

The Jordan Education Initiative

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1. **Background**

The Jordan Education Initiative (JEI) commenced in June 2003 as a public private partnership involving the Government of Jordan, the international private sector, local private sector, NGOs and donors under the auspices of the World Economic Forum's Global Education Initiative (GEI). It ran until November 2006 in this format, and has now been established as a NPO with an all Jordanian staff (<http://www.jei.org.jo>). The principal contact is Haif Bannayan, who serves as Executive Director of the JEI. The initiative was focused around improving education in 100 Discovery Schools, developing the technology industry and providing effective life long learning for Jordanian citizens.

Education is a key catalyst and enabler for social and economic development in countries throughout the world. Recognizing this, business leaders from the IT and telecommunications sectors at the World Economic Forum Annual Meeting in 2003 presented the World Economic Forum with a mandate to launch an action-oriented initiative to leapfrog education reform in a selected pilot developing country using a new framework for public-private collaboration and partnership.

Jordan, with a committed, clear, and aggressive strategy for education reform was selected as the pilot country for the learning initiative. Formally launched in June 2003 at the Extraordinary Meeting of the World Economic Forum at the Dead Sea, the JEI aims at accelerating education reform through a public-private partnership model that drives innovation and capability.

The Initiative was developed in partnership between the Government of Jordan and the World Economic Forum and to date incorporates over 17 global corporations, 17 Jordanian entities, and 11 governmental and non-governmental organizations as stakeholders in achieving its goals.

2. **Goals**

Poor in natural resources and lacking a well-developed industrial base, Jordan is dependent on human resources to drive its economy. Despite some recent growth, Gross Domestic Product (GDP) per capita remained low and, with 38% of Jordan's population under 15 years of age, current rates of job creation were not rapid enough to provide employment opportunities for the next generation of workers. Unemployment was likely increasingly to become an issue unless action was taken.

In response to these challenges, the government of Jordan, with support from the World Bank and international donors, implemented the major Educational Reform for a Knowledge Economy (ERfKE) to create the knowledge, skills, and attitudes needed for the global market. The program's objectives include curriculum reform, teacher training, adoption of Information and Communications Technology (ICT) as an enabler of learning, and upgrading school ICT infrastructure.

To strengthen this government-led reform, John Chambers, Cisco CEO, invited business leaders at a World Economic Forum meeting in January 2003 to join Cisco in creating a high-quality education program that would harness technology to reduce the gap between developed and developing countries. The Jordan Education Initiative was subsequently launched in June 2003 and gained support of 45 organizations, including local and international companies such as

Cisco, Computer Associates, Microsoft, Intel and HP, Jordanian government departments, global government donors and NGOs.

The goals set for JEI were to achieve educational reform in order to develop a knowledge economy, stimulate economic growth and provide future employment opportunities. The Jordan Education Initiative aimed to do this by:

- Improving the delivery of education to Jordan citizens through public-private partnerships;
- Enhancing the quality of education through the effective use of technology;
- Building the capacity of the local technology industry
- Creating a global education program model for replication in other countries

3. *Inputs*

The Jordan Education Initiative (JEI) developed new models of technology-empowered education and built local competences to scale and sustain those models nationally. Its challenge is to achieve a step change in learning outcomes matched to the current and emerging competence requirements of the global economy. JEI also needs to test its innovative public-private partnership model to make it replicable across the developing world.

The 45 organizations involved in JEI worked together to transform the experience of learners at all levels and achieve a highly educated workforce able to compete more effectively in the 21st-century economy. JEI also aims to advance lifelong learning and to foster development of the local ICT industry. In this way, JEI could position Jordan strongly as a burgeoning knowledge economy in the global market, helping the Jordanian government achieve its vision of education as a catalyst for socio-economic development.

To facilitate the expansive and complementary aims of ERfKE and JEI, the government installed a National Broadband Learning and Research Network that will connect 1.5 million people at schools, colleges, universities, and community centres via fibre optics.

JEI was conceived as a fast-track project first executed across 100 specially selected 'Discovery Schools'. A small project management office (PMO) was set up and, in consultation with the Ministries of ICT and Education, the PMO developed a policy of holistic educational change through electronic content, teacher training, and technology - all within a controlled change management process. This initial phase was intended to inform the future nationwide program and to demonstrate what can be achieved when the corporate sector work together in a holistic way with a government

The e-curricular development strategy was a main focus for JEI and centred on improving the quality of education through interactive, media-rich content. ICT would help to communicate complex concepts to students more effectively, build confidence, encourage critical thinking and applied learning, to instil motivation for learning, and to support individual learning styles. Relevant and quality content was perceived as the key to education together with well trained teachers to unlock students' potential.

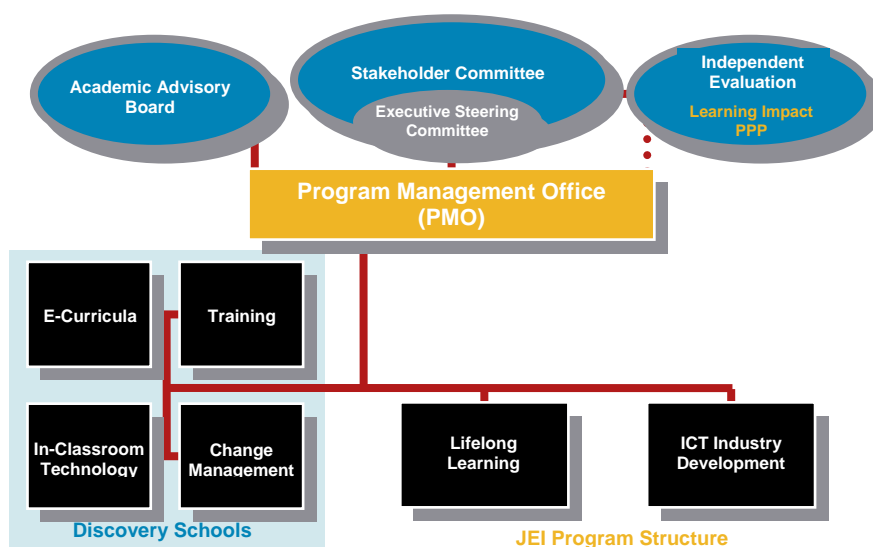
The JEI pedagogical approach was to be based on collaborative learning models and supported by a curriculum aligned with the best in the world. ICT was to be integrated throughout the teaching and learning process, to raise the quality of lessons, student tasks, assessments, and feedback. Teacher-led learning in the classroom, supported by teacher laptops and data projectors would enable technology to support 80% of student learning time. This model was selected in preference to the computer lab which provides one-to-one learning but also gives far less overall access to technology. However computer labs were also provided for further consolidation of individual learning. Teachers would be trained in a 'blended learning' approach, and shown a range of ways in which they could integrate ICT into everyday classroom teaching so that students

can have increased exposure to high-quality learning resources including multimedia simulations and video clips.

4. Implementation

The PMO were the day to day link with the government officials, the schools and the partners and the donors. The 100 Discovery Schools covered the whole of the school age range from years 1 to 12, The PMO was staffed by a small team that went from four to eight including 2 secondees from Cisco, one to support the in-classroom technology implementation and one part time to help drive curriculum integration, links with ERfKE and teacher development. The program manager was seconded to the project by Computer Associates. Cisco also brought in a program strategist to help architect the fundamentals of the program, including the strategies for use of technology and electronic content, organising the project management office, setting up an independent evaluation, and managing change. Alongside Microsoft, Intel and HP, Cisco has also contributed to the establishment of a Schools Technology Innovation Centre which is developing and showcasing new learning solutions.

The PMO ran 6 monthly update meetings and reported to an executive steering committee which was latterly chaired by the Queen of Jordan. Weekly meetings were held with the stakeholder committee who oversaw the everyday operations of the JEI. A Master Plan was also developed that looked at each stage of e-curricular development, piloting and roll-out. The program structure is outlined in the Figure below:



JEI developed e-curricula for key subjects: mathematics, science, ICT, Arabic, civics and English, each sponsored by a private sector partner. Local companies were used for software development, ensuring local ownership and accountability, and also facilitating the transfer of knowledge and capacity to Jordan. These companies in turn employed Jordanian teachers to help create the e-curricula. Building the capacity of the local ICT industry ensures the development of future innovative learning solutions and thus the sustainability of the reform. To ensure some uniformity of experience and that the e-curricula met the ideals for curriculum development, Cisco funded expertise to create a set of curriculum guidelines and standards

Cisco also initiated and funded the first of the e-curricula – ‘Mathematics Online’ - and the Cisco Learning Institute (CLI) developed the content with Rubicon, a Jordanian IT company. CLI’s experience from the Cisco Networking Academy played an important role in the creation of Mathematics Online. Approximately 30 Jordanian teachers and supervisors, who were assigned by the Jordanian Ministry of Education to work on the development of the mathematics e-curriculum, received training and support from Cisco education specialists Cisco Learning Institute and

Rubicon. In September 2004, Mathematics Online was deployed across the Discovery Schools in grades 1 to 12.

5. Outcomes

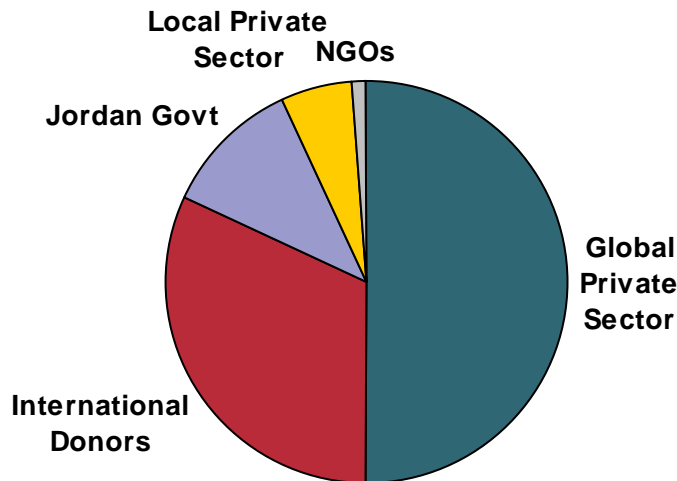
Overall five main success factors can be identified from the JEI experience:

- Experience of dealing with large corporations through the development of Multi-Stakeholder Partnerships and in educational reform;
- The Ministries of Education and ICT have gained expertise around the implementation of technology based learning solutions influenced strongly by the JEI partners;
- There has been an acceleration in the deployment of internet connectivity and computers in schools;
- The JEI has helped the Ministry of Education to gain a greater understanding of the importance of linking the training programmes available to teachers and staffed by Jordanians with proper funding support;
- The e-curricula have drawn attention to the blending of traditional learning resources and have exposed teachers to new ways of teaching and have raised awareness of the potential of using ICT to enhance learning and to improve the quality of the learning experience.

Probably the single most important factor for the success of the JEI at the school level was its anchorage within two major existing national programs (ERfKE and the National Broadband Learning and Research Network (NBN)). In contrast, the relative failure of the JEI Lifelong Learning track was probably largely due to the fact that potential partners (both international and local) were not able to tie their offerings to an established national agenda even though there was a physical network of publicly accessible "Knowledge Stations" across the country that provided a great starting point for the program.

The local ICT industry will gain new revenue sources if the electronic teaching materials created in Jordan are sold to other countries. Developing local ICT businesses ensures the sustainability of the solutions implemented in JEI and furthers the national economy. A McKinsey Report (*'Building Effective Public-Private Partnerships: Lessons Learnt from the Jordan Education Initiative. An Initiative of the World Economic Forum'*, 2005) estimates that approximately US\$3.7 million has been transferred from global partners to local companies as a direct result of JEI programs. There have also been indirect benefits as JEI has encouraged global companies to take a closer look at Jordan by creating a favorable environment for investment. For example, in August 2004 Cisco Systems formed a strategic partnership with Estarta Solutions to develop a Cisco Technical Support Center in Amman, Jordan, that will serve enterprise customers in Europe and the Middle East.

Approximately US \$ 22m was spent on the JEI either through financial contributions or in kind payments with funding streams obtained from stakeholder in the proportions indicated in *Table 1*.



A baseline study was undertaken, but it was too late and was also incomplete. However, there have been a number of small studies of the impact of the final products by the e-curricula developers and the Academic Advisory Board carried out interviews with key stakeholders in March 2006 which was reported back to the executive committee and at an update meeting of the JEI in June of that year. This carried a number of recommendations that would help improve the outcomes of the JEI and included more work on change management particularly with Discovery School principals. Monitoring is undertaken through the stakeholder committee and led by deliverables of the JEI Master Plan.

A thorough impact assessment funded by USAID has been scoped out with the PMO focusing primarily on student achievement in core curricular subjects and in the process investigating the impact on teachers, administrators and the overall education system. This is being led by the US-based organisation, EDC.

A quick impact assessment of Mathematics Online is being carried out by a local company, To-Excel, in order to obtain a snapshot impact assessment of deploying e-content. The results of this study were meant to have been available in May 2007.

5. *Links, documentation and other information*

- The JEI was the first of a series of education initiatives under the umbrella of the World Economic Forum's ' Global Education Initiative. For more information see:

<http://www.weforum.org/en/initiatives/gei>

- The McKinsey Report referred to above is available at:

<http://www.weforum.org/pdf/JEI/JEIreport.pdf>