Journal of International Education and Leadership
http://www.jielusa.org/
Volume 2 Issue 3 Fall 2012
ISSN: 2161-7252

The TAMAM Project: Shifting the Paradigm of Educational Reform in the Arab World

Rima Karami Akkary
American University of Beirut

Nadya Rizk
University of New England Armidale

This paper presents a descriptive case study of the TAMAM project as a new school reform initiative in the Arab world. The case addresses goals, strategies and assumptions of the project, its distinctive and promising design features, and the cultural and contextual factors critical to its successful implementation. The work adopted grounded theory procedures for collecting and analyzing data. The study provides researchers interested in cross cultural transfer of conceptual knowledge insights into the aspects of widely accepted reform models that need to be emphasized if those western models are to be successfully adapted to the Arab Schools cultural context.

Key Words: School Based Reform; School Improvement; Arab Countries; Case Studies; Cross-Cultural Analysis; Collaborative Action Research; Problem Based Approach; Inquiry; Change; Leadership Capacity

This paper offers a descriptive case study of the TAMAM project as a new school reform initiative in the Arab world. Historically, school reform in Arab countries has depended on top-down directives from the national government level (El Amine, 2005; Arab League Educational, Cultural and Scientific Organization [ALECSO], 2008; Arab Knowledge Report, 2009; Middle East and North Africa [MENA] Report, 2008; Heyneman, 1997). While well-intended, this approach has not been effective in its implementation strategy, and has fallen short of driving necessary changes at the school and classroom level (Bashshur, 1982, 2009; Karami-Akkary and Rizk, 2011). In contrast, TAMAM follows a bottom-up, problem-centered implementation strategy, with school teachers and staff identifying specific issues and initiating necessary changes. This study is based on the premise that how change is conceived and planned significantly contributes to its success or failure (Chenoweth and Everhart, 2002; Fullan, 1993, 2003, 2005; Fullan and Hargreaves, 1996; Fullan, Hill, and Crevola, 2006; Mclaughlin, 1990, 1998; Wilson and Daviss, 1994).The paper describes the design of the project and how it was conceived, initiated and planned against the current context of existing trends of school reform in the Arab countries and around the world. It concludes with a discussion that highlights promising aspects of its strategies and outlines factors that are critical to its successful implementation.

The Context: School Reform in Arab Countries

School reform in the Arab countries has been dominated by top-down politically-driven mandates and centralized decision making, and has depended on outside "experts" with no voice for the school-level practitioners (El Amine, 2005; ALECSO, 2008; Arab Knowledge Report, 2009; MENA Report, 2008). Change initiatives are set in the form of grand regional and national strategic plans, with the belief that this is the best approach to address common challenges faced in Arab countries and to promote unity and solidarity among them. Moreover, a chronic scarcity of empirical research in the social sciences in the region (El-Amine, 2009) has resulted in the absence

of a culturally grounded knowledge base that can inform policy making. This leaves educational policy makers highly dependent on borrowing ideas and practices from the available international [Western in particular] literature while designing and implementing reform initiatives.

Nonetheless, despite major historical achievements, education in that region is still far from its desired ends, and is believed to be facing a major crisis (Chapman and Miric, 2009). The 2008 Middle East and North Africa (MENA) development report posits that even with the notable 20th century expansion of education in Arab countries, "gaps still exist between what education systems have attained and what the region needs to achieve its current and future development" (p.1). While there is a wide agreement on the need for major improvement in education in the Arab countries, there is little clarity as to why this gap still persists. Some have attributed the failure of the countless attempts at reform to the inadequacy of the design and implementation processes followed by these regional and national plans. They argue that though the plans have addressed salient issues, they have not adopted specific strategies that account for the unique needs, constraints and peculiarities of each country (Bashshur, 1982, 2010). Moreover, the plans also depend heavily on imitating Western experiences and adopting their strategies without scrutiny of their relevance to the ecological milieu of the Arab region (ALECSO, 2008; Bashshur, 2010). A recent examination reveals that the typical reform design consists of: 1) long "to do" list of goals for school practitioners to achieve, and 2) interventions and policies without specific strategies to implement, monitor and evaluate. It has also found that the improvement discourse rarely discusses instructional methods, school management approaches, or other micro-level procedural issues of interest to the practitioner (Karami Akkary and Rizk, 2011). The 2008 MENA World Bank report offers some insight into reasons behind the shortcomings of education reform attempts in Arab countries, explaining that reform initiatives can be mapped under three dominant approaches: engineering, organizational, and public accountability. It posits that the majority of Arab countries have relied heavily on the "engineering" approach, which centers on government providing needed resources like school buildings and pedagogical material, and on setting selection criteria, salary scales, workload and other working conditions. According to the report, and looking through its Western framework of effective school reform, Arab reform historically has paid limited attention to addressing organizational and public accountability aspects including: 1) decentralizing decision making, 2) allowing teachers, educators, parents, students, and other stakeholders to influence education objectives, policies and resource allocation, either at the national or local levels, and 3) building human capacity through professional development (MENA Report, 2008). Based on this analysis, the report recommends that Arab countries adopt a new paradigm that simultaneously tackles these aspects of reform while focusing on promoting the performance, commitment and active involvement of teachers (MENA Report, 2008). However, the report neglects to note that these recommendations are likely to challenge deeply rooted practices in the predominantly non-democratic Arab societies, and offers no insight into ways to address these challenges. Recently, an increasing number of reform initiatives in the Arab countries have been pushing toward this paradigm shift. Many initiatives in these countries are exploring approaches to reform that pay attention to building capacity among practitioners, and initiating reform at the school level (e.g. AED, 2004, 2005; Al Sayyed, 2005; McGee 2008, RAND-Qatar, 2009). However, there is no empirical evidence to the extent to which these initiatives include in their design processes that allow for a critical adaptation of well-developed Western practices and strategies. Unlike these initiatives, the TAMAM project is a new reform approach in the Arab world with a design that makes culturally grounded knowledge production, and the critical adaptation of Western conception one of its central goals. This case study of TAMAM describes and evaluates its design, discusses the extensive research and theory informing its approach to implementation, and offers examples of issues and challenges to be addressed to make the implementation of this approach successful.

The TAMAM Project: An Overview

The word "tamam" in Arabic means "complete" but relative to the project it is actually an acronym that consists of the initials of "school-based reform" in Arabic (al-Tatweer Al-Mustanid ila Al-Madrasa). The TAMAM project reflects a major paradigm shift in the Arab region from existing top-down attempts of school reform typically far removed from problems at the school level (Karami-Akkary and Rizk, 2011). TAMAM is most distinguished by an approach to school reform that combines research and professional development and follows an evolving design model in planning its activities. A team of university researchers conducts research on school improvement processes and their impact on student learning and school culture, while concurrently building individual and institutional capacity to support future school improvement initiatives. Unlike its counterpart in the region, the project designers did not adopt "ready-made" procedures and strategies from the Western/international literature. Rather, they were adamant at "constructing" their own through an ongoing process of critical adaptation of ideas they deemed relevant and useful to achieving the project's goals.

Participants in TAMAM are selected to represent the three key players in educational reform: universities, schools, and policy makers. In its first phase, it included educational researchers from the Education Department at the American University of Beirut (AUB), 9 private schools consisting of 3 schools from each of the countries of Lebanon, Jordan and the Kingdom of Saudi Arabia (KSA), and a group of representatives from public universities and ministries of education in each of the three countries. Moreover, long term [7years] and flexible funding was provided by a local Arab NGO, Arab Thought Foundation (ATF), active in promoting social development through educational reform.

TAMAM was launched in the summer of 2007 and completed its first phase in the summer of 2010. A project steering team (PST), consisting of three professors from AUB, oversaw the development and implementation of the project. In the first phase they focused on initiation and capacity building. Research activities were mostly limited to collecting data on the project implementation progress, monitoring progress by analyzing this data and taking actions when necessary. The ongoing second phase of the project has shifted emphasis to helping the school teams incorporate and institutionalize their TAMAM learning in their school structure and culture, explore opportunities for networking with new schools in their countries, and expand TAMAM activities to those schools. In this phase, the TAMAM school teams are expected to go toward planning and orchestrating reform. The PST development role in this phase is to enhance the teams' leadership capacity, and help them acquire the skills to act as "agents of change" in their schools, coaching and mentoring their peers, and sustaining the long-term impact of the project improvements. Research activities in the second phase aim at examining the intended and unintended impact of the project on the schools, and continue with monitoring the progress of the project implementation and use collected data to shape the project's "evolving design". In both phases, the project adapted collaborative action research strategies, at the individual school level and at the whole project level, where those wanting the change do the change themselves, study what they do, and concurrently learn and change how and what they do (Calhoun, 2002; Hendricks, 2009; Mcniff, 2002; Sagor, 1997, 2005).

Methodology

The study is the first in a series aiming to understand the TAMAM project. It follows a descriptive case study design (Merriam, 2009; Stake, 2005) and adopts grounded theory procedures for collecting and analyzing data (Glaser and Strauss, 1967; Glaser, 1992; Charmaz, 2005; 2010). The TAMAM project is selected because it offers a radically different design and approach to school reform in the Arab region. The focus of the case is on examining the project design as intended and as it evolved throughout the initiation phase of the project. Namely, it

describes the initiation process and outlines the planned implementation activities with the first group of participants [nine private schools] that formed the basis for developing the project design and activities.

Grounded theory procedures are followed as they allow the researcher to maintain a cultural sensitivity during data collection and analysis. Namely, conceptual categories are inductively constructed from initial field data, comparing and checking them against new field data and existing conceptual literature, and integrating them to derive a theoretical portrayal that emphasizes understanding rather than prediction and explanation.

Data was collected over three years from: 1) participant observer notes, 2) open-ended individual interviews with the three project initiators and the university team members in charge of developing and implementing the project, 3) content analysis of the initial TAMAM project proposal, and 4) the recorded minutes from 30 university team planning meetings. Moreover, since the authors of this paper were both members of the project University team, their reflective journals provided additional data. The field work consisted of concurrent observations and reflections, where the researchers , as participant observers, were "personally in contact with activities and operations of the case, reflecting and revising descriptions and meaning of what is going on" (Stake, 2005, p. 450). It is worth noting that at the time the project was launched, there was no pre-set road map, nor a detailed implementation plan that outline the specific activities. The project paper included general and sketchy details on how the project steering team is going to achieve the project stated goals. Hence, the need for interviews, and participant observations for the researcher to reach a description of the project initiation, initial design and plans for implementation.

Selection of participants to interview, events to observe, and documents to analyze followed theoretical sampling, and what Stake (2005) calls "opportunity to learn" (p. 452). Decisions on information to seek next were guided by their relevance to emerging analytical understanding of the project assumptions, goals, and implementation strategies (Glaser and Strauss, 1967; Charmaz, 2010). Most data was in Arabic. Both researchers, being bilingual, translated the field notes and conducted the analysis in English.

Charmaz's (2005, 2010) procedures of constant comparative method guided the analysis of field data which leads to the construction of the conceptual understanding of the project design. Relevant literature was consulted at two main junctures during the study. First, prior to the field work, the literature on educational reform in the Arab world was reviewed to draw the historical context and identify current reform attempts in selected Arab countries. This situated TAMAM within past and current trends of school reform in those countries. Second, the international literature on effective school reform was examined throughout the field work and informed the theoretical understanding and discussion of the TAMAM project design. Over-dependence on the international theoretical literature was inevitable in the face of an acute lack of indigenous empirical and theoretical literature that is relevant to the case.

The analysis also combines an "intrinsic" focus and an "instrumental" one. The intrinsic focus consists of understanding "what is important to that case within its own world", thus relying on the perspectives of TAMAM's participants for the constructed theoretical understanding of its design. The instrumental aspect focuses on "illustrating how the concerns of researchers and theories were manifested in the case" (Stake, 2005, p. 450), thus relying on a comparative analysis of the project design and processes as informed by the existing literature on effective educational reform.

In the next two sections, a description of the TAMAM project initial design is presented. A discussion of the promises and challenges of its implementation then follows.

Initiating the Project

A group of three educators with long experience in school improvement in the Arab World (two university professors and a school principal) initiated the TAMAM project, identifying two main concerns as their motivation:

1. *A concern about the absence of empirical research in the field of education and of a knowledge base on best educational practices that is grounded in the Arab culture and the experiences of its practitioners.*

The project initiators believed in the need for empirical research to build a theoretical knowledge base on school improvement in the ARAB World. One of the initiators narrated: "the trigger for me came after I attended a local educational conference and listened for three days to speaker after speaker speculating about what should be done without even one of them basing the argument on empirical data". She believed that an empirically generated knowledge base would be a great resource for dialogue on reform, and could provide support for policy makers and practitioners to go beyond setting broad top-down goals, toward designing improvement strategies grounded in real problems faced at the school level.

2. *A concern about the quality of professional development programs available for Arab educational practitioners.*

Available professional development in the Arab world mostly consists of traditionally delivered theoretical knowledge, often disconnected from the practitioners' needs and the challenges of their practice. Moreover, the design of reform attempts that are typically followed gives a passive role to the practitioners and limited opportunities to connect this theoretical knowledge to the realities and challenges of their practice. This issue was raised by both university professors who initiated the project. One pointed that "I am tired of engaging in professional development activities that are piecemeal, and short term while I know that what works is an experiential problem-based model where-in educational practitioners are coached to acquire new skills while engaged in solving real challenges in their schools and classrooms."

Consequently, the project initiators opted for a design whereby a team of university professors act concurrently as researchers and change agents triggering and building capacity for change at the school level, through forming and training an improvement team from each of the participating schools and providing long term professional development for these teams.

Setting the Goals of the TAMAM Project

The project initiators stated that they started with one overarching goal in mind, that of "building a knowledge base for school reform and its implementation processes that is empirically grounded, responsive to the cultural characteristics of the Arab region, and reflective of experiences and views of educational practitioners at the school level." Interviews with the project initiators and examination of available documents revealed five initial objectives for the TAMAM project:

- Build capacity for collective inquiry and leadership among the members of the participating school teams.
- Design and implement an experiential problem-based professional development model based on research that is grounded in the cultural context of schools in the Arab World.

- Conduct research on the process as well as on the dynamics and outcomes of the introduced changes, document best practices, and develop grounded theories of school reform.
- Support professional collaboration and networking between schools, universities and policy makers, within and across countries.
- Influence educational policy making at the levels of the school and the ministries of education.

Building the TAMAM Project Teams

Participants in TAMAM include teachers, administrators, university faculty, and ministry of education representatives from each participating country. The project initiators stated that the purpose of including stakeholders with different roles, professional backgrounds, and authority levels within the educational establishment was to enrich professional dialogue across authority levels and roles. In fact they explained that "in the highly bureaucratic and authoritarian educational system in the region this design brought together for the first time key players and allowed them to engage in dialogue and inquiry regardless of their formal positions." Moreover, school practitioners were able to interact with educators from other schools, universities, and ministries of education from the same country, as well as other participating countries. The participants were teamed up as follows: a Project Steering Team (PST), one team of school practitioners from each participating school, a support team with representatives from local universities, and representatives from the ministry of education in each country.

The Project Steering Team (PST): A project steering team (PST) of three full-time faculty members from AUB, all Arabs and trained in the United States with specialties and professional experiences pertaining to school improvement and reform, leads and coordinates the TAMAM project. The PST members all noted that their training prepared them to play the role of "cultural translators" of the broad available literature that participants in the project needed to tap into. As one of the members explained: "I found myself on multiple occasions providing contextual background on how and why a certain concept emerged, for example professional dialogue, in order to help them relate to it and examine its potential benefits on their practice." The PST roles include: 1) designing the project and managing its implementation, 2) providing professional development training and coaching to participating school teams, and 3) conducting research focusing on developing a conceptual understanding of school improvement grounded in the Arab cultural context.

The Schools' Teams. The first step was to identify the countries from which schools were selected. The PST team chose three countries mostly based on convenience in terms of securing quick access: Lebanon and Jordan because of their ties with AUB and the Kingdom of Saudi Arabia because of it ties with Arab Thought Foundation (ATF), the funding agency.

Selecting the schools. The first group of schools that were selected for the project included three private schools from each of Lebanon, Jordan, and the Kingdom of Saudi Arabia. The PST approached a number of schools to solicit their interest and get their commitment to participate in the project. Out of concern about the region's tendency to cling to tradition and to reject "out of the ordinary" social change, the guiding principle was to seek schools perceived as innovative and effective in their community, and ready to offer easy access to the PST team. Though their decision to select "successful" schools was often challenged, the PST members insisted on keeping this criterion. During the interviews, they explained that innovative schools were likely to have education staff more willing to accept change, and thus more likely to maximize the project's chances of success. One of the members stated that "with the ideas and approach we are bringing forth in TAMAM, we are set to face major challenges from the existing system… what we are after is a "success story" of our approach that we can use to convince others that it is worth trying.

Once we can do that, we will have a better chance to penetrate the rest of the schools." Consequently, private schools were targeted for ease of access and the greater decision making authority allowed to their administrators, compared to their public school counterparts, thus avoiding the bureaucratic complications required to access public schools in the early stages of the project.

The stated selection criteria included: 1) following the national curriculum, 2) having a majority of Arab personnel, 3) readiness to facilitate research and development activities for the school's team members and outside project personnel 4) availability of financial and other resources to support "improvement", 5) willingness of administration to support innovations, and 6) a structure relatively responsive to emerging needs. However, the challenge of getting access to the schools added "personal connections" as de facto criteria. Of the nine private schools selected, four had direct contact with the university professors and had done work with them prior to their participation. Moreover, in Lebanon, some consideration was also given to the sectarian denomination of the schools for political correctness in the context of that country.

On the other hand, the schools who agreed to join the project were mostly driven by the fact that they saw their participation as an opportunity to receive professional development from a reputable university in the region (AUB) and have their name associated with that university. More interestingly, this same factor helped the principals tolerate the early ambiguity that characterized the early stages of the project and mentioned "the trust" in the reputation of the professors and their institution as the reasons that kept them going.

Selecting the school team. The selected schools were then invited to freely select a team of 4-5 members. The only condition was that the team needed to include teachers. As a result, the composition of the teams varied among schools. Some teams included the school principal; others were composed only of teachers, sometimes including teachers with supervisory functions. When asked on how they selected their teams, the schools' principals stated that they selected the team members from their most qualified teachers who demonstrated leadership potential. Teachers' selection to join the project was perceived by both principals and teachers as a symbolic gesture of recognition, and an assurance for the team members that they had the full support of their school administration. Because of the project association with AUB, selected teams felt "privileged" and were highly motivated by the prospect of receiving professional training from a renowned university in the region.

The Support Teams. In each country, the TAMAM school teams were joined by a representative from a local university to provide guidance to the team members in their country in coordination with the PST. Moreover, university representatives were expected to communicate acquired knowledge, research findings and practices from the project to teachers' preparation programs in their universities. Each country team was also joined by a representative from the country's ministry of education. This representative acted as an observer and a liaison between the project and the ministry of education, and was intended to advocate for the project, facilitate communication, information and acquired knowledge flow between the project, ministry of education and policy makers. By including a ministry of education representative, the project's hope was to bridge the divide between school practitioners, academics and policy makers and impact policy making. In the first phase of the project, the role of the support team remained marginal, and the interest of some of the ministry representative faded in attending the bi-annual workshops. The PST efforts in addressing this issue did not go beyond persisting on inviting that representative to observe the gatherings and attend the workshops.

Developing the Project Strategies and Activities

Project activities included determining the needs of school teams, conducting skill-building workshops, providing ongoing follow-up support visits to schools, and monitoring and documenting the process of project planning and implementation. The workshops provided

training on conducting collaborative action research, reflective practice, strategic planning, evidence-based decision making, and leadership for school improvement.

The PST team members described their project design as "evolving," with decisions regarding the scope and sequence of the activities determined through a process of monitoring of school teams' progress, thus tracking challenges faced and lessons learned. Examination of the tapes of the PST meetings showed that in the first year of the project, the PST focus was solely on providing action research skills to the team members. At the conclusion of the second year, a clear shift can be detected toward emphasizing reflection, leadership for change as opposed to emphasizing data collection and analysis techniques. When asked for an explanation, PST team members stated that they assumed that teaching the skills for action research is all what the school teams needed to "act" as school agents. However, and as they were monitoring the teams progress they noticed that the school teams became so focused on the "research part" that they failed to see its connection to school improvement. As a result, PST explored further the available literature, and decided to introduce reflective practice and to frame it as a bridge between the acquired inquiry skills and the anticipated role for those teams as agents for school improvement.

Selecting the School Projects

In the beginning stage of the project implementation, the PST asked each of the school teams to choose an innovative project at their school, and challenged them to provide evidence of the chosen project's effectiveness. The PST members explained the choice of their starting point stating that "…in the Arab culture it is highly unlikely to get school teams to disclose problematic areas in their schools to outsiders, so we had to "trick" them into engaging in inquiry on their practices by asking them to provide evidence on the effectiveness of what they perceive as success stories". Moreover, the school teams were given complete freedom to choose their project focus. The "innovative projects" ranged from "cooperative learning", to "inquiry-based project learning", to "program to build leadership among female students", to "computerized system for ranking and rating students' performance." Since none of the school teams possessed the necessary skills to evaluate the impact of these innovations, this challenge motivated them to learn research and group work skills needed to complete this task.

Expanding the Capacity Building Activities

The PST members stated that their initial objective was to equip the school team members with collaborative inquiry skills. However as the project unfolded, they realized that in order for these skills to become part of the school teams practice they needed to change their 'habits of mind.' Consequently, the PST set additional objectives to help team members become active learners and knowledge producers, expand their view of their role, and empower themselves with the knowledge and motivation needed to take action and initiate school improvement independently.

Therefore, school teams were first coached on collaborative action research skills: asking research questions, developing tools for data collection, analysis and interpretation, developing action plans, and reporting the research experience to their school community. As they progressed with using these skills to evaluate their projects, the school teams were introduced to reflective practice through engaging in: 1) "reflective dialogue" with the other participating teams, 2) reflection on their individual learning and progress, and 3) reflection on the effectiveness of the training program itself. The teams were then introduced to a conception of leadership as a capacity beyond a position of power, where acquired expertise and knowledge empowers practitioners to "act" as leaders and initiate change. Finally, the teams were introduced to evidence-based decision making and were asked to build plans for action that were rationalized by their research findings. During all of these activities, the PST encouraged the school teams to document their experiences

by writing reflective journals, and writing a report on their experience to share within their school and with other schools.

Using Experiential and Mentoring Approaches

With the belief that adults learn best through a combination of experiential activities and mentoring, the PST team designed professional development and capacity building activities around the tenets of experiential learning. Teams were coached to select their own innovative projects, make decisions on how to collect and interpret data, and design action plans to implement ideas that emerged from their research. Throughout all training activities, the PST members acted as mentors offering continuous "non-directive" support during individual school visits between training workshops. The PST described that this approach was faced with some resistance at the beginning as it ran counter to existing cultural norms on expertise. One of the PST members explained: "team members were frustrated at first when we "the experts" refused to make on their behalf what we thought to be the best decision". The PST considered this approach part of building the teams' leadership capacity as it breaks established chains of dependency and enables team members to direct their own practice. On the other hand, the PST acted often as "friendly critics." They examined critically each project's progress, challenged decisions made by the school teams, and offered them the training and resources needed to sharpen their understanding and resolve encountered problems. The school teams also held individual and all-team meetings to discuss encountered issues with their own country support team. In addition, PST created a website where school team members can access workshop material and engage in an electronic forum for discussing project issues.

Contributing to the Project Design

The school teams were often invited to engage in reflective dialogue on the professional development process itself, and to construct their own views about the ongoing change process in which they were involved. After three years of training, the teams significantly contributed to deriving a set of principles they called "the TAMAM pillars". The pillars were nothing more than the shared conceptual language that was adopted to describe the processes that guided the project implementation as well as the learning experiences that the school teams went through. These were: experiential learning, mentoring through challenge and support, school driven decision making, evidence based decision making, de-privatization of practice, evolving plan, professional collaboration, collaborative inquiry, and reflective dialogue. Though originally adapted from the Western literature and used in English, the meaning accorded to each pillar was constructed collectively rather than adopted from one source. During the last workshop of the first phase, a session was dedicated to discussing a draft of these pillars, and to experiment with their translation to Arabic. These pillars, thereafter, became the foundation of the project design, ensuring a shared vision both of the reform approach and the school culture promoted by TAMAM. Preliminary results show that all team members began to view school improvement as linked to building a school culture rooted in inquiry, where decisions are informed with "evidence", and practitioners adopt collaboration as an integral part of their practice, thus becoming reflective practitioners willing to de-privatize their practice, engage in dialogue to find creative solutions to their problems, and lead their schools in an on-going process of learning and improvement.

Conducting Research toward Theory Development

In addition to building the school teams' capacity for school improvement, the PST team members themselves engaged in systematic data collection and analysis throughout the implementation. This served two purposes: to inform the evolving design of the project and to accumulate empirical data to construct a grounded theoretical understanding of the school improvement process. Data was collected through regular school visits to monitor and understand

the participants' progress and their challenges and successes. Those visits became the basis for the ongoing process of designing, assessing and re-designing next steps. As in action research, this understanding was used to take action and make decisions on what came next in the process of capacity building: what training to give, what aspects should be followed up on, what challenges should be resolved.

Promising Aspects of TAMAM Project

Analysis of the TAMAM project design and how it was implemented shows that it is rooted in four fundamental ideas: 1) The individual school and its teachers are the locus of effective educational reform; 2) developing teachers' capacity for critical reflection and inquiry is a powerful tool facilitating school improvement; 3) Professional development should be grounded in teacher's experiences, and teachers need the right balance of challenge and support to grow professionally, and 4) School improvement is a collective endeavor that requires concerted contributions from university professors, policy makers and school practitioners. All four ideas are supported by theoretical and empirical research literature on best Western practices to trigger school improvement. The following section reviews the literature informing and supporting these four key ideas and discusses their salience to shifting the paradigm of school reform in the Arab region.

The Individual School and its Teachers are the Locus of Effective Educational Reform

There is a widespread agreement in Western literature that to be effective, educational reform needs to shift authority to the school level (Hallinger, 2003; Mehta, 2010; Chenoweth and Everhart, 2002) and to keep the focus on improving the teaching and learning core (Fullan 1993; Sergiovanni, 2005, Seashore Louis, Toole, and Hargreaves, 1999; Darling Hammond, 1994; Darling Hammond, Chung Wei, Andree, Richardson, and Orphanos, 2009, Bashshur, 2005). Since the 1980s, many reform projects have become centered around improving what teachers do and around expanding their role to encompass contributions to curricular and systemic decisions (Chenoweth and Everhart, 2002; Murphy and Datnow, 2003).

Teachers as Professionals. Educational researchers acknowledged the importance of an active teacher role in inducing change in the classroom and the school, and supported the notion of a bottom-up change in schools acted out by teachers, since they are the ones to be most directly involved in the process of teaching and learning (e.g. Darling Hammond and Mc-Laughlin, 1995; Harris and Young, 2000; Harris and Lambert, 2003; Little, 1993; Louis, Kruse and Raywid, 1996; Wilson and Daviss, 1994). Fullan (1993; 1999; 2003; 2007) argued that effective school reform requires that prevalent top-down approaches connect with bottom-up initiatives generated at the school level. Therefore, it is necessary that teachers are viewed as professionals and that they are provided the supportive systemic conditions and offered the training needed to build their capacity to successfully play this role. Empowering teachers and supporting them as professionals are thus key factors for successful school reform (Quellmalz, Shields and Knapp, 1995; Hargreaves, 2007; Hargreaves and Fink, 2000; Shields, Anderson, Damburg, Hawkins, Knapp, Ruskus, Wechsler and Wilson 1995; Shields, Knapp, and Wechsler, 1995; Shields and Knapp, 1997). Schon (1983) argues that as professionals, teachers have unique expertise, knowledge, and "wisdom of practice" that need to be valued as much if not more than the theoretical knowledge generated by educational researchers. According to Schon (1983), teachers should act as "researchers of their practice context," setting goals, solving problems and making decisions. They are well positioned within the school system to reflect on their daily experiences, understand the demands of their school context, continuously acquire new learning, and take actions to improve their practice. Attention to and support of these processes become fundamental to building the capacity of those teachers as competent professionals (Schon, 1983).

Teachers as Decision Makers. Additionally, there is wide agreement that increasing teachers' involvement in decision making is another key condition associated with increasing teachers' positive attitudes and their effective contributions to school improvement (Quellmalz et. al, 1995; Conley and Goldman, 1998; Chenoweth and Everhart, 2002; Sarason, 1996). Researchers found that reform initiatives are less likely to succeed unless teachers are encouraged to participate in making decisions in areas that are especially important to them (Conley, 1991; Conley and Goldman, 1995, 1998). Several studies have reported a positive impact on improving teaching quality and students' learning, when involving teachers in various school decisions, whether curricular (e.g. Haberman, 1992; Kirk, 1988; Xu, 2008) or more systemic ones that are related to whole school improvement (e.g. Copland, 2003; Harris and Young, 2000). Moreover, teachers' participation in decision making is believed to result in building a sense of ownership, boosting the teachers' commitment to the actions in which they engage (Korostoff, Beck, and Gibb, 1998). Barth (2001) emphasized that when allowed assuming leadership roles teachers feel empowered and are more likely to become active learners. Wislon and Daviss (1994) note that it is essential to "place the power to change and making decisions in the hands of those in the front lines" (p.46) to increase their commitment and guarantee the effectiveness and efficiency of implementing innovations. Accordingly, preparing teachers to lead is key to the success of school improvement (Barth, 2001), and for ensuring its sustainability (Harris and Young, 2000; Harris and Lambert; 2003).

Teachers as Leaders. More recently, new conceptions of school leadership as distributed (Spillane, Halverson and Diamond, 2001; Harris and Lambert, 2003) brought more attention to the leadership role teachers can play in their schools. Distributive models of leadership take the idea of participation in decision making from an opportunity for teachers to contribute to leading the school, to an expectation that teachers engage continuously in leadership acts. When leadership is distributed, it resides not solely in the individual at the top, but at every level and in every person who, in one way or another, acts as a leader. Through viewing the capacity to lead to be inherent in people, as they interact together and react to their surrounding conditions, the view of the teacher as a professional expands to encompass leadership competencies and an active role in driving improvement initiatives at their schools (Lambert, 2003; Harris and Lambert, 2003; Spillane et al. 2001; Copland, 2003). Hence, one way to improve schools is to develop a new understanding of leadership, whereby the authority for improving teaching and learning is no longer exclusive to those "up the chain" of the administrative hierarchy, but is rather distributed horizontally to involve all teachers in the decision-making process (Copland, 2003). Pavlou (2004) claims that "schools improve by harnessing the leadership qualities of all teachers and staff in the school" (p. 6). In addition, Harris and Drake (1997) argue that a traditional view of leadership, as reflected in a hierarchical power structure, acts as a barrier to reform efforts. The current paradigm of schools as learning communities (DuFour and Eaker, 1998; Senge, 1990; Senge, Cambron-McCabe, Lucas, Smith, Dutton, and Kleiner, 2000) sees schools as populated with professionals who are capable of holding a systemic view of their schools and who can build a shared vision, work collaboratively, engage in dialogue, and have personal mastery in their area of expertise. The literature on school reform in the West is moving in the direction of advocating for re-defining the role of teachers, building schools that support their continuous professional development, and expecting those teachers to be reflective practitioners, initiators of their own professional development as well as active contributors to their school improvement (Darling Hammond, 1994; Darling Hammond et al., 2009).

Consequently, adopting a school-based approach to school reform in the context of Arab countries not only aligns with the international literature but also responds to the prevalent calls to improve the effectiveness of teachers in charge of implementing the proliferating large scale school improvement initiatives in the region (Bashshur, 2005; 2009; El Amine, 2009). As designed, TAMAM brings the attention of reformers to the school level and offers strategies to

empower practitioners at the school level to play an active role in initiating, planning and implementing school improvement and contributing their voice to the policy making process in their schools and countries. Teachers themselves identify instructional and school practices they believe to be in need of improvement or change. They work in collaborative teams on studying the identified practices, designing and implementing strategies to improve them, while documenting and communicating the lessons learned to decision makers.

Developing Teachers Capacity for Critical Reflection and Inquiry is a Powerful Tool Facilitating School Improvement: *Action Research for School Improvement*

In the West, action research is widely viewed as a vehicle for "developing effective professional practice" (Greenwood and Levin, 2007, p.77). It is broadly defined as a process of systematic inquiry which involves practitioners (teachers and other stakeholders) in studying and reflecting on their own practices in order to produce positive change in their schools (Gall, Gall and Borg, 2005; Cano, 2004; Gillies, 2009; Mitchell, Reilly and Logue; 2009; Savoie-Zajc and Descamps-Bednarz, 2007). The essence of action research is that it supports the ongoing professional development of practitioners, and positions all involved stakeholders as learners rather than experts. Practitioner-researchers choose issues to investigate which pertain to their everyday teaching and learning, which are within their sphere of influence, and about which they care deeply. Thus, the main objective for teachers of conducting action research is to identify meaningful problems of practice and to seek systematic solutions to these problems in order to take action (Rearick, 1998). Action research has been used as a tool for teacher-driven professional development (Harris and Drake, 1997; Glickman, Gordon, and Ross-Gordon, 2010; McNiff, 2002), whether pre-service, beginning or veteran teachers (e.g. Ax, Ponte and Brouwer, 2008; Mitchell, Reilly and Logue, 2009; Vogrinc and Zuljan, 2009), with the goal of helping those teachers become more autonomous, active learners, and reflective practitioners (Kang, 2007; Bustingorry, 2008). Moreover, Darling Hammond (1994) and Darling Hammond, Meyerson, La Pointe, and Orr (2010) argue that new demands on schools result in needing teachers who are "infinitely skilled". Lambert (2003) considers "skillfulness" the basis on which broad-based participation in leadership can be achieved.

Collaborative Action Research. Collaborative action research (Carr and Kemmis, 1986; Kemmis and McTaggart; 2005, Calhoun, 2002; Brydon-Miller and Maguire, 2009) promotes investigations involving teams of several stakeholders (teachers, administrators…) who are directly targeting school reform through seeking changes in: 1) "what people do, how they interact with the world and with others [both at a behavioral level], and 2) what people mean and what they value, and the discourse in which people understand and interpret the world [their mental models]" (Kemmis and McTaggart, 2005, p.565). The fundamental idea behind this approach is that by bringing people together, they will learn from their experiences while studying their own situations. It also rests on the assumption that people who hold goals, beliefs and visions, which are constructed from the "ground-up", can work more efficiently and harmoniously toward achieving improved performance (Clausen, Aquino Wideman, 2008; Sagor, 1997; 2005). Accordingly, collaborative action research becomes action for social change, shifting the goal from an individual to a collaborative one, intentionally aiming at organizational development and deep structural change (Brydon-Miller and Maguire, 2009). In fact, Hallinger (2003) advances that "the collaborative processes inherent to the inquiry approach to school improvement offer the opportunity for teachers to study, to learn about, to share and enact leadership" (p.240).

Educational research in its broad sense is a scarce commodity in the Arab region and strictly confined -when present- to academic circles. Despite the dire need for a culturally grounded knowledge base that can inform practice, none of the current large scale initiatives for school reform addresses this gap (Karami-Akkary & Rizk, 2011). Developing inquiry skills among practitioners could constitute a much needed strategy to develop a culture of learning and

sustainable growth at all levels. TAMAM uses collaborative action research as the main activity to develop the school teams' capacity to become agents for change in their schools. Each school team chooses an innovative project at their school and conducts action research to evaluate its impact on student learning. In the process, they are coached by a team of University professors to build their inquiry skills, to work collaboratively, to use evidence as the basis of their decisions, and to become reflective practitioners. Moreover, engaging in research on their practice is considered a venue through which they build their expertise in that particular area of their practice, and hence become ready to act as leaders initiating and sustaining improvement in their schools. Therefore, while action research in TAMAM is targeted toward building the capacity of individual school practitioners, it is also used to build professional collaborative teams whose role goes beyond the classroom to create the conditions that motivate and encourage all members of their school community to take leadership actions toward school improvement.

Professional Development should be Grounded in the Teacher's Experiences, Providing Teachers with the Right Balance of Challenge and Support to Grow Professionally

Experiential Learning. According to the literature, adult learners are autonomous, socially responsible thinkers (Mezirow, 1997) and capable of self-directed learning (Knowles, 1973). Current models of adult learning (see Merriam, 2001 for a full review) focus on the socio-cultural context in which learning occurs, and view learning as inherently embedded in the immediate milieu of practice of the learner (Knowles, 1973). Adults learn best through "action learning", through interaction with their colleagues and the situational factors they encounter in their work as they engage in problem-solving (Argyris and Schon, 1974, 1978; Webster-Wright, 2009). According to Kolb (1984), there are two dimensions to the learning process. The first dimension represents the concrete experiencing of events at one end and abstract conceptualization at the other. The other dimension has active experimentation at one extreme and reflective observation at the other. Thus, in the process of learning, one moves in varying degrees from actor to observer and from specific involvement to general analytic detachment. Mezirow (1997) suggested that critical reflection is central to adult transformative learning, which he defines as the process of inducing change in one's viewpoints and habits of mind. This critical reflection is an understanding of the historical reasons for one's needs, wants, and interests. Mezirow (1981), as cited in Merriam (2001) considered "such self-knowledge a prerequisite for autonomy in self-directed learning" (p. 27) and called on adult educators to take that into consideration.

Problem Based Approach. There is ample evidence that the old view of professional development, which is characterized by a prescriptive approach to teacher training and that neglects the input of teachers as adult learners, rarely takes into account the context of teaching and the experiences of teachers. With this old view of professional development, decontextualized packages of knowledge, distributed to teachers in bite-sized pieces, have generally failed to induce considerable change in teachers' ways of teaching and students' learning (Darling Hammond, Mc-Laughlin, 1995; Darling Hammond et al., 2009; Lieberman, 1995; Little, 1993; Knowles, 1973). Consequently, new approaches at building capacity adopt a professional development model that seeks to create opportunities for action learning, problem-based learning, and critical reflection where teachers build their own understanding about content, pedagogy and student learning (Newmann, King and Youngs, 2000; Darling Hammond and McLaughlin, 1995). According to Bridges and Hallinger (1995), a problem-based approach allows practitioners to acquire knowledge and learn how to use this knowledge simultaneously. Real life challenges offer a meaningful context for acquiring and learning new information. This form of learning is found to be best achieved in an environment that supports teachers working collaboratively with each other and with experienced mentors on planning, implementing, and evaluating their practice (Harris and Young, 2000). In this approach, mentors direct practitioners to challenging situations while at the same time offering them the support they need to resolve them (Glickman, et al.2010).

Developmental Approach. Glickman, Gordon, and Ross-Gordon (2010) advocate adopting a developmental approach for adult learners that is built around determining the needs, predispositions and the conditions surrounding these adult learners. This all should be taken into account while designing the content as well as determining the approach followed in the training. Moreover, researchers agree that an effective professional development program needs to be centered on learning (Little, 1993; Webester-Wright; 2009). Rather than viewing teaching as a set of acquired technical skills, teaching is viewed as a profession where-in there is ample room for invention and for the building of craft knowledge (Lieberman, 1995).

Professional development in the Arab region still adheres to traditional approach, and is widely criticized for its ineffectiveness. Moreover, there is no evidence of any attempts to improve it. Conceptions of how adult learn and what are their needs for continuous growth and development are still foreign even among trained practitioners. Professional development as practiced is reduced to one stop workshops and seen as venue to "impart knowledge" rather than support growth. A paradigm shift in reform requires an equivalent shift in the way professional development is conceived and practiced. Though the effectiveness of the above Western views in the Arab context are yet to be seen, they are surely worth trying. On the other hand, professional development activities in TAMAM are very much aligned with widely accepted views in the Western literature on ways adults learn and on effective approaches to professional development. They consist of a combination of skill-building workshops and ongoing follow-up visits by the PST and support team while the school teams are progressing with their action research projects. All training activities are centered on the principles of experiential learning, and mentoring through challenge and support. Moreover, the design and the content of the professional development activities have emerged in response to the needs of the school team members and the challenges they have faced during the implementation of project activities. Reflective practice is promoted in all those activities and school team members are continuously probed to engage individually, as well as a team, in critical reflection.

School Improvement is a Collective Endeavor that Requires Concerted Contributions from University Professors, Policy Makers, and School Practitioners

Fullan (1993, 2003, 2005) notes that for school reform to be successful both bottom-up and top- down strategies are needed. According to him, school change is a complex process that should not be left to "experts" alone; rather, every member of the organization should act as an agent of change, hence making it possible to address concurrently many aspects of a school's functioning in order to reach the "breakthrough" that is needed (Fullan, Hill, and Crevola, 2006). Many scholars conclude that bridging the gap between the policy making process and the knowledge base available on best educational practices is a necessary condition for effective school reform (Berman and McLaughlin, 1974; Fullan, 1993, 2003, 2005, 2007; Fullan et al., 2006; Mehta 2010; Wilson and Daviss, 1994; Seller & Hannay, 2000). Moreover, there has been a growing awareness that schools need to go beyond focusing on the teaching and learning core within classrooms toward an examination of the school organization itself as the context within which schooling takes place. Thus, for reform to be successful, we must look at all these parts together while paying special attention to their manifestations in the school culture as a whole (Chenoweth and Everhart, 2002; Seller, 2001). The underlying assumption of this position is aligned with a conception of the school as a social system that consists of integrated and mutually interdependent sub-units and functions that are open to influences from the surrounding political, social, and cultural environment (Owens and Valesky, 2010; Hoy and Miskel, 2008). Within this system, policy makers, school administrators, university scholars, and school teachers play different roles and develop different perspectives on what needs to be improved and how to do it. As part of this interconnected system, it becomes crucial that those stakeholders unify their views, set shared

goals, synchronize their efforts, and build their capacity to support all improvement efforts, irrespective of where those efforts are initiated (Wilson and Daviss, 1994; Stringer, 2009).

Moreover, effective school change requires the active involvement and commitment of the school community (Shields, Knapp, and Wechsler, 1995). There is a growing consensus in literature (e.g. Fullan, 2001; Sarason, 1996) suggesting that major changes at the school level are bound to fail if the school doesn't create the conditions and opportunities (i.e. build the school's capacity) to implement those changes. A school's capacity is viewed as the school's potential ability to sustain its high performance with respect to teachers' ability to teach and students' ability to learn (Hoyle, Samek, and Valois, 2008; Stringer 2009). According to Louis, Kruse and Raywid (1996), even when individual teachers are full of new reform ideas, their efforts for change can be deflected by the unchanging practices of their institution. Because of this, researchers call for rethinking the underlying assumptions and values that guide school practices, as well as transforming the structural and institutional arrangements to promote on-going teacher learning (Darling Hammond and Mc-Laughlin, 1995; Sarason, 1996; Wilson and Daviss, 1994). Accordingly, Kemmis and McTaggart (2005) argue that changing these practices involves a social process whereby people reframe and change their practices through interactions with others. For Kemmis and McTaggart (2005), "when one party changes its behavior the others are forced to respond to that change... [and] the willing and committed involvement of those whose interactions constitute the practice is necessary in the end to sustain and legitimize the change" (p. 563). Hargreaves (2007) adds that sustainable school improvement is achieved by broadening the base for participation through distributing leadership widely and wisely rather than keeping the responsibility centralized and under government control. Hence, building the school's capacity necessitates far-reaching interventions to transform the school culture into "communities of practice" (Sergiovanni, 2005). Sergiovanni (2005) contends that developing communities of practice for teachers to reflect and share collaboratively their craft knowledge is critical to school improvement, and implies that the school is actually creating the requisite conditions and opportunities for the collective staff to work and learn together.

TAMAM is indeed grounded in a conception of change that is "systemic" and "adaptive" and that, as Murphy describes, "involves the fundamental alteration of core beliefs or values and the loss of accustomed ways, and possibly even identity, in an effort to alter phenomena that cannot always be precisely defined and for which the solutions and the means to address them are usually ambiguous" (Murphy, 2008, p.2188). TAMAM is designed around the assumption that effective school reform in the Arab countries necessitates an active and collaborative contribution from all stakeholders, both at the school and at the central policy making level. In TAMAM, teams are formed where all levels of the decision-making hierarchy are represented, connecting classroom teachers to policy makers at the Ministries of Education. Throughout the project, a group of teachers, school administrators, university professors, and university representatives participate in reflective dialogue as they plan, implement and evaluate their strategies for improving schools. As school team and university researchers reach evidence-based conclusions about school level problems and the actions to be taken to address these problems, formal educational leaders provide the needed support to see that the proposed plans for action are implemented and incorporated in the operation of the school.

What would it take to implement the TAMAM Model successfully?

Firestone and Corbett (1998) note that "there are no universal rules for changing organizations" (p.333). Many researchers add that the complex nature of the change process makes it impossible to engineer the perfect process a priori, and attribute failures of educational reform to neglecting the specific cultural elements of the school where the change has to be embedded (Fullan, 2007; Chenoweth and Everhart, 2002; Sarason, 1996). Wilson and Daviss (1994) note the "missing link" in the success of educational reform is the absence of a "process for strategic

progressive change" (p.12). According to them, the key to successful reform is to work with a purposeful, well thought out design informed by best practices and refined through continuous examination in the cultural contexts and realities of schools. In this process, practitioners in charge of implementing the reform play a key role in designing and planning for its implementation. Researchers (Fullan 2007; Sarason, 1996; Chenoweth and Everhart, 2002; Wilson and Daviss, 1994; Mclaughlin 1990; 1998) have identified several conditions that are necessary for successful educational reform. These conditions include: 1) presence of a sense of malfunction, or crisis triggering the need for transformative change; 2) a vision that builds upon successful experiences and responds to current demands; 3) continuous conversations and collaboration among researchers, practitioners and policy makers while designing and implementing the change; 4) a design model refined through continuous examination to guide the change process; 5) building capacity for change and continuous improvement at the school level; 6) work toward re-culturing, and paradigm shift to achieve transformational change; and 7) developing a process to monitor progress and evaluate impact. While TAMAM seems to be aligned with these and other recommendations that have originated from Western experiences, the promises that this alignment offers are likely to face major challenges. . Senge (2000) points out that "transformative change" requires overcoming archetypes and traditions that are deeply rooted in organizational cultures. In the context of the Arab region, these archetypes rest on assumptions that run opposite to school based reform and can jeopardize the implementation of TAMAM unless reformers give special attention to understanding their nature, and purposefully attempt to address the challenges they pose. In what follows, we argue that successful implementation of TAMAM is highly dependent on giving special attention to four key issues: 1) securing the support of school leaders to incorporate the goals and visions of TAMAM in the school; 2) allowing enough time to build capacity for sustainability; 3) empowering and supporting school teams to help them feel that change and improvement is within their collective power; and 4) Assuming a learning stance throughout the project implementation as a mean to keep the focus on re-culturing and transformative change.

Secure the Support of Schools Leaders to Incorporate the Goals and Vision of TAMAM in the School

One key challenge to the successful implementation of TAMAM is the current practices and conceptions of formal school leaders. There is wide agreement in the literature about the centrality of the principal as a leader of change in the school (Greenfield, 1995; Leithwood and Jantzi, 2000; 2005; Hallinger, 2003; Darling Hammond, Meyerson, La Pointe, and Orr, 2010). By design, TAMAM secured the commitment of the school principals and invited them to participate in any capacity they chose, both in the activities of the project as well as in providing support to facilitate the work of the school team's members. Nevertheless, and despite their apparent support for the project, all these principals still operate in a non-democratic societal culture and within an organizational culture dominated by an authoritarian, top-down, directive, bureaucratic leadership model (Akkary and Greenfield, 1998; Karami-Akkary, 2011). This dominant paradigm makes it difficult for them to make sense of and practice the transformational (Leithwood and Jantzi, 2000, Hallinger, 2003), developmental (Glickman et al., 2010; Day, Harris, and Hadfield, 2001) and distributed leadership (Spillane et al., 2001; Lambert, 2003) models that TAMAM is advocating. Thus, TAMAM design needs to include professional development activities that directly target school leaders. These activities should aim at the following: 1) helping formal leaders [including the principals] acknowledge the need to reframe their role responsibilities and their priorities as leaders; 2) acquire skills and competencies that allow them to support the development of a professional and empowered teaching force, ready to participate in instructional decision making. Leaders need to be coached to embrace reflective practice and inquiry as a vehicle for critical self-evaluation toward reframing their role and aligning it with the goals and vision of TAMAM.

Moreover, leaders in participating schools need to acquire the beliefs, competencies and skills needed to for a developmental approach to leading, so that they can create the conditions that allow teachers to develop into self-directed learners and independent professionals.

Furthermore, school leaders need to be guided to play a key role in institutionalizing the practices, skills and beliefs that the TAMAM project has introduced. In fact, after completing the capacity building activities, each of the project schools ended up with a team that had acquired unique skills [inquiry, reflection, collaboration, and leadership], and special expertise in the particular focus area they worked on during their action research activities, thus becoming ready to participate in leading their school improvement. However, if those newly formed teams are to succeed in their new role, school principals need to formally assign leadership responsibility to these teams and grant them the authority they need to implement the action plans they have developed, and to incorporate what they have learned from their TAMAM experience into the school structure as well as into its teaching and learning core.

Allow Time to Build Capacity for Sustainable Improvement

TAMAM's approach to school reform aims at change in the school culture. Many researchers assert that changes in the culture of the school require time, and need to be seen as an unfolding journey shaped by the existing and emerging conditions as the school implements new views and behaviors (Berman and McLaughlin, 1974, 1978; Chenoweth and Everhart, 2002; Fullan, 1993, 2001, 2003, 2005; Sarason, 1996; Sergiovanni, 2005). El Amine (2005) stated that "designing the transformation of systems is a theoretical matter; applying this transformation, however, is altogether something else. It is related to how change is "digested" by groups in which particular traditions have been anchored for a long period of time" (El Amine, p. 43). Time is the essential ingredient in any reform and its function is to provide opportunities to accommodate, adjust, and adapt the school organizational structure and processes to the desired changes in practice. In the Arab context, the issue of time and school reform is compounded by two additional factors. First, a sense of national crisis prevails in Arab societies after decades of political, economic and intellectual decline putting an additional burden on educators for quick improvements. Second, the absence of an active community of researchers and of publications in the Arabic language in the social sciences and in the field of education in particular, limits the access of educators at all level to the insights and lessons learned from previous experiences in theirs and in other societies. This leaves many reformers completely in the dark about what to anticipate and to the amount effort and time needed to achieve their goals. These reformers often underestimate the complexity of the process by which changes work their way into the daily lives of administrators and practitioners. As a result they set unrealistic expectations on what can and should be completed within a certain period of time.

Shields and Knapp (1997) found that schools that made progress toward improving learning opportunities for students were those that did not tackle everything at once, but aimed for more modest goals and allowed for changes to take place over a longer time line than schools that attempted to change too much within too short a period of time. Fullan (1993, 1999, 2003) contends that effective change should start with small projects focused on salient issues yet conducted at the peripheral of the school system, then gradually progress to expand to more central functions of the organization. Hallinger, Leithwood and Murphy (1993) point at the strategic importance of daily decisions and invite us to "think big by thinking small" (p.17). According to them, paying attention to the strategic potential of ordinary actions provides the opportunity to interconnect daily practice to large goals. Problem-finding and understanding of the contextual factors at play becomes even more important than problem-solving. Thus, it is crucial for the PST team of TAMAM to secure long-term commitment from the participating schools helping their teams view change as a transformative journey that unfolds and needs to be tackled patiently. Moreover, schools adopting the TAMAM model of school reform need to stay focused throughout

the process on identifying key challenges to deal with them in ways that allow for new learning [reflective practice, inquiry, collaboration] to infiltrate and transform their daily practices, hence gradually accelerating the process of change and increasing its prospects for success.

Empower and Support School Teams to Help Them Feel that Change and Improvement is Within Their Collective Power

One of the main challenges of the TAMAM project is to break the cycle of dependency, and change the patterns of learned passivity that dominate the highly bureaucratized and paternalistic organizational culture of schools in the region. Bashshur (2005) criticized the prevailing approach to reform in the Arab countries for considering the practitioners within the educational system as workers serving that system, and suggested that future reform strategies should start looking at the system as "a servant" to the educational practitioners so that they, too, become servants to the classroom (p. 296).

In fact, within the prevailing school culture in Arab countries, school members are inclined to be "dependent" for direction on all those they consider to be "experts", which include academics, their administrative superiors, and policy makers. As a result, it is a big leap to expect that school team members and the teachers among them can immediately assume the role of inquirers, with the expertise to judge what problems to address and what actions to take, given the confines of their current role conception. Therefore, for TAMAM reform approach to succeed, it is critical that both the PST, in its role as the mentor/coach, and the school administrator purposefully work on helping teachers become self-directed learners and on fostering the school team's sense of self-efficacy. The TAMAM project addressed this issue through building the capacity of teachers by developing their inquiry skills. However, the project needs to prepare school practitioners to seek changes in the working conditions around the school and to give the teachers the time and the mentoring support they need to learn and believe that change is within their collective power (Gall, Gall and Borg, 2005; Sagor (1997, 2005). Fullan (1993) notes that in order for school reform to be successful, the organization must be restructured in a way that enables and supports the actions of the people as they work on improving their practice. Fullan (1993) believes reformed (or restructured) organizations "need to be structured as learning communities in which both the people and the organization are supported in their continuing growth towards increasingly effective practice for the benefit of the students." (p.257). Thus, in order to empower their teachers and build among them a sense of self efficacy, schools adopting the TAMAM model of reform need to work on improving communication, empowering their staff with new responsibilities, and building flexibility in their structures (by reducing their reliance on bureaucratic rules) while making on-going professional development a central aspect of the school operation.

Focus on Re-culturing Through Assuming a Learning Stance during Project Implementation

Working toward re-culturing the school necessitates an across-the-board focus on the value of learning. The successful implementation of the TAMAM model of reform requires that all the stakeholders involved in the project be open to change, and adopt a learner attitude, where school leaders, teachers and university professors actively participate (as learners themselves) to transform the educational system into a collaborative community of learners. This poses a major challenge, especially on those in a paternalistic society who are expected to lead, yet still hold strongly to the model of the "complete leader", the loner "*super hero"*. The broader peer culture and superiors with traditional perspectives compounds the difficulty of adopting this newer model of leading. Given this, defensiveness to adopting a learning attitude is likely to emerge, first to avoid failure and the embarrassment of not living up to expectations, and second, from the habits of dependency that avoid taking responsibility. Argyris (2002, 2008) addresses a similar challenge faced in the West, pointing at the difficulty "smart people", especially those in key leadership positions, face to overcome their fear of failure, to embrace their mistakes and to learn from them.

He warns that those "smart" people that lead others toward success can become the very reason behind the failure of their teams or organizations, because of their resistance to learn. To overcome this barrier, Argyris and Schon (1996) and Argyris (2002) propose going beyond "single-loop learning" and engaging in "double-loop learning". Accordingly, single-loop learning occurs when people identify problems and find for them solutions, while "double-loop learning"-which they call "genuine" learning- takes place when people take an extra step and reflect on the way they think, by examining the assumptions behind their actions. Therefore, university professors as well as school principals adopting the TAMAM model of reform need to assume an added responsibility- that of reflecting and critically examining their own thinking and actions. For Argyris (2002), this examination is where *learning how to learn* takes place, leading to deeper "more textured" understanding, thus laying the foundation for sustainable improvement (p.15). Therefore, as the university professors in TAMAM were coaching the school teams to become reflective and collaborative, it became critical that they model this position in their actions. For that, university professors in the TAMAM project needed to engage in self-examination, encouraging scrutiny by all stakeholders in the TAMAM community. Most importantly, they needed to demonstrate to those they are coaching their willingness to admit mistakes and to take actions that reflect new learning. A large part of the success of the TAMAM project in the future is that those members of the PST model the very behaviors and attitudes they want teachers to learn and adopt.

It will take commitment and courage from all to make this shift toward identifying and taking responsibility for one's own mistakes, taking risks in experimenting with innovative views, and critically evaluating actions and goals in order to break old patterns of behavior. If a TAMAM model of reform is to succeed in re-culturing the schools, it needs to help school practitioners critically examine their current conceptions of effective leading, teaching, learning and professional development, and help them reframe those conceptions in a way that aligns with the vision of schools as professional communities of practice. In these communities, no one is the sole expert, or the only leader, or the "complete" professional. Rather, each and every one is a learner in a journey of inquiry, discovery and continuous growth. The skills and attitudes that the TAMAM model of reform is introducing form new habits of mind that enhance learning as the basis for building broad-based leadership capacity for skillful participation (Lambert, 2003; Lambert, Walker, Zimmerman, Cooper, Lambert, Gardner, and Szabo , 2002).

Conclusion

Mehta (2010) argues that for reform to be sustainable, the existing relationships between research, policy, and practice need to be "fundamentally changed" (reversed/ or re-conceptualized). Instead of adopting a causal logic where-in research informs policy and policy mandates practice (the R&D model that dominated early and frequently failed reform efforts in the West), he proposes "inverting that pyramid" suggesting a causal logic where-in "practice needs to drive the [reform] process, the research will take place in schools, the role of policy would be to provide the needed support." (p.8). Then the process will run from practice to research to policy rather than from research to policy to practice. However, despite the similarity, TAMAM's design and conceptualization goes a step further, suggesting a multi-directional, fluid, and symbiotic process of mutual influence among those three components. Practitioners at the school level are viewed to be active participants- as "professionals" - whose participation has value equal to the university scholar or the policy maker. Within this frame, whether or not reform and innovation are initiated at the school level, the policy making level, or the university research level becomes a less important issue. Rather, any reform initiative, regardless of where it is initiated [university, ministry or schools] is welcomed and all three groups [teachers, policy makers, scholars] work collaboratively in investing their resources, and sharing equal responsibility to achieve the

intended goals of that improvement. A key safe-guard in this conceptualization is that any reform effort is studied *during* the implementation process and *if necessary is modified* as determined by those striving to achieve the goals of the reform initiative. As such the TAMAM reform model can be described, in line with what Wilson and Daviss (1994) called for, as adopting a purposeful, well thought-out design- informed by best practices and refined through continuous examination in the cultural context & realities of schools, with an active role for teachers.

Two key features of this project are particularly promising. First, the TAMAM model focuses on building capacity at all levels [schools, universities, and policy makers]. At the school level, it fosters a professionalization of the teacher workforce, helping teachers to become reflective and to adopt a critical and inquiry-oriented perspective toward their practice. This professionalization of teaching will ultimately lead to re-culturing the school into a self-renewing professional learning community (Kruse and Louis, 1993; Senge, 1990; DuFour and Eaker, 1998; Senge et.al, 2000). Moreover, through engaging in action research and continuous reflection on their practice, university professors and ministry representatives participating in the project are "learning through action" and are having the opportunity to challenge deeply held beliefs and practices about what constitutes effective reform, the strategies to implement it successfully, and the kind of schools and educational professionals they want to nurture. In fact, all TAMAM team members described what they were doing as "spreading the TAMAM culture". This awareness of addressing the cultural dimension resonates with recommendations in the Western literature on school reform, arguing for the salience of attending to the collectively held habits, beliefs and conceptions of school members and others, in attempting to initiate school reform, succeed at the effort, and maintain its impact over an extended period of time (Argyris, 2002; Sergiovanni, 2005; Sarason, 1996; Seashore Louis et al., 1999; Fullan, 1999, 2005).

Second, the TAMAM model brings research to the center of school reform, not only as a tool to build capacity, but also as a tool for knowledge production grounded in practice and the contextual and cultural realities of schools. In fact, through training the school teams on action research, the TAMAM model encourages building capacity for research beyond the confines of universities and engaging practitioners in the process of knowledge production as problem-solvers with home-grown solutions. Consequently, school practitioners adopting this approach to reform will gain a proactive voice that shape the research activities in their countries and keep this research focused on real problems of practice.

The TAMAM model embeds research directly into the process of school improvement. Unlike the case of traditional research, where research is sent for publication hoping that its results will trickle out to affect practice, use is made of the teacher-directed and school-based research results right away. The same people who did the research can take action immediately, translating their insights into improved practice. Through observing what happens and reflecting on it, they continuously adapt and re-organize their actions about what school-based problem to work on next and how to approach it.

As such, the activities required to use the TAMAM model of reform hold the promise to empower schools and to drive school reform. These activities include: relocating expertise by building capacity at the level of the school (teachers and principals alike); activating and synergizing resources (teachers, principals, ministry representatives, university representatives, scholars…); building capacity for internal as well as external agency for change (Lambert, 2003); redefining expertise in research; reframing professional development as on-going professional learning at all levels of the educational system; and last but not least, continuously connecting research, practice and policy making.

Author Bios

RIMA KARAMI AKKARY is an Assistant Professor at the American University of Beirut, Lebanon. She holds a Bachelor in Science in Chemistry, Diploma for teaching science and Master of Arts in Science Education from the American University of Beirut (AUB). She earned her Doctorate in Education from Portland State University, Oregon in 1997 with a specialty in [K-12] Educational Administration and Supervision and a focus on school principalship, organizational change and educational policy. Her areas of professional interest are: educational reform, role of the school principal, principal training, women in educational administration and educational services to marginalized population in schools.

NADYA RIZK is a doctoral student at the University of New England in Armidale, Australia. She has a degree in Physics (BS) and in science education (MA) from the American University of Beirut, Lebanon. She has three years of experience in teaching Physics. Currently, she is pursuing her studies in program evaluation with a particular focus on science teacher education.

References

AED. (2004), "Approaches and methods for advancing learning project (AMAL)", available at: http://cge.aed.org/Projects/NAfrica/amal-north-africa-and-middle-east.cfm (accessed 10 January 2008).

AED. (2005), "AED helps Qatar change its educational landscape", available at: http://www.aed.org/News/Stories/qatar_ed_2-07.cfm (accessed 14 January 2008).

Akkary, R. K., and Greenfield, W, Jr. (1998), *"Leadership and work context of public and private secondary principals in the Republic of Lebanon",* paper presented at the annual meeting of the American Research Association, day13-17 April, San Diego, CA.

Al Sayyed, F.H. (2005), "Educational reform within the contexts of conspiracy fear and the absence of participation: Study on the impact of developmental foreign aid on reform of educational policy in Egypt in the nineties", in A. Al Amine (Ed.), *Reform of General Education in the Arab World*, UNESCO Regional Bureau, Beirut, pp. 39-53.

ALECSO (2008), *A Plan for the Development of Education in the Arab Countries*, Arab League Educational, Cultural and Scientific Organization ALECSO, Tunis.

Arab Knowledge Report (2009), *Towards Productive Intercommunication for Knowledge,* Al Ghurair Printing & Publishing House L.L.C, Dubai, UAE.

Argyris, C. (2002), "Teaching Smart People How to Learn", *Harvard Business Review*, Vol. 4 No. 2, pp. 4-15.

Argyris, C. (2008), *Teaching Smart People How to Learn*, Harvard Business School Press, Boston, MA.

Argyris, C. and Schon, D.A. (1974), *Theories in Practice*, Jossey-Bass, San Francisco.

Argyris, C. and Schon, D.A. (1978), *Organizational Learning: a theory of action perspective*, Addison Wesley, Reading, MA.

Argyris, C. and Schon, D.A. (1996), *Organizational Learning II: theory, method, and practice*, Addison Wesley, MA.

Ax, J., Ponte, P. and Brouwer, N. (2008), "Action research in initial teacher education". *Educational Action Research,* Vol. 16 No. 1, pp. 55-72.

Barth, R. (2001), "Teacher leader*", Phi Delta Kappa,* Vol. 82 No. 6, pp. 443-49.

Bashshur, M. (2010), "Adoption/Adaptation And the Question of Educational Reform in the Gulf (With specific reference to Qatar)", working paper, Symposium on Education Reform in the GCC counties, convened by the Gulf Comparative Education Society, Doha, Qatar, 8 April.

Bashshur, M. (1982), *Trends in Arab education: In light of the report "the strategy for developing Arab education [Eteghahat fi altarbiya al arabiya: ala thaw' takreer: estrategiyat tatweer altarbiya alarabiya]*, Wehdat Al Bohooth Altarbawiya, Tunis.

Bashshur, M. (2005), "Dualities and Entries in Educational Reform Issues", in A. Al Amine (Ed.), *Reform of General Education in the Arab World*, UNESCO Regional Bureau, Beirut, pp. 277-298.

Berman, P. and McLaughlin, M. (1978), *Federal Programs Supporting Educational Change, Vol. VIII: Implementing and sustaining innovations,* RAND, Santa Monica, CA.

Bridges, E. and P. (1995), *Implementing problem based learning in leadership development*, ERIC, University of Oregon, Eugene, Oregon.

Brydon-Miller, M. and Maguire, P. (2009), "Participatory action research: contributions to the development of practitioner inquiry in education", *Educational Action Research,* Vol. 17 No. 1, pp. 79-93.

Bustingorry, S.O. (2008), "Towards teachers' professional autonomy through action research", *Educational Action Research,* Vol. 16 No. 3, pp. 407-420.

Calhoun, E. (2002), "Action Research for School Improvement", *Educational Leadership,* Vol. 59 No. 2, pp. 18-23.

Cano, J. (2004), "The role of action research in effecting educational change", *The Agricultural Education Magazine,* Vol. 76 No. 6, pp. 2.

Carr, W. and Kemmis, S. (1986), *Becoming Critical*, Falmer Press, London.

Chapman, D. W. and Miric, S. (2009), "Education Quality in the Middle East", *International Review of Education,* Vol. 55 No. 4, pp. 311-344.

Charmaz, K. (2005), "Grounded theory in the 21st century: applications for advancing social justice studies", in N. K. Denzin and Y.S. Lincoln (Eds.), *The Sage Handbook of Qualitative Research,* Sage Publications, Thousands Oaks CA, pp. 1115-1126.

Charmaz, K. (2010), *Constructing Grounded Theory: a practical guide through qualitative analysis*, Sage Publications, Thousands Oaks, CA.

Chenoweth, T. G. and Everhart, R. B. (2002), *Navigating Comprehensive School Change: a guide for the perplexed*, Eye on Education, Larchmont, New York.

Clausen, K., Aquino, A.M. and Wideman, R. (2008), "Bridging the real and ideal: a comparison between learning community characteristics and a school-based case study", *Teaching and Teacher Education,* Vol. 25, No. 3, pp. 444-452.

Conley, D. T. (1991), "Lessons from Laboratories in School Restructuring and Site-Based Decision-Making: Oregon's 2020 schools take control of their own reform", *OSSC Bulletin*, Vol.34 No.7, pp. 1-16.

Conley, D.T. and Goldman, P. (1995), "Reactions from the field to state restructuring legislation", *Educational Administration Quarterly,* Vol. 31 No. 5, pp.512-538.

Conley, D.T. and Goldman, P. (1998), "How educators process and respond to state-level education reform policies: the case of Oregon", paper presented at the annual meeting of the American Educational Research Association, 13-17 April, San Diego, CA.

Copland, M (2003), "Leadership of Inquiry: Building and Sustaining Capacity for School Improvement", *Educational Evaluation and Policy Analysis,* Vol. 25 No. 4, pp. 375-395.

Curryer, I. and Barrett, P. (2004), "Building capacity developing your school", available at: http://www.ncsl.org.uk (accessed 15 April 2010).

Darling Hammond, L., Wei, R. C., Andree, A., Richardson, N. and Orphanos, S. (2009). *Professional learning in the learning profession: a status report on teacher development in the United States and abroad*, National Staff Development Council, Dallas, TX.

Darling Hammond, L. (1994), *Professional Development Schools: Schools for Developing the Profession*, Teachers College Press, New York.

Darling Hammond, L., Meyerson, D., La Pointe, M. and Orr, M.T. (2010), *Preparing Principals for a Changing World: lessons from effective school leadership programs*, Jossey-Bass, CA.

Darling Hammond, L. and McLaughlin, M.W. (1995), "Policies that support professional development in an era of reform", *Phi Delta Kappan,* Vol. 76 No. 8, pp. 597-604.

Day, C., Harris, A. and Hadfield, M. (2001), "Challenging the orthodoxy of effective school leadership", *International Journal of Leadership in Education*, Vol. 4 No. 1, pp. 39–56.

DuFour, R. and Eaker, R. (1998), *Professional Learning Communities at Work: best practices for enhancing student achievement*, National Educational Service, Bloomington, Indiana.

El Amine, A. (2005), "Executive Summary", in A. Al Amine (Ed.), *Reform of General Education in the Arab World,* UNESCO Regional Bureau, Beirut, pp. 23-47.

El-Amin, A. (2009). Meta-Issues involved in research in Arab States: Reflections of a social scientist. In S. BouJaoude & Z. Dagher (Eds.), *The world of science education: Arab states* (pp. 256-264). Rotterdam: The Netherlands: Sense Publishers.

Firestone , W.A. and Corbett, H.D. (1998), "Planned Organizational Change", in Boyan, N.J. (Ed.), *Handbook of Research in Educational Administration*, Longman, New York, pp. 321-340.

Fullan, M. (1993), *Change Forces: probing the depths of educational reform*, Flamer Press, London.

Fullan, M. (1999), *Change Forces: – the sequel*, Falmer Press, London.

Fullan, M. (2001), *Leading in a Culture of Change*, Jossey- Bass, California.

Fullan, M. (2003), *Change Forces: with a vengeance*, Routledge Falmer, London.

Fullan, M. (2005), *Fundamental Change: international handbook of educational change*, Springer, the Netherlands.

Fullan, M. (2007), *The New Meaning of Educational Change*, Teachers College Press, New York.

Fullan, M. and Hargreaves, A. (1996), *What's Worth Fighting for in your School*, Teachers College Press, New York.

Fullan, M., Hill, P. and Crevola, C. (2006), *Breakthrough*, Corwin Press, CA.

Gall, J., Gall, M. and Borg, W. R. (2005), "Action Research", in Burvikovs, A. (Ed.), *Applying Educational Research: a practical guide*, Pearson Education, Boston, pp. 487-522.

Gillies, W. (2009), "Leveraging action research", *Principal Leadership*, Vol. 9 No. 7, pp.16-17.

Glaser, A. (1992), *Grounded Theory Analysis: emergence vs. forcing*, Sociology Press, Mill Valley, CA.

Glaser, B. G. and Strauss, A. (1967), *Discovery of Grounded Theory: strategies for qualitative research*, Aldine Publishing Company, Chicago.

Glickman, C. D., Gordon, S.P. and Ross-Gordon, J. M. (2007), *Supervision and Instructional Leadership: a developmental approach*, Pearson, Boston.

Greenfield, W. Jr. (1995), "Toward a theory of school administration: the centrality of leadership", *Educational Administration Quarterly*, Vol. 31 No. 1, pp. 61-85.

Greenwood, D. J. and Levin, M. (2007), *Introduction to Action Research: social research for social change*, Sage Publications, CA.

Haberman, M. (1992), The Role of the Classroom Teacher as a Curriculum Leader. *NASSP Bulletin*, Vol. 76 No. 547, pp. 11-19.

Hallinger, P., Leithwood, K. and Murphy, J. (1993), *Cognitive Perspectives on Educational Leadership*, Teachers College Press, New York.

Hallinger, P. (2003), "Leading Educational Change: reflections on the practice of instructional and transformational leadership", Cambridge *Journal of Education*, Vol. 33 No. 3, pp.329-351.

Hargreaves, A. (2007), "The long and short of educational change", *Education Canada*, Vol. 47 No. 3, pp.16-23.

Hargreaves, A. and Fink, D. (2000), "The three dimensions of reform", *Educational Leadership*, Vol. 57 No. 7, pp. 30-34.

Harris, A. and Young, J. (2000), "Comparing school improvement programs in England and Canada", *School Leadership and Management*, Vol. 20 No. 1, pp. 31-42.

Harris, A. and Lambert, L. (2003), *Building Leadership Capacity for School Improvement*, Open University Press, Mc Grow-Hill, PA.

Harris, B. and Drake, S. (1997), "Implementing high school reform through school-wide action research teams: a three year case study", *Action in Teacher Education*, Vol. 19, No. 3, pp.15-31.

Hendricks, C. (2009), *Improving Schools through Action Research: a comprehensive guide to educators,* Pearson, NJ.

Heyneman, S.P. (1997), "The quality of education in the Middle East and North Africa", *International Journal of Educational Development,* Vol. 17 No. 4, pp. 449–466.

Hoy, W. and Miskel, C (2008), *Educational Administration: theory, research and practice,* McGraw Hill, New York.

Hoyle, T., Samek, B. and Valois, R. (2008), "Building capacity for the continuous improvement of health promoting schools", *Journal of School Health,* Vol.78 No. 1, pp. 1-8.

Kang, N.H. (2007), "Elementary teachers' teaching for conceptual understanding: learning from action research', *Journal of Science Teacher Education,* Vol. 18 No. 4, *pp.* 469-495.

Karami-Akkary, R. and Rizk, N. (2011), "*A profile of school reform in the Arab world: characteristics & challenges",* available at: http://www.tamamproject.org/documentation/publications (accessed 1 October 2011).

Kemmis, S. and McTaggart, R. (2005), "The eighth and ninth moments: participatory action research: communicative action and the public sphere", in Denzin, N.K. and Lincoln, Y.S. (Eds.), *The Sage Handbook of Qualitative Research,* Sage Publications, Thousands Oaks CA, pp. 1115-1126.

Kirk, D. (1988), "Ideology and school-centered innovation: a case study and a critique", *Journal of Curriculum Studies,* Vol. 20 No. 5, pp. 449-464.

Knowles, M. (1973), "The adult learner: a neglected species", available at: http://eric.ed.gov/ERICDocs/data/ericdocs2sql/content_storage_01/0000019b/80/31/57/4e.pdf (accessed 1 June 2010).

Kolb, D. (1984), "*Experiential learning: experience as the source of learning and development*", Prentice Hall, New Jersey.

Korostoff, M., Beck, L. and Gibb, S. (1998), "Supporting school-based reform: lessons from the work of the California Center for School Restructuring", paper presented at the Annual Meeting of the American Educational Research Association, April 13, San Diego, CA, pp. 13-17.

Kruse, S. and Louis, K. (1993), "An emerging framework for school-based professional community", paper presented at the Annual Meeting of the American Educational Research Association, April 12-16, Atlanta, GA, available at: http://www.eric.ed.gov/PDFS/ED358537.pdf (accessed 5 May 2009).

Lambert, L. (2003), *Leadership Capacity: for lasting school improvement*, Association for Supervision and Curriculum Development (ASCD), Alexandria, VA.

Lambert, L., Walker, D., Zimmerman, D., Cooper, J., Lambert, M. Gardner, M. and Szabo, M. (2002), The constructivist leader, Teachers College Press, New York.
Leithwood, K. and Jantzi, D. (2000), "The effects of transformational leadership on student engagement with school", *Journal of Educational Administration*, Vol. 38 No. 2, pp. 112-129.

Leithwood, K. and Jantzi, D. (2005), "A review of transformational school leadership research: 1996-2005", *Leadership and Policy in Schools,* Vol. 4 No. 3, pp. 177-199.

Lieberman, A. (1995), "Practices that support teacher development", *Phi Delta Kappan,* Vol. 76 No. 8, pp. 591.

Little, J. (1993), "Teacher professional development in a climate of educational reform", *Educational Evaluation and Policy Analysis,* Vol.15 No. 2, pp. 129-151.

Louis, K. Kruse, S and Raywid, M. (1996), "Putting teachers at the center of reform", *NASSP Bulletin,* Vol. 80 No. 580, pp. 9-21.

McGee, A. (2008), "Critical reflections of action research used for professional development in a Middle Eastern gulf state", *Educational Action Research,* Vol. 16 No. 2, pp.235-250.

McLaughlin, M.W. (1990), "The RAND Change agent study revisited: macro perspectives and micro realities", *Educational Researcher,* Vol. 19 No. 9, pp. 11-16.

McLaughlin, M.W. (1998), "Listening and learning from the Field: tales of policy implementation and situated practice", in Hargreaves, A., Lieberman, A., Fullan, M. and Hopkins, D. (Eds.), *International Handbook of Educational Change,* Kluwer Academic Publishers, London, pp.70-84.

McNiff, J. (2002), *Action Research for Professional Development: concise advice for new action researchers,* September Books, UK.

Mehta, J. (2010), "Inverting the pyramid of school reform: practice should drive research and policy not the reverse", *Harvard Education Letter,* Vol. 26 No. 6, pp. 6-8.
MENA Development Report (2008), *The Road Not Traveled: Education Reform in the Middle East and North Africa: Executive Summary,* World Bank Publications, Washington, DC.

Merriam, S. (2009), *Qualitative Research: a guide to design and implementation,* Jossey-Bass Publishers, SF.

Merriam, S.B. (2001), "Andragogy and self-directed learning: pillars of adult learning theory", *New Directions for Adult and Continuing Education,* Vol. 21 No. 89 pp. 3-14.

Mezirow, J. (1981), A Critical Theory of Adult Learning and Education, *Adult Education Quarterly,* Vol. 32 No. 1, pp. 3-24.

Mitchell, S., Reilly, R. and Logue, M. (2009), "Benefits of collaborative action research for the beginning teacher", *Teaching and Teacher Education,* Vol. 25 No. 2, pp. 344-349.

Murphy, J. (2008), "A framework for rebuilding initial certification preparation programs in educational leadership. Lessons from whole-state reform initiatives", *Teachers College Record,* Vol. 110 No. 10, pp. 2172-2203.

Murphy, J. and Datnow, A. (2003), *Leadership Lessons: from comprehensive school reforms,* Sage Publications, Thousands Oaks, CA.

Newmann, F.M., King, M.B. and Youngs, P. (2000). Professional Development that addresses school capacity: lessons from elementary urban schools. *American Journal of Education*, Vol. 108, No. 4, pp. 259-299.

Owens, R. and Valesky, T.G. (2010), *Organizational Behavior in Education: leadership and reform*, Pearson, Boston.

Pavlou, D. (2004). *Teacher Leaders and Reflective Practitioners: building the capacity of a school to improve by promoting research and reflection*, College for School Leadership, Nottinghan, National.

Quelmallz, E., Shields, P. and Knapp, M. (1995), Lessons from a national study: a guide for school reform teams, Planning and Evaluation Service, Office of the Under Secretary, U.S. Department of Education, Washington, DC.

RAND-Qatar Policy Institute (2009), "Implementation of the K-12 education reform in Qatar's Schools," available at: http://www.qascores.com/pubs/monographs/2009/RAND_MG880.pdf (accessed 5 February 2010).

Rearick, M. (1998), "Action research: the school university connection", paper presented at the Annual Meeting of the American Educational Research Association, 13-17 April, San Diego, CA.

Sagor, R. (1997) "Collaborative action research for educational change", in Hargreaves, A. (Ed.), *ASCD Yearbook: Rethinking Educational Change with Heart and Mind*, Association for Supervision and Curriculum Development, Virginia, pp. 169 - 191.

Sagor, R. (2005), *The Action Research Guidebook: a four step process for educators and school teams*, Corwin Press, CA.

Sarason, S. B. (1996), *Revisiting the Culture of the School and the Problem of Change*, Teachers College Press, New York.

Savoie-Zajc, L. and Descamps-Bednarz, N. (2007), "Action research and collaborative research: their specific contributions to professional development", *Educational Action Research*, Vol.15 No. 4, pp. 577-596.

Schon, D. (1983), *The Reflective Practitioner: how professionals think in action*, Basic Books, New York.

Seashore Louis, K., Toole, J. and Hargreaves, A. (1999), "Rethinking School Improvement", in Murphy, J. and Seashore Louis, K. (Eds.), *Handbook of Research on Educational Administration*, Jossey-Bass Publishers, San Francisco, CA.

Seller, W. & Hannay, L. (2000). "Inside-Outside Change Facilitation: Structural and Cultural Considerations." In Bascia, N. & Hargreaves, A. (Eds.), *The Sharp Edge of Educational Change: Teaching, leading and the Realities of Reform*, Routledge, Falmer, New York, NY.

Seller, W. (2001), "Reforming schools: building the capacity for change", *School Leadership and Management*, Vol. 21 No. 3, pp. 255-259.

Senge, P. (1990), *The Fifth Discipline: the art and practice of the learning organization*, Doubleday, New York.

Senge, P., Cambron-McCabe, N., Lucas, T., Smith, B., Dutton, J. and Kleiner, A. (2000), *Schools that Learn: a fifth discipline fieldbook for educators, parents, and everyone who cares about education*, Doubleday, New York.

Sergiovanni, T. B. (2005), *The Principalship: a reflective practice perspective*, Allyn and Bacon, Boston.

Shields, P. and Knapp, M. (1997), "The promise and limits of school-based reform: a national snapshot", *Phi Delta Kappan*, Vol. 79 No. 4, pp. 288-294.

Shields, P., Anderson, L., Damburg, G., Hawkins. E., Knapp, M., Ruskus, J., Wechsler M. and Wilson, C. (1995), *Improving Schools from the Bottom-up: from effective schools to restructuring*, Department of Education, Washington, D.C.

Shields, P., Knapp, M. and Wechsler, M. (1995), *Improving schools from the bottom up: from effective schools to restructuring*, SRI International, Menlo Park, Calif.

Spillane, J.P., Halverson, R. and Diamond, J.B. (2001), "Investigating school leadership practice: a distributed perspective", *Educational Researcher*, Vol. 30 No. 3, pp. 23-28.

Stake, R. E. (2005),"Qualitative case studies", in N. K. Denzin and Y.S. Lincoln (Eds.), *The Sage Handbook of Qualitative Research*, Sage Publications, Thousands Oaks CA, pp. 1115-1126.

Stringer, P. (2009), "Capacity building for school improvement: a case study of a New Zealand primary school", *Education Research Policy Practice*, Vol. 8 No. 3, pp. 153–179.

Vogrinc, J. and Zuljan, M.V. (2009), "Action research in schools: an important factor in teachers' professional development", *Educational Studies*, Vol. 35 No. 1, pp. 53-63.

Webster-Wright, A. (2009). Reframing professional development through understanding authentic professional learning. *Review of Educational Research*, Vol.79 No.2, pp. 702-739.

Weston, M. and Bain, A. (2009), "Engaging with change: a model for adopting and evaluating school-based innovation", *Journal of Educational Administration*, Vol. 47 No. 2, pp. 156-175.

Wilson. K.G. and Daviss, B. (1994), *Redesigning Education*, Teachers College Press, New York.

Xu, Y (2008), "School-based teacher development through a school-university collaborative project: a case study of a recent initiative in China", *Journal of Curriculum Studies*, Vol. 41 No. 1, pp. 49-66.