, science and computer workshops designed to enhance parent knowledge about what their children were studying seemed to make a difference. One teacher noted that these workshops were organized by her school using computers procured by MSN, although the workshops were not part of the MSN program.

It is worth noting that one reason why some parents rarely visit the school or are reluctant to become more involved in school may be the result of their children's fear of the stigma of a school visit being associated with student discipline problems or academic failure. In focus groups, some students admitted they hide or throw away school invitations to their parents because of this fear. This perception is not universal, however, as one student explained: "The

Figure 19 Options about the extent of educational support provided to schools from parents and the community



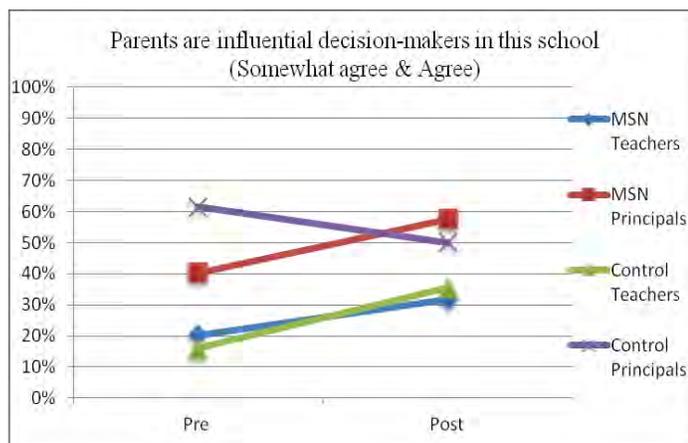
principal sends invitations to our parents regularly to visit the school for meetings but some of them don't show up. It is because some of them can't or don't care, which will decrease their children's academic achievements. Parents must visit the school and inquire about their children's performance no matter what the circumstances."

Importantly, statistical and anecdotal evidence suggest that both teachers and principals underestimate and possibly undervalue the extent of learning support that children receive at home from parents and older siblings. Survey results for students from both MSN and control schools report much higher assessments of their parents’ involvement with their learning at home than teachers and principals credit. Overwhelming majorities of students surveyed from grades 4–9 “agreed/strongly agreed” that their parents either check or help them with homework. Furthermore, comments by students in focus groups and in-depth interviews regularly framed the home as a space where older siblings or parents could be relied on to act as mentors, tutors and even surrogate guidance counselors. As one student noted, “When I have a problem that I couldn’t solve I let my older brother help me,” while yet another noted, “My mother helps me study English and science. And my dad is an engineer, he helps me in math.” This underscores the need for schools to explore innovative strategies for stronger, more collaborative home-school partnerships.



Parents perceive that they are increasingly expected to contribute to their child’s schooling through financial or in-kind support. This burden comes without a reciprocal increase in their influence on school decision-making. However, MSN schools are moving in a more positive direction than control schools in advancing parental involvement in decision-making. Principals from both MSN and control schools—more so than teachers—believe that parents are making larger cash or in-kind contributions to their schools.

Figure 20 Parents are influential decision-makers in this school



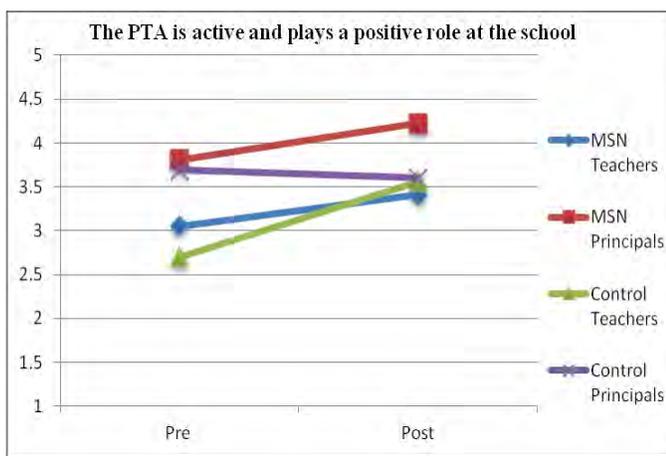
Only a third of the teachers and just over a half of the principals think that parents influence school decision-making, as highlighted in Figure 20. However, the number of MSN principals who share this view increased over the pre- and post- periods, while the number of principals from control schools decreased. One reasonable explanation is the impact of MSN leadership

development for principals. It is possible that MSN leadership training increased the principals' capacity to involve parents in the development of the school improvement plan.

Statistical and anecdotal results suggest some modest improvements in the performance of PTAs, particularly for MSN schools and possibly associated with MSN's Leadership Diploma Program for principals. There was a 26% increase in the number of MSN parents who acknowledge the quality of the PTA performance, as illustrated in Figure 21.

The MSN Program sought to “activate” existing PTAs. Examples of new activities undertaken by these PTAs included the following: the formation of a PTA extracurricular committee; supervision of some extracurricular activities formerly administered by school staff; parent participation in community involvement activities; and parent participation in the School Improvement Planning processes. Anecdotal evidence from parent focus groups suggest that improved relations between principals and parents in MSN schools are indeed making a difference.

Figure 21 The PTA is active and plays a positive role at the school



### Policy Recommendations

The foregoing discussion of capacity-building interventions supporting school leadership, in-service teacher professional development, integration of education technology and school-community integration offers a body of research-based evidence to justify scaling aspects of the MSN model in Palestinian schools. The replication of the model, however, is predicated upon the existence of educational policies that can fully support and sustain resources and conditions to ensure high-quality, learner-centered instruction in Palestinian schools.

AMIDEAST originally outlined 20 policy recommendations that were presented and discussed during an education summit involving the Minister of Education and approximately 80 senior ministry staff in July 2012. This event marked the conclusion of MSN West Bank activities. However, during the subsequent year, the LTD Program and, more recently, the USAID-funded School Improvement Program (SIP)—both administered by AMIDEAST—have provided important momentum in furthering some of these policy recommendations. As such, each of the original recommendations is listed below along with a postscript describing any advances associated with this recommendation.

1. In-service professional development is linked to systems and administrative mechanisms at the district and school level to improve school leadership and encourage school-based management reform.

AMIDEAST’s administration of the LTD Program through close collaboration with the Ministry of Education and capacity building for key MoE departments is providing a holistic approach toward in-service professional development.

2. The newly accredited Leadership Diploma Program implemented by NIET becomes a mandatory credential for all principals. Variations of the framework and curriculum should be adapted for new and experienced principals.

NIET has officially adopted the LDP as a mandatory credential and the original content and method of delivery essentially remain intact.

3. A highly flexible professional development program makes use of the school as the basic institution for development and builds on effective school standards. Program delivery is led by a highly skilled team of national trainers composed of university faculty and other experts.

NIET is gaining strength and talent in its effort to deliver a quality LDP training program. NIET now has 18 new staff, some of whom are involved as leadership trainers, and its systems for monitoring and evaluation are improving.

4. Professional networking of principals and teachers is strengthened through a system that clusters schools so that neighboring principals and teachers benefit from shared

experiences. Clustering schools also supports collaborative practice as a mechanism for improvement. Principals and teachers are engaged in a holistic continuum of professional development.

The notion of school clustering has yet to become a concrete mechanism for effectively encouraging professional networking among educators. However, both the LTD and SIP Programs will provide new opportunities to take advantage of this mechanism.

5. Selection and grouping of teachers from a school or cluster of schools into communities of practice for professional development recognizes prior experience and skills, as well as distinguishes teachers by grade, discipline and specialization.

NIET's approach for long-term, sustainable professional development strategically involves clustering of discipline-specific teachers within local communities.

6. Professional development includes a modular curriculum that addresses common themes of teaching while carefully integrating theory and practice in ways meaningful to teachers. The curriculum includes subject-specific content based on the Palestinian curriculum.

This approach is integral to what is unfolding within NIET. In addition, the thoughtful integration of competencies and teacher standards has produced revised or new modular curricula for math, science, English, Arabic and technology education teachers.

7. The MoE develops and codifies performance standards for principals and teachers and links them to performance indicators that have relevance and substance for career enhancement, program requirements, and incentives. School, district, and MoE policies provide sufficient motivation for principals and teachers to participate in an in-service professional development program.

The Commission for the Development of the Teaching Profession has finalized principal and teacher standards. Furthermore, the MoE drafted a white paper for the creation of a teacher licensing process linked to a performance assessment system that was approved by the PA cabinet. The ability of the MoE to follow through on this plan however, remains unclear.

8. MoE policies ensure that principals are not transferred to another school while earning the Leadership Diploma, and teachers are not transferred mid-way through a professional development program.
9. The teacher evaluation system is transparent and consistent, so that the goals of teacher certification are clearly met and nationally recognized. This includes minimum standards for any training program requiring online participation.

The LTD Program's capacity-building mandate extends to providing the MoE with technical expertise in creating a Teacher Performance Assessment System. This objective within LTD is tied to the MoE's progress in implementing key dimensions of the newly approved Teacher Licensing System.

10. The MoE adopts a strategy that provides all public schools with Internet connectivity and the necessary technology infrastructure and training to support the effective use of new media and digital technologies in curriculum, instruction, and professional development. Teachers have access to portable computers for use inside classrooms and at home.

The LTD Program will provide 300 schools with local area networks and some Internet connectivity. SIP is also expected to provide 50 more schools with connectivity. The MoE has negotiated with Paltel Group to provide free connectivity to up to 1,000 schools for one year starting in September 2013. These efforts illustrate important advances in school connectivity.

11. Pre-service and in-service teacher education prepares teachers to use education technology to enhance learner-centered, authentic forms of student performance activities. These activities emphasize collaborative problem-solving and project-based approaches to assessment.
12. The MoE reviews the Palestinian curriculum by grade and subject in order to create supplemental content and guidelines for integration of education technology in the classroom. These guidelines and content support learner-centered strategies that are consistent with internationally accepted standards for the integration of education technology.
13. The MoE works in tandem with the district offices and school principals to establish new strategies, guidelines and procedures for the maintenance of all technology, particularly hardware that is mobile and virus-prone, as well as for in-class scheduling that encourages multidisciplinary use of the computer lab.
14. Communication and outreach occurs between schools and parents in order to keep stakeholders better informed about connections between social and academic development and co-curricular and extracurricular activities. Community outreach and parent involvement training is strengthened in the Leadership Diploma Program for school principals.

The School Improvement Program has an important objective to provide a variety of extracurricular activities within the 50 schools it will eventually target. Community outreach and parent involvement are also important components of SIP.

15. Principals and teachers are given wide autonomy to initiate and manage new extracurricular activities.
16. Teachers, as facilitators of extracurricular activities, are viewed in a professional capacity and receive sufficient training. Teachers' participation in activities is voluntary. Teachers

receive incentives (financial or in-kind) and are supported by a part-time designated teacher who, with the assistance of district offices, serves as the extracurricular activity coordinator at each school.

17. Recruitment and participation of students and parents in school life are transparent and voluntary. A variety of student interests, skills, grade levels, gender and socioeconomic backgrounds are taken into consideration, so that activities attempt to engage all students in collaboratively-planned activities, with clear, agreed-upon goals by all stakeholders.
18. Teachers and school staff are trained to offer “homework help” workshops to build the capacity of adults in students’ extended family who serve as tutors.
19. Institutional mechanisms to increase families’ involvement in school decision-making are developed or improved. Training is offered for parent and community members in committee participation and leadership.
20. The MoE reviews its own policies and procedures at the school, district and central levels to ensure that they reflect the recommendations in this report in order to encourage development of community engagement and extracurricular activities. Community engagement in schools is strengthened through renewed consideration of approaches and policies linking parents, principals and teachers.

AMIDEAST’s USAID-funded School Improvement Program will work with relevant MoE departments in an effort to strengthen policies and procedures linking parents, principals and teachers.

## Gaza MSN Program

### Introduction and Context

During three weeks in December of 2008 and January 2009, Israel launched a major military offensive in Gaza. Gaza's de facto government, Hamas, and other factions within Gaza responded by sending missiles into Israel. Communities within Gaza were severely traumatized and many schools were damaged. As a consequence, the U.S. government responded with a broad array of humanitarian support. This effort ultimately translated into USAID adding a further \$1.7 million to the MSN grant in September of 2009. These additional funds were intended for AMIDEAST to organize and implement new programming in Gaza specifically to support private schools. Due to the no contact policy with the de facto government, as well as other laws and rules governing engagement in Gaza, public schools could not be beneficiaries of these new funds.

In December 2009 the Gaza component of the MSN program was launched with five staff located in the main AMIDEAST Gaza office complex. The MSN Program in Gaza initially had only two main program components: 1) distribution of local tuition scholarships to private school students with demonstrated need, and 2) provision of psychosocial support at private schools. These components were driven by USAID's priorities and reflected USAID's rationale that despite constituent groups'



receipt of assistance from multiple donors after the war, private schools and their student bodies had been ignored. Furthermore, because unemployment continued to soar in the Gaza Strip, it was increasingly difficult for families to cover private school tuition. Private schools in Gaza were struggling to survive and serve their communities. USAID supported private schools in Gaza through the AMIDEAST-administered American Scholarship Fund Program that had concluded a few years earlier, so the needs and concerns of the private schools were known.

The Gaza component of MSN began ostensibly as a short-term humanitarian effort, although it blossomed into a medium-term school improvement program over three and one-half years. Local scholarships became a focal point, and the provision of psychosocial support became a minor effort amidst a robust series of interventions involving in-service teacher training, leadership training, school procurement, and provision of student extracurricular activities, as well as other activities. In effect, the Gaza program became a smaller, mirror image of the types

of engagement AMIDEAST conducted with the private schools in the West Bank. Indeed, the systems, procedures and lessons learned in the West Bank programming afforded many advantages to the Gaza program.

AMIDEAST initially received vetting clearance for only 12 private schools out of 24 that were submitted. The process of vetting and receiving clearance to work with a cohort of schools took six months. This vetting period significantly slowed the implementation process and pushed engagement with the schools until the fall of 2010. Once the schools were approved by USAID, AMIDEAST signed a Memorandum of Understanding (MOU) with each school and began to develop what ultimately became a very close, collaborative working relationship with each school's administration. The core group of interventions with the schools effectively took place from September 2010 until May 2012. As such, much of the monitoring and evaluation data was framed within this period.

As the West Bank program concluded activities in the spring of 2012, it became apparent that the grant would have unspent funds. AMIDEAST requested and received USAID approval for a no-cost extension until December of 2012 to address Gaza school procurement needs. However, this extension in time necessitated a re-vetting the schools due to the expiration of the MOU. The re-vetting process took a further four months. As it became clear that half of the original schools would not clear vetting, AMIDEAST sought the inclusion of several new private schools. Three new private schools cleared vetting and were belatedly added to the program. During the same period, USAID requested that AMIDEAST cease supporting the American International School of Gaza, while another school never cleared vetting and a third did not express any interest in continuing in the program. A complete list of the 15 schools is below:

Table 13 Gaza MSN Schools

Gaza MSN Schools	
1	Palestinian Association for Rehabilitation of Disabled (special school for disabled students)
2	Ibad El Rahman Exemplary School
3	Al Zeitoun Private School
4	Al Wehda Private School
5	Al Mahd Islamic Private School
6	Al Zahra Exemplary Private School
7	Greek Orthodox Patriarchate School
8	American International School in Gaza (USAID ceased working with AISG in September 2012)
9	Rosary Sisters School (dropped out in June 2012)
10	Al Nassr Islamic School
11	Al Majd Private School
12	Deir Al Balah Private (failed re-vetting Dec. 2012)
13	Lighthouse School (added Dec. 2012)
14	Noor Al Maraf School (added Dec. 2012)
15	Mecca Al Mocarma Private School (added Dec. 2012)

Challenges and delays with school vetting necessitated a further no-cost extension until June 2013. AMIDEAST was finally able to utilize the last five months of the grant to purchase computer labs and classroom libraries and conduct some further in-service teacher training for eleven schools, three of which were completely new to the program. This report describes each of the Gaza activities and provides some analysis and evaluation of the overall contribution and impact of these efforts.

### School Satisfaction Survey Results

As part of its M&E approach, MSN’s Gaza team conducted a school survey to measure the following: satisfaction with the learning environment among principals, teachers, students and parents; student participation in the school activities; and parent involvement in the education

process. This study served as a baseline prior to the start of MSN interventions in September 2010. A further post-assessment survey was conducted in May 2012 to provide some indications of change within the educational context of the original 12 private schools. The satisfaction survey was not administered again in May 2013 for the following reasons: some of the schools had changed; the nature of the activities during the waning months were minor; and the procurement items received and installed in the schools had not been present long enough to accurately reflect benefits.

The satisfaction survey was a guided, self-administered questionnaire with 52 questions. Subsets of questions were tailored for the four target groups: principals, teachers, students and parents. The sample comprised a random selection of 23% of the students and parents. All the principals and all English language, math, science and technology teachers in the 11 participating schools were included in the study. All but four of the sampled administrators and teachers were recipients of training. The results represent the averaged values on a scale of 1–5 for the two measurements, with 1 signifying "very low satisfaction/agreement" and 5 signifying "very high satisfaction/agreement."

The survey results revealed school principals' level of satisfaction was noticeably changed over the seven domains. Principals' satisfaction with the level of parent involvement in the education process increased 4.12%. This increase may reflect that the leadership training emphasized the importance of involving parents in decision making and in following up with their children. Computer usage was another domain that increased significantly. Principals were 6.27% more satisfied with their use of computers in



communicating with teachers and parents. This change may be related to the fact that MSN distributed netbooks to all principals and provided reliable connectivity throughout the school.

Surprisingly, there were no significant changes reflected in the average level of satisfaction of teachers across any of the seven domains including: school infrastructure; school climate; classroom environment; teachers' qualifications and practice; parent involvement; student extracurricular activity; and teachers' use of computers. Indeed, most of the indices were negative up to 1.5%. The reasons for this may relate to the fact that teachers within the private school sector do not feel appreciated by the owners or administrators of their school and receive additional pressure from parents who pay the school fees with high expectations for their children. In general, the teaching in private schools is poorly perceived by teachers and lacks a

professional context, particularly with regard to UNRWA schools. The MSN interventions were not designed or able to change this broad perception in Gaza.

The one domain that did show a small positive improvement (.5%) related to how teachers rated their qualifications and practice. This one domain relates best to the in-service teacher training provided to the teachers. Analysis from the trainings and classroom observations of math and science teachers also revealed a very positive impact from the professional development. These dimensions are discussed later. In separate focus groups, teachers remarked that their teaching habits and pedagogy improved due to the professional development training. In addition, the majority of teachers stated that their computer usage improved and they benefited from utilizing the netbooks inside their classrooms. Teachers received training on how to use the netbooks and how to use Microsoft Office. Surveys of computer usage revealed that teachers used their netbooks primarily for email communication, access to Facebook and general Internet browsing.

In terms of the parents' level of satisfaction, three domains are worth highlighting. Parents' satisfaction with school infrastructure scored 4.29 on a scale of 5 with an increase of 4.6% from the baseline. Importantly, at the time of the post-survey, AMIDEAST had not supported any school infrastructure, with the exception of school connectivity and the provision of netbooks to teachers and principals. However, the student scholarship component had a positive impact on school infrastructure because it provided a guaranteed lump sum cash infusion over four semesters. Many schools used these funds for some renovation, including the construction of additional classrooms and the construction of multi-purpose halls. At one school, a new school building was constructed after receiving a bulk payment of tuition fees. In effect, the payment of scholarships assisted school administrators in managing the school cash flow. It allowed the schools to engage in much-needed school renovation and general infrastructure development.

During the past year, MSN also conducted a variety of student extracurricular activities. Parents clearly recognized the value of these activities. Satisfaction with extracurricular activities in the schools increased 3.1%. Finally, parents were also pleased with the classroom environment. Satisfaction with classroom environment increased 2.33%.

The satisfaction survey targeted students in grades 4 and 5. A more complex survey was developed for students in grades 6–9. The elementary students remarked on the introduction of technology in the class, presumably from the teachers using the netbooks. They also remarked on greater parent involvement in their education, which increased 4.35%. During the professional development sessions for teachers and principals, MSN trainers stressed the importance of parent involvement in their children's education.

The most noticeable changes in student satisfaction from the upper grades included a dramatic increase of 11.4% in extracurricular activities and 11% in parent involvement. MSN provided a variety of afterschool activities over 18 months for over 500 students in grades 6–9. Grade 4 and 5 students showed only a slight increase of 1% in their level of satisfaction with the extracurricular activities, although most activities did not target this age group.

The following two figures (Figures 22 & 23) illustrate the most significant changes over time.

Figure 22 Change in Principal, Teacher & Parent Levels of Satisfaction

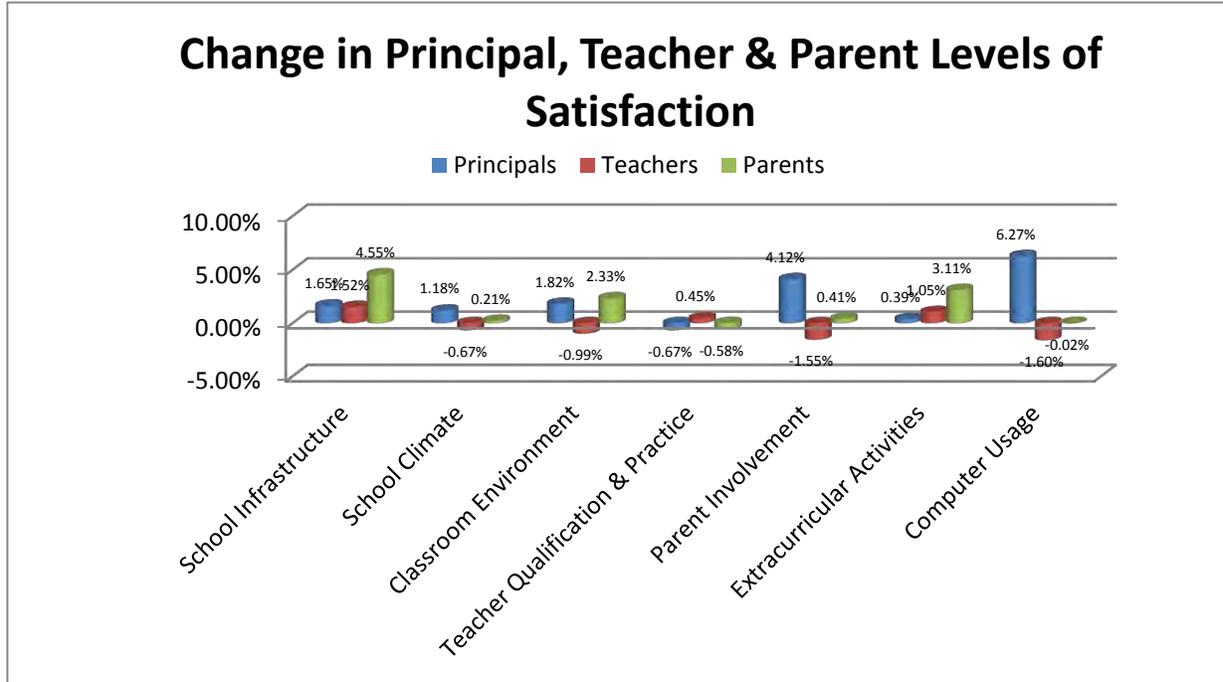
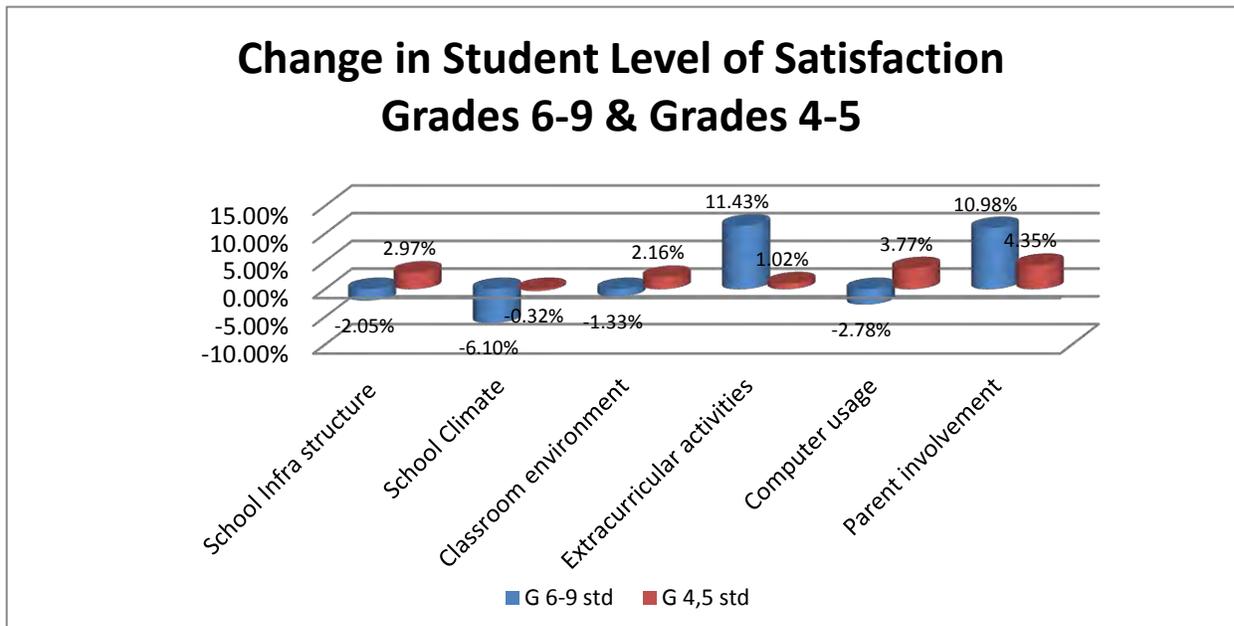


Figure 23 Change in Student Level of Satisfaction Grades 6-9 & Grades 4-5



### Local Scholarship Program

The scholarship component was the initial focus of the Gaza MSN Program. The intention was to offer local scholarships to relieve the burden of student tuition fees on struggling families, as well as to assist private schools in sustaining their activities and services. The Gaza MSN team developed a school profile and student scholarship application process and vetted all of the schools. The school profile provided basic data about the following: school history; school management and decision making; school capacity; tuition fee rate; school conditions; and school general needs. Student selection criteria were premised on two main conditions: the financial need of the student’s family and academic achievement of the student.

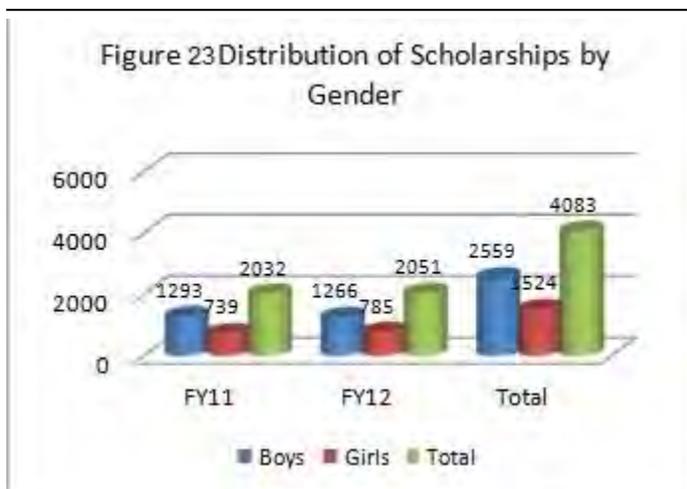
Eligibility for assistance through Gaza MSN was dependent on the following factors for each student.

- The student is currently enrolled in an eligible private school.
- The student is enrolled in grades 2 through 9.
- The student’s age does not exceed 15 by the end of the school year 2010–2011.

Eligible students were then measured against a set of criteria and ranked within a complex point system that was determined by a school committee and AMIDEAST staff. Key selection criteria included the following:

1. Family income based on member share (USD/capita/day)
2. Unpaid tuition (if the family owed the school tuition fees from previous years)
3. Academic merit (the student’s GPA and/or cumulative average score in the first semester of the school year 2009–2010)
4. Number of students other than the applicant within a single family currently enrolled at a private school
5. Number of students within the nuclear family currently enrolled at a public and/or UNRWA school
6. Number of students in a family currently enrolled at a university
7. The family has a member/s that dropped out of a university due to financial difficulties.
8. The family has one or more members with a disability and/or chronically debilitating disease.
9. The family pays a monthly rent for a residence.
10. Non-living or living parents
11. Car ownership
12. Means of transportation the children use to and from school.

Figure 24 Distribution of scholarships by gender



A school-based selection committee (SBSC) recommendation comprised 28% of the total score. The school’s recommendation also took into account financial need and academic merit. The application forms and selection criteria were approved by USAID. Based on the selection criteria and application form, a local database was developed to manage the issuing and scoring of the applications to ensure full transparency. The database assisted the MSN team in managing and tracking the scholarship activities and progress, in addition to issuing letters of award and receipt vouchers. The whole process to disburse the first round of scholarships required the development of an elaborate bureaucracy in order to be completely transparent and in compliance with USAID regulations.

Table 14 Scholarships for the academic years 2010–2011 and 2011–2012

<b>Academic Years 2010–2011 and 2011–2012</b>			
<b>No</b>	<b>School</b>	<b>Scholarships</b>	<b>\$ Value</b>
1	<b>Al Mahd Islamic Private School</b>	166	\$82,138.94
2	<b>Deir Al Balah Private</b>	50	\$33,005.05
3	<b>Al Zaiton Private School</b>	136	\$62,195.44
4	<b>Al Majd Private School</b>	146	\$80,437.44
5	<b>Rosary Sisters School</b>	471	\$356,475.00
6	<b>American International School in Gaza</b>	127	\$219,600.00
7	<b>Palestinian Association for Rehabilitation of the Disabled</b>	74	\$26,640.00
8	<b>Al Wehda Private School</b>	332	\$200,112.67
9	<b>Greek Orthodox Patriarchate School</b>	488	\$231,973.59
10	<b>Ibad El Rahman Exemplary School</b>	523	\$573,143.42
11	<b>Al Zahra Exemplary Private School</b>	470	\$239,186.40
12	<b>Al Nassr Islamic School</b>	1,100	\$597,168.88
<b>Grand Total</b>		<b>4,083</b>	<b>\$2,702,076.83</b>

AMIDEAST distributed a total of 4,083 scholarships over two academic years for students in twelve private schools. In total, 2,927 students benefitted from the local scholarship program. Seventy-two percent of the students received a scholarship for two consecutive years. In the first academic year, 57% of the scholarship recipients were women and in the second year 62% were women. These percentages generally correspond to the gender representation in the total student body of all schools. The local scholarship program involved disbursement of \$2.7 million dollars which far exceeded the expenses of all other program components combined.

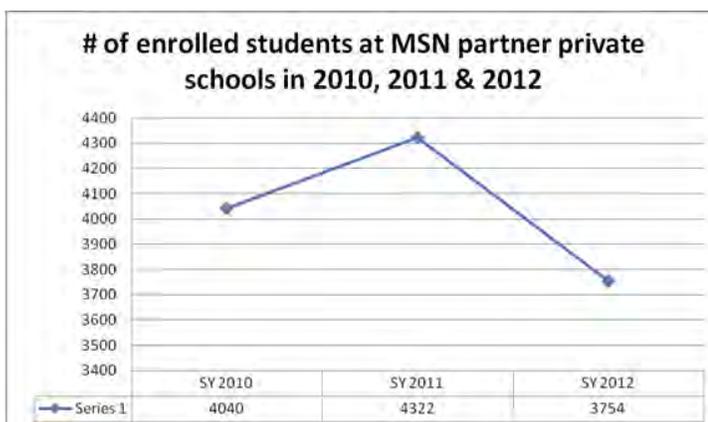
### Impact of the Local Scholarship Program

At the start of the program, most of the schools reported that they faced difficulties paying their staff salaries regularly each month. A number of schools resorted to loans to pay staff salaries. The USAID scholarships were paid in four installments, or per semester, across two academic

years. This payment system allowed the schools to sustain their staff salaries and plan accordingly. A quarter of the schools still reported delays in staff salary payments. On average, the delay ranged from 1–3 months. Importantly, student/family debt associated with student fees decreased by approximately 61% (\$5,333 vs. \$13,600). The schools benefited from being able to plan on the scholarships over a two-year period. The guaranteed lump sum cash transfers enabled the school administration to make needed capital improvements.

During the scholarship period, the enrollment rate of students at MSN’s private schools increased by 10%. At the beginning of the academic year 2012–2013, student enrollment at MSN partner schools had dropped by an average of 13% from the previous year. This downturn in enrollment was considerably higher than that of previous years and varied considerably across schools. from 11% at Al Naser Exemplary School to 47% at Al Mahd Private School. The graph above illustrates this drop.

Figure 25 Number of enrolled students at MSN partner private schools in 2010, 2011 & 2012



AMIDEAST conducted a phone survey with school principals to determine the reasons for student withdrawal and found varying responses. A primary reason was family relocation within Gaza that necessitated transferring to schools closer in proximity to the new family residence. Other factors included economic hardship and the lack of scholarships for some families.

### In-Service Teacher Professional Development

AMIDEAST designed and implemented seven separate in-service teacher professional development programs. These programs were of varying lengths and purposes. Each professional development program targeted a specific group of teachers and was tailored according to the needs of these teachers. In some cases, the curriculum material was borrowed and adapted from the West Bank programs. This was the case for the math, science and technology professional development programs. AMIDEAST hired locally for the trainer positions including Gazan academics with relevant credentials and experience, particularly individuals with experience teaching in schools and supervising teachers.

AMIDEAST ultimately provided training to 167 teachers from 14 private schools in Gaza over three years.<sup>13</sup> Collectively, this amounted to hundreds of hours of formal training and other types of informal instruction and learning. These teachers would not likely have received any

<sup>13</sup> This includes teachers from three schools added in December 2012 and recognizes that one school's teachers did not participate because their teachers supported students with disabilities and did not formally teach the disciplines targeted in the professional development trainings.

professional development were it not for the Gaza MSN program. However, it is difficult to measure the effect of the training program on actual classroom teaching practice. It is clear that the vast majority of the teachers who participated in the programs gave consistent high ratings to the trainings and increasingly saw themselves as professional educators. The community of practice developed among the educators was noteworthy and there remained a high degree of trust and collaboration among school teachers.

Table 15 Teacher Professional Development in Gaza

Training	No. of Participating Teachers	No. of Training hrs Received	No. of Learning Circles hrs	No. of Classroom visit hrs
E-Teacher Training for English with University of Oregon	41	Four 10 week courses online	0	0
Specialized English Teachers	8	72	0	0
Math Teachers	26	96	90	78
Science Teachers	25	96	90	75
Technology Teachers	19	54	0	0
Para-Counseling	11	72	0	41
Multi-disciplinary Program	37	30	72	0
<b>Total Teachers Trained</b>	<b>167</b>	<b>420</b>	<b>252</b>	<b>194</b>

### Math and Science Teachers

AMIDEAST provided 80 hours of in-service teacher professional development to 26 math teachers and 25 science teachers. Central themes were addressed in the math and science certificate programs and were reinforced by the face-to-face and online events. These central themes included the following.

- student-centered learning
- strategies for promoting critical thinking
- assessment theory and techniques
- curriculum analysis as it applies to the classroom environment
- information technology in the classroom
- materials design, focusing on low-cost alternatives

Each of the themes was explored by the teachers within the context of math and science instruction and student needs. Teachers participated in 80 hours of face-to-face training and learning circles. These sessions occurred over 14 months beginning in November 2010 and concluding in December 2011. In addition, each teacher was observed six times and engaged in VLE activities. This approach was meant to enable teachers to experience, observe, conceptualize, and experiment by providing them with sufficient time between face-to-face events, and opportunities for individual and group reflection.

Overall, math and science teachers’ level of satisfaction was very high when measured at five separate intervals during the course of the professional development experience. The average score was 4.48 on a scale of five. Ninety-six percent of the teachers felt that the training strengthened their knowledge with student-centered teaching approaches and helped them learn new strategies to promote critical thinking. They also felt the experience helped them gain the necessary skills to understand different teaching styles. Furthermore, teachers took note of how to better promote active learning through different classroom strategies. A majority of the teachers (89%) believed that the training content was appropriate. The parts of the training that incorporated differentiated learning theory and student-centered instruction were considered very beneficial and relevant to their needs. Upon completion of the training, a majority of the teachers saw the value in student-centered learning. Teachers enjoyed the learning circle sessions and exchanged knowledge among colleagues. In addition, 86% of teachers said that they had attempted new ways of integrating technology in their classrooms. Seventy percent remarked on how they had used the MSN-issued netbook to provide more innovative teaching for their students.

### Classroom Observation Visits of Math and Science Teachers

In addition to face-to-face training and learning circles, math and science teachers received three observation visits per semester by trainers over two semesters. This totaled six visits per teacher. The visits aimed to improve the quality of teaching by providing support and coaching to teachers and assessing them in their real teaching settings. The Gaza teacher trainers used an observation tool designed in the West Bank but made some adaptations to it to reflect the Gaza context. The form, which comprises a check list, covered the main teaching domains including teaching styles and classroom environment. The domain of lesson planning included tasks such as setting lesson objectives with aligned learning outcomes. It also included the use of diverse assessment tools. The domain of class management included time management, use of different teaching strategies, and preparation of the class environment to encourage student engagement.

A remarkable positive change was observed by the teachers in using student-centered learning techniques (12.2%) and in promoting critical thinking and problem solving (18%). The overall average change across all domains was 10%. These statistics reveal important change in instructional practice (see table below).

Figure 26 Math and Science Teacher Satisfaction

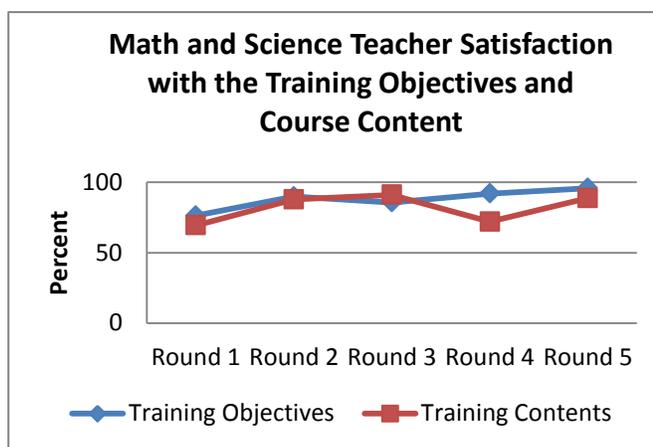


Table 16 Change in Teachers' Teaching Skills

Domain	pre	post	difference	*P value
	1-5	1-5	%	
Class planning	3.6	3.9	6.8%	0.001
Classroom management	3.6	3.9	6.2%	0.001
Using student centered learning	3.6	3.9	12.2%	0.000
Promoting problem solving & critical thinking	3.0	3.9	18.0%	0.001
Assessment of the learning situation	3.5	3.9	7.6%	0.013
Overall	3.4	3.9	10.0%	

Based on a 1-5 Likert scale.

\*P value 0.05 and less indicates statistical significance.

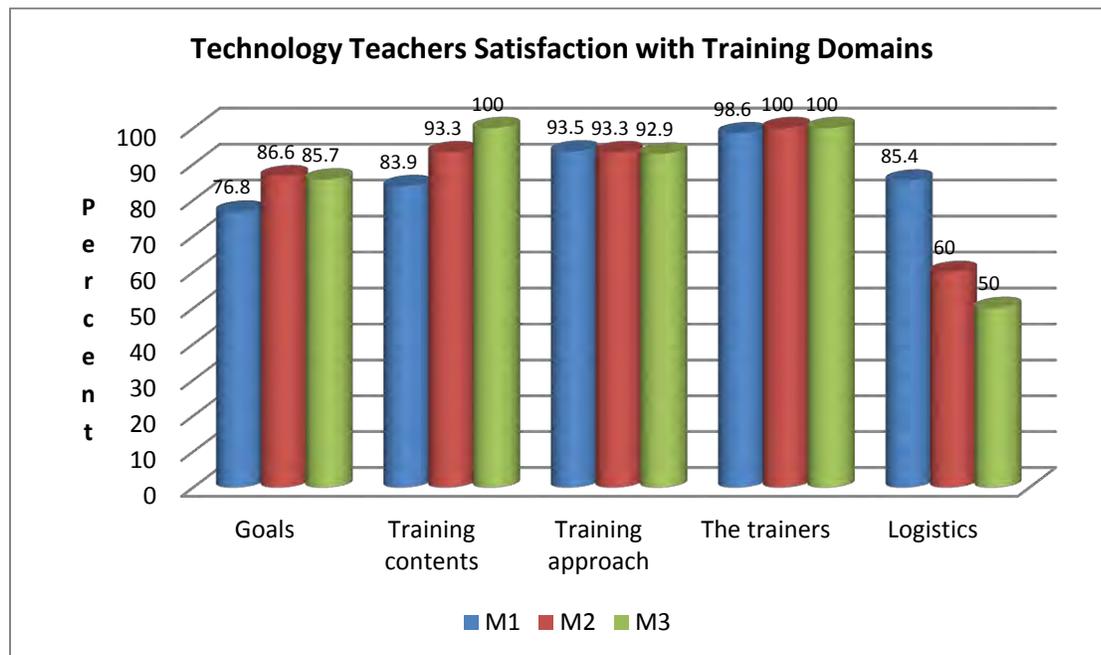
### Technology Teachers

Eighteen technology teachers from 11 MSN partner schools engaged in professional development sessions. Each teacher was provided with a netbook to facilitate the training. Teachers received 54 training hours over a six-month period between January 2011 and November 2012. This time period comprised two academic semesters. The training aimed to strengthen teachers' ability to teach computer and technology classes and to provide substantial technical assistance to other teachers at their schools. Training was provided in the following key areas.

- Effective supervision of students in computer labs
- Integration of technology into regular classroom lessons by working with other teachers
- Curriculum integration of technology
- Troubleshooting and supporting lab computers
- Troubleshooting and supporting classroom computers

Teachers expressed general satisfaction with the training as measured at three different intervals and illustrated below. The level of satisfaction averaged across all domains was 87%.

Figure 27 Technology teachers satisfaction with training domains



### English Teacher E-Training & Specialized English

AMIDEAST used a different approach for the English teachers, with less dependence on face-to-face training. This was due to the fact there were few individuals in Gaza with sufficient experience and credentials to assume role of teacher trainer. Consequently, AMIDEAST subcontracted with the University of Oregon’s American English Institute (AEI). AEI’s program encompassed the following goals.

- Introduce teachers to the most recent teaching methods and techniques, including project-based learning, alternative assessment, learning styles, large class management, and critical thinking
- Offer teachers the opportunity to engage in an innovative distance-learning program employing technology in a way that is appropriate to participants’ needs and available resources
- Collaborate with in-country tutors to enhance online offerings with their face-to-face support
- Provide direct access to U.S. experts at UO;
- Enable teachers to share the knowledge gained during the program with colleagues through workshops, professional presentations, and curriculum development projects in their local schools

All the English teachers applying to be part of the Gaza MSN program were required to sit for the TOEFL Institutional Testing Program (ITP), which measures nonnative speakers' skills at the intermediate to advanced levels. The UO required a score of at least 450 on the ITP for participation in the training. Eight teachers who did not meet the minimum requirement were provided with 60 hours of English language instruction



through AMIDEAST, with a special focus on reading and writing skills. This alternative program was extremely well received by the group of eight teachers. Three quarters of the trainees believed their English language proficiency (reading, writing and speaking) improved as a result of the course. They particularly benefited from the fact that the course was contextualized for the Gaza English classroom. The small group evaluation revealed an average of 98% satisfaction with the training goals, content and approach, trainers, and logistics.

Forty teachers began the UO online courses, which involved three 10-week terms of online work spread out over the fall 2010, winter 2011, and spring 2011 academic semesters. The three courses were: 1) Methods; 2) Effective Feedback and Assessment Practices; and 3) Differentiated Instruction for Large Classes and Mixed Abilities. During the courses, AMIDEAST provided a local facilitator who met with the teachers for monthly face-to-face sessions. These monthly sessions provided teachers with the opportunity to discuss class assignments, as they encouraged networking among the teachers.

A mid-term evaluation revealed that 85% of the teachers were very satisfied with the courses, although only 26 completed the first three courses and could therefore pursue the final project in the fall 2011 semester. Eighteen teachers successfully completed the final project, which was based on action research related to their classroom instruction. The relatively low retention rate of 65% up to the final project was attributed to several factors: 1) several teachers found the English level too difficult and dropped out; 2) four teachers ceased teaching and left their schools; 3) the overall work load after hours was overly demanding.

Originally the intention was to also send a large group of some English teachers to the Cairo TESOL conference in January 2011. However, the political situation in Egypt forced this activity to be canceled due to security considerations.

### School Counseling Program

An outcome of the lengthy deliberations regarding the provision of a psychosocial component in Gaza resulted in the design and delivery of a program to train para-counselors in the Gaza private schools. The decision to pursue this training resulted from the fact that Gaza MSN private schools do not have the resources or trained staff to provide effective counseling to their students. However, the school principals recognized the importance of supporting their students in this way. Consequently, each of the 11 original MSN schools nominated one teacher to participate in educational counseling training. The program was designed locally through two separate needs assessment sessions with school teachers, and was delivered between January 2012 and March 2013. The program consisted of 24 weekly face-to-face sessions each lasting three hours, for a total of 72 training hours. The time commitment was considerable, although this did not discourage the participants. There was a 100% attendance rate that was largely attributed to the quality of the trainers and the relevance of the curriculum.

Topics for the training were determined through the needs assessment and included the following.

#### PART I—October to December 2012

- Principles and basic concepts of school counseling
- Counseling skills: interview, case study
- Counseling skills: cumulative log, group guidance and group counseling
- Teacher counselor self-organization; organizing and managing a counseling and guidance program at school; goals and objectives of a counseling and guidance program
- Action research
- Developmental characteristics in childhood and adolescence
- Annual guidance and counseling plan
- Classroom problems: causes, manifestations, suggested solutions; student problems and their counseling needs
- Principles of child behavioral change and applications
- Class management and class control
- Attention deficit, memory stimulation, encouraging motivation
- Family counseling

#### PART II—January to March 2013

- Objectives of professional guidance in elementary and preparatory stages
- Communication skills
- Employing nonviolent communication skills in solving school problems
- Punishment alternatives, practical applications for positive discipline in a friendly learning environment
- Using psychodrama in behavioral treatment
- Shock: definition, signs, helping children deal with it

- Caring for those with special needs
- Methods for solving school problems
- Crisis management
- Action research

In addition to the face-to-face instruction, each teacher received a total of four visits from the instructor, two per semester, for coaching in para-counseling efforts and assistance in evaluation of specific cases. Participants were given the opportunity to construct a school counseling log in order to register each case they faced. They also had the chance to confidentially discuss each case with the trainer in order to explore solutions.

The participants exhibited a high degree of satisfaction with the training objectives, the content and the approach of the training. This level of satisfaction increased 3.5% from the mid-term evaluation to the post-evaluation. At the end of training, they demonstrated a high degree of overall satisfaction: 4.33 on a scale of 5. Overall, AMIDEAST Gaza staff considered this particular professional development effort highly successful. Although small, the training had an outsized impact due to the great need at schools. It was a unique opportunity for private schools to gain skills to benefit students, teachers, and families.

### **Multidisciplinary Professional Development Program**

AMIDEAST received an extension of the MSN grant to continue activities into the first semester of 2012–13. However, due to delays in re-vetting the original schools and the replacement of three of them with new schools, which changed the type and number of beneficiaries, the final teacher training interventions were amalgamated and redesigned. To ascertain needs and interests of schools, the AMIDEAST Gaza team surveyed all new teachers from all disciplines. The results of this survey led to the development of a multidisciplinary teacher training program that addressed generally applicable elements of teaching.

The multidisciplinary professional development program covered five core modules used in the West Bank certificate programs for in-service teacher professional development. Thirty-seven teachers participated in 30 hours of face-to-face training and 12 hours of learning circles. These sessions occurred over a period of five months beginning in February 2013 and concluding in May 2013. The central themes that were addressed in the program included the following.

- Active teaching and planning
- Classroom management
- Teaching strategies and modern teaching methods
- Modern assessment and evaluation techniques
- Teaching aids and learning styles
- Types of questions and styles of thinking

The following table shows participants’ overall level of satisfaction with the various training domains. On average, 86% of the trainees were satisfied with the training as a whole, with a scale median of four out of five.

Table 17 Teacher Satisfaction with Training Domains

Domain	Disagree %	Neutral %	Agree %
Training objectives	0	11.8	88.2
Training contents	0	2.9	97.1
Training approach	0	5.9	94.1
The trainers	2.9	2.9	94.1
Logistics	8.8	35.3	55.9
Overall average	2.34	11.76	85.9

The participants believed that the training provided them with the opportunity to learn new methods of teaching and learning styles. They

became more aware of classroom management strategies and how to better plan for instruction. Teachers also better understood student-centered instruction techniques.

Additionally, most of the participants viewed the learning circles as very beneficial and saw them as complementary to the face-to-face training. Follow-up interviews with teachers revealed the teachers found commonality across academic disciplines in the issues they faced. Teachers enjoyed the opportunity to discuss real teaching situations and get a feedback from peers. The small number of participants in the learning circle group provided the chance for increased interaction. Teachers found the discussions meaningful and useful for their school situation, and videos of real teaching situations also gave them the opportunity to critically examine teaching styles and suggest different approaches.

### English Language Training for MSN School Principals

A further professional development program that took place in the final months of the MSN Program in Gaza arose from the MSN school principals’ request for an opportunity to improve their English language skills. AMIDEAST responded by designing an English language course involving thirteen principals and administrative staff who had a similar low level of English language proficiency. All 13 actively participated in the 80-hour course and maintained an enthusiastic attitude.

Principals spoke highly of the opportunity to improve English proficiency, even though it took time out of their busy day. One principal noted, “It’s a chance that might not be repeated. It is an opportunity to practice speaking English language. It increased our knowledge of English vocabulary.”

The largely conversational classes were positively received in part because they allowed participants to interact with fellow colleagues and to speak English more confidently. One principal remarked that he is now more capable of replying to email in English than he used to be. Another principal felt that the sessions refreshed and expanded her previous knowledge of English.

Table 18 Evaluation Results for English Language Training

Learning domain	A little	some what	Good	Very good
Improved vocabulary	0.0	0.0	54.5	54.5
Can form correct sentences	0.0	9.1	72.7	18.2
Manage email English messages	9.1	54.5	27.3	9.1
Able to hear and comprehend simple dialog	0.0	9.1	45.5	45.5
Speaks out without fear	0.0	36.4	36.4	27.3

### Conference Series

The MSN Program conducted three conferences in Gaza. The conferences were intended to be culminating events at different points in the program and served to link the participating school communities, provide time to reflect and discuss education issues in Gaza and recognized the effort and professional contribution of teachers and administrators. The conferences were held at the ARC Med Hotel in January 2011, June 2011 and March 2012. This was the first time most of the 450 teachers attended such an event or visited this hotel.

For the first conference, teachers were not yet engaged in the professional development program; therefore, the participants were assembled into working groups based upon their field specializations: science, math, English, education technology, and school administration. Each working group was facilitated by a trainer and an AMIDEAST staff member. Specific issues were raised and discussed, such as classroom teaching practice, assessment and evaluation, classroom management, student-centered learning, technology in education, and school management practices for principals.



The second and third conferences allowed teachers to present papers and action research projects that emerged out of their professional development training. These two conferences built upon the content and issues arising out of the previous conference. This helped provide a greater sense

of networking and the establishment of a learning community of practice. The conferences also allowed an exchange of knowledge among MSN schools which in many cases represented the first time these private schools had come together to discuss and share information about the composition and character of their individual schools.

Twenty-four action research papers were presented in the conferences, and their preparation constituted an important professional development experience for teachers. The notion of presenting at a conference, let alone presenting in front of one’s peers, was a novel experience for most of the presenters. Teachers who presented received considerable coaching and support from the trainers involved in the professional development training programs for each discipline. Below are some examples of action research projects presented by the teachers.

- Learning difficulties involving basic multiplication facts faced by students in grade 3
- The performance of Al Zahra Private School students on the TIMSS math tests
- The effect on achievement among second-graders of using computers in teaching mathematics
- Using drama in teaching science
- Using active learning to improve English speaking skills
- How effective communication with parents enhances science class participation
- The effect on elementary school student achievement of using Moodle and educational CDs

Each conference was extremely well-attended, considered as significant events to which teachers and administrators looked forward both professionally and personally. Overall, 92% of the conference attendees were satisfied with the conference arrangements and results. School principals were particularly impressed with the action research presented and were often surprised by their teachers’ capabilities. The table below reflects the average rate of agreement by attendees over three conferences regarding specific questions asked of them in a survey given at the end of each conference.

Table 19 Conference Evaluation Results

Domain	Averaged % agreement across all three conferences
Domain	Overall
I personally benefited from the conference	94.5
The conference facilities were clean and suitable	95.9
I was admired with the notion that teachers present in the conference	96.4
Research papers presented	92.2
I am more aware to the MSN activities and objectives	97.0
During the conference I met with teachers from other schools	95.5
Now I have more understanding of student-centered learning	89.7
I have greater understanding of cooperative learning and the activities it includes	90.4
I have a great understanding of how to differentiate education for	90.6

the diverse learning styles and intelligences of students	
I broadened my knowledge about the importance that technology plays in the classroom	89.0
I have a wider understanding and of classroom teaching approaches	89.4
I have more understanding regarding the importance of planning	89.7
I have broadened my knowledge about school leadership that is based on a vision	87.9
I developed an increased understanding of the role of extracurricular activities and community service in education	93.2
I am more convinced that parents should play a more effective role in the school life	91.2
<b>Overall average</b>	<b>92.4</b>

### **Palestinian Association for Rehabilitation of the Disabled**

The MSN Program components were largely not relevant to the Palestinian Association for the Disabled (PARD), which is a school providing education and social services to children with special needs in Gaza. The school does not have a traditional teaching staff, so the professional development training was not relevant. Students at PARD were not capable of participating in the range of student extracurricular activities. Therefore, AMIDEAST contracted an external consultant to conduct an assessment to determine capacity-building needs for the school and its teachers. Performance and gap analyses were used as the main tool for the needs assessment. In addition, data collection for the assessment occurred through direct observation of the school’s facilities, classrooms, library and other areas. The consultant observed playgrounds, yards, and the vocational training program areas. In addition, the consultant interviewed the school’s staff. The assessment report recommended that AMIDEAST provide some renovation and resources to classrooms, bathrooms, playground areas and the library. In addition, the consultant recommended the implementation of a school lunch program, as well as to upgrade furniture and equipment.

Based on these recommendations, AMIDEAST upgraded the classroom furniture by procuring nine round student tables, 141 student chairs, five whiteboards, nine bookshelves, and 234 educational books. The PARD school director also participated in the leadership training conducted by Triangle Associates. In addition, in August 2011, FEKRA implemented a specially tailored drama program for 12 children with special needs. The program lasted for 24 days, three hours each day for a total of 72 hours. In the drama activities, children were guided to express their feelings, emotions and thoughts through drama and games.

Overall, PARD benefited from the MSN Program, but in a manner very different from all the other MSN schools. Ultimately, the services provided by PARD more closely paralleled those of a social services agency than a school. Consequently, there was a limited amount of support that could be provided under the umbrella of a school improvement program.

### **School Renovation**

AMIDEAST provided a variety of equipment and renovations for each of the Gaza MSN private schools. The intent was to improve the physical infrastructure of the schools and thereby improve the quality of each school and its ability to deliver better instruction. Initially, as part of the education technology strategy, AMIDEAST purchased 150 netbooks for all participating teachers and principals. AMIDEAST also installed a local area network in each of the schools and provided Internet service to the school starting in January 2011 and concluding in May 2012. These two components tied to the teacher training in terms of how to use the netbooks with Internet in classrooms. In September 2012 AMIDEAST surveyed each of the schools and found they had all retained the Internet connectivity at their own cost.

To contribute to the improvement of the learning environment, AMIDEAST also renovated 11 computer labs and provided the schools with 170 desktop computers, 12 printers, 12 scanners, and 45 LCD projectors. AMIDEAST installed nine air conditioning units in nine computer labs. AMIDEAST also provided 11 schools with a small teacher resource library and one mobile classroom library with a wooden cabinet on wheels. Each classroom library consisted of approximately 50 reading books and approximately a dozen teacher resources.

These additions did not enter the schools until the very end of the program. AMIDEAST was required to delay their procurement due to a USAID funding freeze from September 2011 until February 2012. The re-vetting process for each school following the end of the funding freeze further delayed the procurement effort, as did delays in the importation into Gaza of the requested items. As a result of the protracted procurement process, AMIDEAST was not able to gather concrete data on the impact these resources may have had on the schools.

### **Psychosocial Support Component**

Originally USAID had envisioned a major Gaza MSN component focused on the provision of psychosocial support for school children emotionally harmed during the 2009 conflict with Israel. In November 2009, MSN conducted an assessment of psychosocial organizations and programs working in Gaza, the aim of which was to identify organizations with the capacity to implement psychosocial activities for the MSN Program. This led to AMIDEAST contracting with Arab World for Research and Development (AWRAD) to conduct a psychosocial need assessment.

AWRAD designed a comprehensive study involving a literature review, questionnaires and interviews. The needs assessment was designed to meet the parameters of the MSN Program and included three main sections.

- 1) Psychosocial status and intervention needs of students in the targeted schools
- 2) Access to psychosocial services and resources for the students within schools, within their families, and within the community

- 3) Programmatic needs for psychosocial interventions at the school and family levels; investigation of the training and capacity-building needs and the best means to implement programs and activities

The assessment targeted 23 private schools in Gaza and sampled approximately 10% of potential beneficiaries. AWRAD conducted a total of 1,101 interviews with students, teachers, administrators and parents. The comprehensive final report generated considerable interest within USAID beyond the Education Development Office, as USAID had been supporting a variety of humanitarian activities in Gaza that were addressing children's needs through other partners. Ultimately, USAID determined that the types of activities recommended by AWRAD were best addressed through other partners and not through the MSN Program.

The consequence of this decision was profound for the Gaza MSN Program. USAID asked AMIDEAST to re-imagine engagement with the 12 vetted private schools in a manner that more closely mirrored the types of school improvement activities AMIDEAST had implemented with the private schools in the West Bank. In effect, the Gaza MSN Program became a medium-term school improvement initiative, as opposed to an ad hoc humanitarian gesture focused on supporting families and children through scholarships and psychosocial support.

### **Leadership Program for Private School Principals**

AMIDEAST's original engagement with the schools was very much contingent on the willingness and interest of the school principals. In many cases, these principals were not only the decision makers within the school, but also the owners of the school. As such, AMIDEAST felt it was essential to engage them in a professional development program that was also aligned with the issues and approaches being introduced to the teachers. AMIDEAST designed the leadership program using international consultants in response to the principals' own request and because of the difficulty in finding local experts in school leadership. The leadership program was designed around the MSN Program's three overarching objectives.



1. Introduce a student-centered, contemporary approach to teaching and learning in the areas of English, science, technology and mathematics
2. Introduce educational concepts, teaching approaches, techniques, and resources that will measurably improve student learning outcomes
3. Develop a collective leadership approach among school principals

Triangle Associates designed the leadership program in Gaza to achieve six leadership goals that would complement these objectives.

- Build awareness of the principal’s role as instructional leader in the school, and, as such, as the chief instigator of innovation and reform (Objective 1 above)
- Examine 21<sup>st</sup>-century knowledge and skills derived from research completed elsewhere (Objectives 1 and 2 above)
- Gauge the applicability and appropriateness of existing models of 21st century skills and of the NIET School Improvement Standards for the Gaza context (Objective 2 above)
- Explore progressive and alternative approaches to teaching and learning (Objectives 1 and 2 above)
- Understand what is meant by a “student-centered” learning environment (Objective 2 above)
- Create a collegial network among the private school leaders (Objective 3 above)

AMIDEAST conducted 54 hours of training for its partner school principals and administrative staff during three separate interventions in November 2010, November 2011 and May 2012. Training was conducted by international consultants from the Triangle Association and was attended by 26 school principals and administrative staff. Each of the three sessions held in Gaza were designed to advance all of the above goals. The program successfully offered an opportunity for the principals to examine 21<sup>st</sup>-century knowledge and skills, explore progressive and alternative teaching methods, and gauge the applicability and appropriateness of the NIET School Improvement Standards. In fact, the principals seemed to have an intuitive grasp of what constitutes a more progressive school environment, even if their schools did not embody such practices at the time of the training.

However, while Triangle Associates was successful at advancing the role of the principal as instructional leader in the school, the majority of participating principals were not trained educators and were poorly prepared for this role. Consequently, there was not a direct focus on creating a student-centered learning environment. Trainers instead emphasized how principals lead teacher engagement and presented tactics for building stronger collaborative relationships with parents. These topics seemed closer to the immediate concerns of the principals and helped in setting the stage for the eventual adoption of student-centered approaches to teaching and learning.

Two barriers to educational reform in Gaza private schools are (1) the transient and often temporary nature of teaching as an occupation, and (2) limitations in physical space, coupled with large student numbers, which results in little flexibility in classroom environments. AMIDEAST believes that the principals would support a more student-centered approach, provided they could see its feasibility and practicality given the above limitations.

The impact on education of Gaza’s closure and dire economic conditions cannot be overstated. For example, teacher recruitment and retention is an issue in the West Bank, but this challenge is much more severe in Gaza. The profession of teaching is essentially “day labor” for a great many

educators. Indeed, teachers are likely to stay in a school only until a higher paying job becomes available. Many teachers are unmarried women and leave the profession when marriage and child rearing intervene. This creates instability in schools and is clearly the principals' most serious leadership challenge. Staffing is unpredictable month-to-month and sometimes week-to-week. Going further, the presence of many UNWRA schools in Gaza means there is significant competition for private schools when it comes to teacher recruitment and retention.

Importantly, the majority of MSN schools in Gaza are proprietary in nature. These schools operate under a different business model than their non-profit competitors. Business owners tend to avoid collaboration with and disclosure of information to competitors. This secrecy hindered the development of a spirit of collegiality among school leaders in Gaza.

Each session included three consecutive days of on-site training in Gaza. The total program extended across an almost 18-month period of time. Peter Davidson and Marc Frankel from Triangle Associates, a consultancy based in the United States, facilitated every session. Five meta-themes ran through all three trainings, revisited each time through content exposition, discussions, experiences, and application.

### Theme 1—Applying Different Models of Leadership

Session One presented the notion of transformational leadership. The intention was to expose principals to the possibility of an inverted hierarchical structure as a model for empowering and engaging all constituencies (teachers, parents, students) and applying this model to school improvement and leading change.



In Session Two, these ideas were revisited with a focus on how they apply specifically to the social sector, which includes schools. Principals examined the idea of situational leadership as it informs the coaching and evaluation of teachers at different stages in their careers. The session also began to explore the possibility that the principal could also serve as the instructional leader of the school.

In Session Three, the principals' Myers Briggs Type Indicators were revealed along with an understanding of ways their preferences impact their leadership in general. Principals discussed how their personality type affects their decision-making, hiring of staff, and management of difficult teachers.

### Theme 2—Teacher Recruitment and Retention through Teacher Engagement and Effective Evaluation

Despite the high unemployment rate, the best teachers are attracted to the shorter hours and higher wages of the government and UNRWA schools, sometimes changing jobs in the middle of the year. It was suggested in Session One that principals identify their assets (mission, opportunity to experiment with different teaching methods, a more enlightened model for evaluation as goal-setting and support). Objective observation as a tool for that support was introduced, as well as theories of motivation as applied to teacher engagement. In Session Two, the principals created a description of what makes an excellent classroom and an excellent teacher. They extended their observation skills with exercises in objectivity, measurement and detailed description. The principals focused on understanding the validity of others' points of view and sense of order. Finally, they practiced applying observation skills to videos of Gaza classrooms.

In Session Three, observation skills were rounded out and both behavioral interviewing techniques and evaluation as goal-setting were reviewed, demonstrated and practiced.

### Theme 3—School Improvement, Standards and Best Practices for Schools in Gaza

In Session One, the principals reviewed the AMIDEAST standards for principals; evaluated the appropriateness of each for the Gaza context; and applied the relevant standards to their schools and to themselves as school leaders. In Session Two, the principals created a description of what makes an excellent school, reviewing NIET standards for Palestinian Schools as they apply to Gaza. In Session Three, the principals created a list of best practices for partnering with parents in Gaza and compared their list to that of the National Association of Independent Schools. They were presented with a model for parent education that begins with enrolment and addresses issues of student retention.

### Theme 4—Approaches to Teaching and Learning

Session Two brought approaches to teaching and learning more into focus as the principals created a description of what makes an excellent classroom and listed for themselves the skills their students would need for success in the 21st century. The notion of brain-targeted learning and teaching was also addressed through activities, lectures, and discussion. Geometry lessons in the proofs of pi and the Pythagorean Theorem were presented for the principals' own active engagement. Principals were encouraged to return to their schools and share these lessons as inspirational examples of new teaching modalities. Session Three again involved the principals in active and engaged learning as they directly applied, through role-playing, knowledge and practice in hiring and teacher evaluation.

### Theme 5—Building a Community of Mutual Support and Common Purpose among the Principals of Private Schools in Gaza

In Session One, the principals arranged themselves in order of experience from least to most. The line was then curled back upon itself thus matching the most experienced principals with the least experienced. The pairs were encouraged to introduce themselves, exchange emails and, for

the more experienced, to adopt the less experienced as a mentee. In Session Two, the principals came together to envision the future of Gaza and identify the skills their students will need in that world. In the concluding sessions, the principals once again worked together to envision the public purpose of private education in Gaza.

Table 20 Principal Satisfaction

**Evaluation Results**

AMIDEAST conducted self-assessment evaluations at the conclusion of each training. The results were very positive, with 92.4% of principals agreeing that the workshops were of high quality. Furthermore, most principals claim to better understand the effect of leadership style in the educational process.

	Agreement/ Satisfaction	Agreement/ Satisfaction
Domain	1-5	%
Training Objectives	4.33	92.4
Results of training	4.37	92.4
Content of the workshop	4.32	84.6
Training approach	4.46	92.4
Trainers	4.81	100
Logistics	4.44	92.3
Overall average	4.46	92.45

The same percent of principals (92.4%) agreed that they became more knowledgeable about quality leadership. They indicated that they are now more capable of dealing with different styles of teachers, more capable of recruiting or developing suitable teachers, and better able to apply school assessment models.

Separate from the leadership program, 13 principals and other administrators were given the opportunity to take an English course tailored to administrative needs during the final semester of the MSN Program. This course took place between February and May 2013, and attendance and participation was remarkably high. Generally, the participants were highly satisfied with the training as a whole (4.46 average score on a scale of 5). Eighty-eight percent remarked that their English vocabulary improved. They indicated that they were better able to form sentences, both spoken and written. In addition, participants gained confidence in speaking and sending email in English.

**School Improvement Planning**

Separate from the leadership program, AMIDEAST attempted to engage the principals in a school improvement planning process. The initial sessions were given by the MSN Deputy Chief of Party, Dr. Said Assaf, from Ramallah via digital video conferencing. Two consultants were hired locally in Gaza to follow up on the planning process for each school. A manual was produced for the accredited Leadership Diploma Program in the West Bank and used with the private school principals in Gaza. The school improvement planning process focused on five areas.

1. Elements, domains and objectives of the school improvement plan and measures of implementation and evaluation
2. Administrative dimensions of implementing a plan in a school setting
3. The importance of supervision and instructional leadership in the process of working with a school improvement team
4. Financial management of school planning, including transparency
5. Engaging the local community and strengthening school-community connections.

Follow-up from the local consultants with each school principal and their team produced very mixed results. Based on interviews, about 70% of the principals viewed the effort and follow-up visits positively, although in practice few principals completed the entire planning process. Others felt the follow-up was more like an inspection, and they generally did not appreciate being encouraged to be transparent about strategic planning and financial matters pertaining to their school. Most of the school principals were accustomed to a high degree of autonomy and decision making, and the school improvement process ran counter to their ethos or business mentality of running their school. Many of the principals had difficulty separating their understanding of a vision, mission and objectives in school planning. For example, financial information about the school had traditionally never been shared except in the four schools that had boards of directors and were not owner-operated. Very few principals had any interest in engaging the parent body and deliberately refrained from this initiative. In sum, the school improvement planning process was received by each of the principals very differently, and AMIDEAST struggled to integrate the effort into the wider school improvement process.

### **Reflecting on the role of private education in Gaza**

In other parts of the world, private schools are often crucibles of innovation and progress in education. When government or, in the case of Gaza, UNWRA schools are available and of acceptable quality, private education has to innovate in order to provide sufficient value for parents to be willing to pay tuition. To some extent, this is the case in Gaza, but as explained below, the dominant pedagogical model remains traditional and at times regressive.

The participating principals were asked to reflect upon the question of whether private education serves a public purpose in Gaza and to give their perspective. Their comments were both profound and surprisingly universal: that is, educators everywhere would probably echo the same general sentiments and ideals, although there are some aspects that are unique to Gaza.

One objective for private education shared by all participating principals is the economic development of their country. Principals wonder if a child they educate today will have any hope of a job when he or she graduates, but they still see education as playing a pivotal role in preparing children for whatever opportunities lie ahead. In their view, the next generation will need to be well-rounded in their education— more so than in the past—but more importantly, the next generation will need to become the innovators and entrepreneurs that will create the products, businesses and jobs to propel the Gaza economy. They recognize that their students need to keep up with technological and other changes in order to compete regionally, yet hope

that they don't lose sight of their basic values. In short, the principals say Gaza needs a new generation that will surmount the overwhelming obstacles confronting them even as they retain the essential aspects of a Gaza identity.

The principals also recognize that their students must become the social, political, and leaders of tomorrow. They can fulfill this role only if they have the skills to solve their country's problems and resolve conflicts by peaceful means. Because they see that the Gazan people have suffered so much from violence, they want their schools to play central roles in teaching tolerance and conflict resolution, in addition to the core academic subjects.

### **Triangle Associates Recommendations**

Triangle Associates provided four recommendations regarding future work with private schools in Gaza. These are summarized below.

Trajectory 1—Attracting and retaining the best teachers. It is crucial that Gaza develop and replenish its supply of professional teaching talent. The “day labor” ethos is perhaps the biggest impediment to school improvement. Professionalization of the teaching profession is important. There is much more that the principals can do to orient, train and encourage their teachers to understand and embrace the role the school plays in achieving social change. This sort of mission has proven elsewhere to be a sort of “glue” adhering teachers to schools even in the face of lower salaries and benefits.

**RECOMMENDATION 1:** Advance the professionalization of teaching in Gaza by more clearly explaining the school's mission and role in social change within Gaza during orientation and professional development sessions.

Trajectory 2—“Raise the bar” by adopting best practices in teaching and learning. Several of the principals indicated an interest in transforming teaching and learning in their schools. This is worthy of encouragement and support. Clearly, one part of raising the bar is equipping teachers to teach in more progressive ways such as small group instruction, project-based learning, and integration of technology in core subjects. However, true instructional reform is contingent on improvements to school infrastructure that would permit such styles of teaching and learning. For example, arranging a small group of middle school students for a discussion is a challenge when virtually every square meter of the room contains a desk occupied by a student. The desks themselves are highly traditional and, as such, are impediments to reform.

**RECOMMENDATION 2:** We recommend that future attempts at pedagogical reform be matched with provision of the physical resources necessary to implement new instructional methods.

Trajectory 3—Since most of the principals are not themselves educators by profession and training, their role in instructional leadership is most likely limited to a supporting one. To

compensate for this, instructional leadership could be shared among the schools by creating teams of dedicated teacher coaches.

**RECOMMENDATION 3:** Future attempts at pedagogical reform should be supported by the creation, training and deployment of a team of teacher coaches, perhaps under the auspices of a Palestinian university, shared by the participating schools.

**Trajectory 4—**Focus the program on student mastery of 21<sup>st</sup>-century skills. Much work has been done elsewhere in the world to delineate the skills students need for success in the 21st century's knowledge economy. The principals were quite clear that they aspire to educate students for economic success in the future, and it would be helpful if much of the academic program were oriented toward this objective.

**RECOMMENDATION 4:** In concert with the Ministry of Education, develop a set of 21<sup>st</sup>-century skills appropriate for each academic division (e.g., lower, middle and upper schools), and focus program content and method on mastery of these skills.

### **School Enrichment Program**

There is a growing body of research that documents the positive effects of after-school programming on the growth and development of children, particularly those living in conflict zones such as Gaza. Furthermore, there is a growing body of research that specifically links student engagement in after-school activities to improvements in student learning and higher academic achievement. Consequently, AMIDEAST introduced a variety of student extracurricular programming in the fall of 2010 under the heading of "School Enrichment Programs."

To implement these activities, AMIDEAST subcontracted with four leading local organizations in Gaza, each of which has a longstanding reputation in their respective arenas. These organizations were the following: Palestinian Information and Communication Technology Association (PICTA), FEKRA Art Institute (FEKRA), the Water and Environmental Development Organization (WEDO) and PENMEDIA. AMIDEAST carefully monitored the after-school activities and had staff attend most of the events in order to ensure the students and others involved were satisfied and that the events met the terms of the subcontracts. Most of the reporting described below is based upon AMIDEAST staff monitoring efforts. Given the nature of the activities, these programs were not formally evaluated in the same way as the training programs were.

PICTA provided a series of interwoven and reinforcing activities that included the following: Enhancing Academic Achievement; Youth Leadership Mentoring, Career Planning, Start Academy, CEO Life Stories, and Structured Workplace Learning. PenMedia provided a series of Sesame Street performances to children in schools. FEKRA led the drama clubs in MSN schools, while WEDO organized the environment clubs in schools. Finally, AMIDEAST also organized

English clubs and science clubs. Collectively these activities engaged 3,687 students, of whom 37% were female.

The administration of student after-school activities took place within a challenging environment. In general, Palestinian schools do not have a history of offering such activities. Particularly in Gaza, parents do not necessarily understand the value of engaging in non-academic events after school. Principals were not particularly supportive of these initiatives, since it required keeping their school grounds open after hours and usually incurred a financial cost. Teachers were not enthusiastic because they receive very low pay and had little motivation to stay after hours to facilitate a student activity. Teachers are accustomed to returning home in the early afternoon and supporting their families. In short, important stakeholders in the success and sustainability of student extracurricular activities—parents, principals and teachers—did not highly value what was being offered. Finally, many students were also pressured by parents to do homework and study after school rather than taking advantage of after school activities. Given the general context, history and culture regarding student extracurricular activities, AMIDEAST designed and implemented them with a guarded expectation for long-term sustainability.

AMIDEAST's initial meetings with parents and principals to introduce and suggest various types of activities generated much discussion and debate. Ultimately, the idea of providing these activities free of charge to the schools and students had to be linked to the notion that this was a required component of MSN's broader school improvement initiatives. In this context, school principals acceded and AMIDEAST was able to develop and implement a great variety of activities that were voluntary for students. Once activities were underway, student interest was high and participation was strong. Four activities received particularly high marks from the students: PICTA's Structured Workplace Learning Program, AMIDEAST's English and science clubs and FEKRA's drama clubs. Out of these four, the English and science clubs demonstrated the most sustainability on the basis of cost and popularity, and they will likely be continued on the schools' own initiative. In addition, parents appreciate their co-curricular focus.

### **PICTA Programming**

PICTA's after school program focused on involving students in fun, creative, and educational activities that allowed students to think differently and give them a head start on their future careers. The program was divided according to age group. Students in grades 7–9 were engaged in Enhancing Academic Achievement and the Youth Leadership Mentoring programs, and students in grades 10–12 took part in Career Planning and the Start Academy. High school students participated in CEO Life Stories and Structured Workplace Learning. Each of these is described below with some reflections and examples.

### **Enhancing Academic Achievements (E2A)**

During the second semester of 2010–2011, 374 students (260 boys and 114 girls) participated in activities that focused on critical thinking and problem solving. Students were given the

opportunity to participate in individual and group activities that encouraged them to think creatively. The E2A program involved students in such events as an “Inventors Day” and “Math Day.” Students were encouraged to engage in creative, hands-on activities to stimulate critical and creative thinking. A 7<sup>th</sup>-grader was quoted as saying, “I always had a hard time solving puzzles. I was so happy and surprised when I worked with the trainer and solved a puzzle by myself.” A focus group of E2A participants revealed that the majority enjoyed the activities and liked solving problems in new ways. The sessions were held for an hour and a half after school. Students pushed for an additional half an hour in order to have sufficient time to complete the activities.

### **Youth Leadership Mentoring (YLM)**

A total of 277 students (164 boys and 113 girls) from grades 7–9 enrolled in the Youth Leadership Mentoring activities in the first semester of 2011–2012. The YLM is a character-building program where trained professionals coached students on becoming youth leaders. After completing the program, students created their own “Book of Dreams” reflecting on their journey of discovery during the program and presenting where they wish to be in the future. Examples include two students who presented pictures of Al Azhar University Medical School where they hope to study medicine. Another student created a picture of Al Shifa Hospital in Gaza to represent a future work place. Other students posted pictures of Europe and Egypt—places they would like to visit, live or study in the future.

### **Career Planning (CP)**

One hundred and six students (79 boys and 27 girls) in grades 10–12 participated in the three-month career planning course. The course focused on raising student awareness about available careers in the local market, as well as taking the first steps in their own career planning for the future. In order to actively engage students, PICTA designed an interactive web-based animated career city that students used to virtually travel through diverse career opportunities. This activity captured students’ attention and stimulated their interest. Students who were interviewed from the Greek Orthodox School said they eagerly awaited these sessions from week to week.

### **Start Academy (SA)**

After completing the CP training course, the same group of students from each school enrolled in the Start Academy (SA) training course. The SA course taught students how to prepare a business plan and to manage a theoretical mini-enterprise. The course consisted of 18 hours over a period of three months during the fall semester 2011–2012. Students attended one-and-a-half-hour sessions every week after school. In groups of four to five, students created a fictional mini-enterprise during the course. At the end of the course, students presented their entrepreneurial plans to school administrators and fellow classmates. Thirteen mini-enterprises were developed. Examples included a bookstore created by four students and a business producing Palestinian

embroidered laptop and cell phone covers. One group of students developed a “How to Make It” magazine and yet another group worked on a business plan for coordinating and planning school and kindergarten parties. Overall, Start Academy successfully attracted and sustained student interest.

### **Chief Executive Officer Life Stories (CEO)**

The Chief Executive Officer (CEO) Life Stories activity aimed to broaden the students’ thinking and introduce them to successful local role models. Each CEO life stories event lasted one hour and involved one group of students. PICTA arranged for successful or prominent local individuals representing various professional sectors to talk about their professional background and lead a discussion about their career. Six sessions were conducted with six different individuals in each school. In each session, approximately 50 students representing grades 7 through 12 attended. The six sessions took place over two academic semesters and involved 1,054 boys and 659 girls. Relative to the other activities organized by PICTA, CEO Life Stories engaged the most students.

A good example of a CEO life story is that of Mr. Sameh Al Joor, an IT supervisor in an UNRWA Field Office. He talked about his career and showed his university certificates that illustrated all the stages of his professional life starting with university. He described the obstacles he faced, his first volunteering experience in a local organization, and how he had to work to prove himself. During the discussions, students asked many questions and were very engaged. In general, students showed consistent interest in CEO Life Stories and attendance was high.

### **Structured Workplace Learning**

PICTA implemented a job shadowing program for students in grades 7–12 under the title Structured Workplace Learning (SWL). SWL goals were to give the students a chance to comprehend the real environment of different careers, better identify their ambition and ultimately be better informed regarding which types of work may interest and suit them. Participants experienced real work circumstances and communicated directly with employees and employers doing a variety of jobs.



The program initially targeted 50 students in grades 10–12. However due to parent and student extended interest and demand, the program was expanded to include over 86 students (53 boys and 33 girls) from two additional MSN schools. The types of fields explored included medicine,

engineering, information and communication technology, education, management and finance, law, media, and work with humanitarian and development assistance organizations.

Students were offered an opportunity to spend time with a professional currently working in their respective fields of interest. For example, one of the students wanted to become a surgeon, so he attended a cardiac catheterization operation. Another student accompanied electric engineers in their fieldwork. Students not only got to observe the day-to-day activities of someone in the current workforce, but they also got a chance to have their questions answered. Informal feedback from the students was very encouraging and indicates that the program allowed students unique insights into possible future career tracks.

### **English Clubs**

To promote English language learning, AMIDEAST created English clubs in schools and hired YES alumni to facilitate the English clubs with the assistance of one designated English teacher per school. YES alumni are high school or university students who spent one year in the United States living with a host family and attending school. As a result, their English is an excellent model for other Gaza students. Over two consecutive academic years, 2011–2012 and 2012–2013, AMIDEAST facilitated 21 clubs (13 clubs in 2012 and 9 clubs in 2013) with a total of 553 participating students (329 boys and 224 girls). Students engaged in one-and-a-half-hour sessions once a week. Each group received 10 sessions on average. The activities enriched and increased students' vocabulary and helped them overcome their reluctance to speak in English. The clubs became a place to socialize in English, and the YES students were able to help facilitate themes that touched upon superheroes, family, festivals and holidays around the world. In each session, students were given a topic to prepare in advance and were requested to bring in photos or objects to share and present to their classmates. The facilitators also introduced games that provided an opportunity for students to use English.

In expressing a commitment to continue with the clubs in the coming year, one teacher noted, “We would love to continue with the club and we will even if MSN will not continue. With the knowledge we gained, we can lead and work with our students in similar activities.”

### **Drama Clubs**

MSN subcontracted the FEKRA Art Institute to conduct drama clubs in 11 partner schools (not including the PARD school). FEKRA recruited 176 students (89 boys and 87 girls) from 10 MSN private schools and 10 students with special needs from the Palestinian Association for Rehabilitation of Disabled (PARD) to participate in the drama clubs. One teacher from each school was recruited to attend the drama sessions with the intention of learning how to facilitate club activities in the future when FEKRA's trained staff would no longer be involved.

Each drama club held 64 drama training sessions leading up to a competition of plays that were judged by FEKRA staff. The three best-performing clubs received 13 additional sessions in

preparation for the final drama competition that produced a finalist school. Each drama club presented a final show at their own school that was attended by students, teachers and parents. The three semi-finalist clubs presented their plays at a theatre for the larger group of participating students, parents and guests. The final performance was a significant event for those involved and a unique experience for the participating school communities.

Overall, students showed great interest in the drama clubs and wished they would continue as an afterschool activity. After watching the final shows, principals valued the activities and expressed satisfaction. Parents too were very impressed with their children's acting and creativity. A mother of one students commented, "My son was shy, but now he speaks out freely, he is more confident in himself." Participation in the drama club activities also inspired some students. However, the school teachers were not particularly engaged as after school volunteers and ultimately showed little interest in committing the time to lead future drama clubs. It is unlikely these drama clubs will continue without MSN Program assistance.

### **School Environmental Club**

WEDO established environmental clubs within 10 MSN partner schools in Gaza. WEDO recruited 183 students (104 boys and 79 girls) and 10 teachers from 10 partner schools to participate in the environmental clubs. The size of each club ranged from 14 to 26 girls and boys. One teacher attended as the facilitator.

Participating teachers received 10 training sessions on environmental issues and were provided with training materials to use with their own students. Students participated in 64 facilitated sessions targeting environmentally sensitive topics such as toxic waste, water use, recycling of solid waste, and improper disposal of solid waste and wastewater. The clubs went on eight field trips to environmentally vulnerable areas. During the school-based activities, students made wall journals where they posted articles and flash cards concerning environmental issues. Others made wall murals that promoted awareness of environmental issues such as school cleanliness and recycling. In one school, students planted grass in the schoolyard, and in other schools, students chose an "issue of the week" and integrated discussion and school activities around that issue. In spite of the level of enthusiasm from the students, school administrators and teachers were not particularly enthusiastic about continuing the club using their own resources and time.

### **Science Clubs**

MSN science trainers involved in the teacher professional development program were recruited to also coach science teachers on how to direct student involvement in science clubs, as well as how to successfully run yearly science fairs. The science clubs met weekly and lasted one hour and a half. During the club meetings, students worked on small projects with guidance from their teachers and MSN trainers. One hundred and thirty students from grades 4–7 were engaged in eight science clubs.

During monitoring visits, it was observed that teachers were very proactive and demonstrated a commendable level of commitment to doing creative activities and transferring knowledge to their students. The teachers responded positively and felt the science clubs were a worthwhile endeavor. A teacher from one school remarked, “Our students are very excited about the club and started to be very competitive.” Another commented, “Students are now more interested in my science class as they now use theoretical information into more practical way.” There was a consensus among the science teachers that the science clubs would continue at their schools even after MSN concluded.

A science fair exhibition was held at the end of the school year in May 2013 for those who participated in the science clubs. A science fair is a competition whereby students present a science project in the form of a display board or model featuring something they have created themselves. Investigating a selected science topic in detail was a new experience for many students. The science exhibition was the first such experience for most of the participants, and many schools had never organized and hosted a science fair. Parents who attended were very surprised with their children’s projects. A fifth-grader commented, “The club is amazing, I like to be here. I worked on building a volcano for my project and I feel very proud of coming up with this science project.”

### **Sesame Street Shows Evaluation Results**

MSN subcontracted PenMedia to present “Sesame Street Shows” in participating MSN private schools. Pen Media is a local Palestinian organization dedicated to strengthening the educational, cultural, social and environmental well-being of all Palestinians.

The Sesame Street show was designed for children in kindergarten and first grade. Ten one-hour shows were presented in the winter of 2012, and another 10 shows were presented in the spring of 2013. Three thousand five hundred and thirty-seven students attended the shows, averaging 170 children per show. The shows aimed to relieve the children’s tension and to provide fun and joy. They also focused on three educational messages: home safety, road safety and personal hygiene.



The shows were a special highlight for the students and for the schools hosting them. However, it was very expensive to contract Pen Media for the performances, and the cost effectively precludes a continuation of the activity in the absence of external sponsorship.

### **MSN Summer Camps in Gaza**

The MSN Program, in partnership with PICTA, implemented six 10-day summer camps targeting 603 students during the summer of 2011 and another four summer camps for 487 students in the summer of 2012. Each camp was attended by approximately 100 students from ten MSN private schools. These summer camps, entitled "TechnoKids Summer Camps," focused

on math, science, and technology and were designed to give children a chance to become more creative, motivated and self-confident during the summer months when there are few opportunities available to students. The summer camps were also meant to build on the themes of the after-school extracurricular activities and otherwise provide continuity with MSN's activities during the school year.

Four MSN partner schools generously hosted the summer camps on their school grounds. MSN school teachers were given the opportunity to be paid animators or facilitators in the summer camps, providing them with additional income during the summer vacation.

Each camp was divided into six activity corners described below.

1. **The Digital World:** Students played educationally appropriate computer games and learned how to use different graphics software programs.
2. **Science Maze:** The Science Maze challenged participants to use mathematical and scientific thinking to proceed from one station to another. Each station within the Science Maze included a set of activities and problem-solving techniques to enhance students' abilities in resolving problems in innovative way.
3. **Sports Corner:** Sports activities outside students' usual experience, such as football, tennis, and basketball, were offered. The facilitators also worked with the students in developing good sportsmanship and ethics during play.
4. **Arts and Crafts:** Children created craft projects from used materials such as egg cartons, cardboard, paper, boxes, and string.
5. **Cinematoon:** In this activity, a cartoon or Disney film was shown in segments and the animator discussed the themes and actions with the children in a manner that encouraged reflection and dialogue.
6. **Children's Stories:** A narrator read age-appropriate stories and discussed the themes with the children.

Each camp session concluded with a field trip to the Ibad Al Rahman Beach Resort where students could swim and play. Students participated in a final ceremony to celebrate all they had learned and to seal the friendships they made.

The TechnoKids Summer Camps provided the perfect place for students to try something new and challenge themselves, while feeling right at home in their familiar educational environment. Students were able to pursue their interests, develop their skills, and—most importantly—have fun. On the last day of the camp, a final evaluation was conducted to determine the children's level of satisfaction with the experience. The ratings ranged between 3.9 and 4.5 with an overall mean of 4.2. This result reflected a high degree of satisfaction among the students. One student summed up her experience by saying, "It is a chance to forget about



the summer. One student summed up her experience by saying, "It is a chance to forget about

everything.” Many parents sent thank you letters to their children’s schools and to AMIDEAST, noting that their children were putting what they had learned while at camp into action at home.

## Monitoring and Evaluation of MSN: Key Considerations for the Future

A major objective of the MSN Program was to test, develop, evaluate, document and share results of the model's approach. MSN's monitoring and evaluation (M&E) approach was designed to evaluate model practices that could be replicated and scaled up to enhance the quality of Palestine's national education system. Consequently, a great deal of focus was placed on the 40 public schools in the West Bank. In contrast, the Gaza private school program originated as more of a humanitarian effort without the same expectations for replication or modeling; therefore, the level of effort and sophistication of MSN Program M&E in Gaza was very different from that in the West Bank.

In terms of the West Bank activities, AMIDEAST adopted a two-pronged M&E approach. The first was an "in-house" system of formative and summative assessments that included the following: baseline and recurring satisfaction surveys of principals, teachers, students, and parents; periodic quantitative and qualitative evaluations from participants in all teacher and principal workshops; and student achievement data shared by the Ministry of Education. The second approach comprised a semi-independent, mixed-methods research study designed to assess the extent to which MSN's capacity-building interventions were causally associated with changes in behaviors and attitudes of principals, teachers, and students. This design involved a quasi-experimental approach that included the selection of 10 schools outside the MSN network for the purpose of comparison.

Both of these approaches allowed for a robust triangulation of research findings that produced one of the most extensively evaluated education programs in Palestine. As a consequence of this effort, a number of key considerations arose from the methodology that could inform the monitoring and evaluation efforts of education programming in the future. These issues are highlighted below.

**Qualitative versus Quantitative Evaluation:** School improvement, and more broadly education reform, is difficult to evaluate solely on the basis of quantitative information. Although the donor community frequently emphasizes numerical targets or statistical outcomes, changes in teaching practice or leadership approaches are better measured when qualitative experience is also captured. AMIDEAST deliberately designed a mixed-methods approach in an effort to provide balance; however, this implied a more complex effort, as well as the ability to summarize, synthesize and share qualitative and quantitative data. The level of effort, time and expertise to adequately undertake such an approach should not be underestimated.

**Time and Timing:** Measuring the impact and outcomes of interventions in education development involving a baseline and pre- and post-analysis requires at least three years, and ideally five or more years. Donor-funded projects should build in sufficient funds and allow the time necessary for long-term longitudinal studies. In order to produce reliable, informative data on education reform outcomes, systems and resources need to be in place so that results can be easily and systematically measured at key points over an extended period.

**Evaluation Design and Planning:** M&E must begin with a backward design approach in which the goals and objectives of all interventions are conceptually clear and operationally defined. The M&E rationale and methods should be developed in consultation with all key stakeholders. Similarly, there needs to be an M&E research team whose primary responsibility is the design and implementation of research instruments, sampling strategies, and protocols/procedures for analysis. It is challenging to assemble and keep all these elements in place, as well as to retain the institutional knowledge and expertise over a period of years. In this regard, the MoE's Assessment and Evaluation Department, as well as the Monitoring and Evaluation Division within the Directorate of Planning are the most logical areas for capacity building and further cooperation.

**Control Sample:** AMIDEAST used a quasi-experimental design involving 10 control schools in addition to the 40 schools participating in the West Bank MSN interventions. The objective of this approach was to provide a sound statistical basis by which to examine relationships of actual causality rather than mere correlations between interventions and outcomes. However, attributing causality to MSN interventions was problematic due to the fact that not enough was known about the kinds of professional development activities that occurred in the control schools. This uncertainty made it difficult to explain some of the comparative results obtained from the MSN and control school samples. Although the data from non-MSN schools did provide an additional layer of triangulation for some variables, for comparative purposes the use of the control school sample was limited. In short, more complex evaluations require greater oversight, expertise, time and money.

**Teacher Performance and Student Testing:** Increasingly, international evaluation methodologies focusing on improving teacher performance have attempted to benchmark success by examining changes in student achievement. AMIDEAST attempted to do this with the original cohort of private schools using local, university-designed and administered tests for students in select grades. This effort was repeated for the cohort of 40 public schools using the MoE's national test data in math and science. While the results showed very positive gains, the short timeframe—approximately two years in both private and public student cohorts— was too brief to reflect genuine trend lines. The process of linking causality of in-service teacher professional development to specific student test results is complex and requires a level of capacity and expertise that does not yet exist in Palestine.

**Dissemination of Results:** The best designed and administered evaluation studies may never inform policy or practice without a strategic plan for dissemination and a receptive audience willing at a minimum to review and consider the results. AMIDEAST deliberately produced four smaller thematic reports whose content constitutes this final report. Each of the four thematic reports was produced separately. Each report was presented to and discussed with stakeholders during four separate events. Feedback and reflection from these events were integrated into the final report, with the most important modification being a consolidation and refinement of the policy recommendations. In sum, the value of any monitoring and evaluation effort is contingent on how the data is received and used by decision makers. This last step in what may be a very long process of producing solid data and analysis is perhaps the most important.