Chapter 3
Embracing ICT by the Jordanian Education System

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ABSTRACT

This chapter discusses the experience of adopting information and communication technologies (ICT) by the Jordanian education system. The discussion tackles the Jordanian Ministry of Education's endeavour to update the education system for the Knowledge Economy by shedding light on its two main recent initiatives - Education Reform for the Knowledge Economy (ERfKE) and the Jordanian Education Initiative (JEI). Both projects included ICT as a key component for upgrading the education system for the Information Age. Jordan's location in the heart of the Middle East as well as the countries scarce resources available for development makes education reform a challenging task for the education system. The chapter discusses the Jordanian education system's approach in reforming itself through the adoption of ICT.

THE JORDANIAN MINISTRY OF EDUCATION: BACKGROUND

The Jordanian Ministry of Education is the central education authority represented by 36 regional directorates of education across Jordan (a small country located in the Middle East). The Ministry plays a crucial role in the society as the country is considered a young society with 38 percent of the population are estimated to be under 15 years of age. Several achievements of the Jordanian education system bear witness to the high priority placed on education in the country.

After independence, the 1950s period witnessed a shift towards *education for all* which was reinforced by the *Knowledge Act No.20* making education compulsory for all children up to grade six. In order to further extend educational provision across the country, the *Education Act No.16* was endorsed in 1964 making education compulsory up to grade nine. Therefore, education provision has expanded rapidly across the country. For

instance, the number of governmental schools increased from 714 in 1960 to 5,526 schools in 2006 with 1,056,470 students and 58,886 teachers (Ministry of Education, 2007). In addition, the budget of the Ministry of Education reached 12 percent of Jordan's General Budget in 2006 (Ministry of Education, 2006). Currently, both primary and secondary education are provided tuition free for all students across the country. As a result, the literacy rate in Jordan has become one of the highest in the Arab world with 91 percent of the population over 15 years of age can read and write.

The Need for Educational Change

Human capital represents Jordan's main asset. The scarcity of natural resources in Jordan and its weak industry (Al-Sa'd, 2007) made the successive governments of Jordan focus on education as a main driver for human development. As a result, the educational system's graduates have undertaken outstanding role in the development of the Jordanian society as well as other countries in the region due to the good reputation. Therefore, despite the fact that Jordan is a small country with limited natural resources, the education system of Jordan compares favourably with other systems in the Middle East. Accordingly, remittances from the Jordanian workforce abroad are major sources for foreign exchange (Mu'tamen, 2007).

However, global markets have undertaken major transformations placing increasing pressure on education systems worldwide to respond and to undertake reform accordingly in order to be able to survive and compete in the new era. There has been a warning that despite the large spending on education by education systems in the Middle East and North Africa (MENA) region students in the region are not being prepared to participate effectively in the global market (Akkari, 2004; Ministry of Education, 2004; World Bank, 2002; World Bank, 2003). For example, according to Akkari (2004), Arab countries spend

over 5 percent of their Gross National Product on education; the highest percentage among all developing countries. Furthermore, despite impressive signs of improving education in term of enrolment and access to public education, *quality* is still a concern. For example, in 1999, Jordan, Tunisia and Morocco participated from the MENA region in the Third International Mathematics and Science Study (TIMSS), the test showed that Jordan was "near the bottom in math and science" compared with other participating countries (World Bank, 1999, p.12) and the *Programme for International Student Assessment* (PISA) report in 2000 reported that Jordan was "statistically significantly below the OECD average" on its science scale (OECD, 2006, p.22). Furthermore, a national assessment found that Jordanian students did not meet the educational system's learning objectives in Arabic, math and science (World Bank, 1999).

The Education System and the Sudden Increase of Student Numbers

The Middle East region is turbulent and frequently shaken by conflicts and wars which have disturbed development and reform across the region. However, the regional disturbances have had severe implications on development projects in Jordan as a small country located in the heart of the region and relies heavily on external assistance in undertaking reform. The unexpected disturbances caused by external, as well as internal, conflicts have frequently shaped reforms in Jordan. Shortly after gaining independence in 1946, Jordan bore the full brunt of the creation of Israel on its western borders engaging in military conflicts and through dealing with large numbers of Palestinian refugees (Chatelard, 2004; Saleh, 1991). The 1967 war with Israel created a wave of an estimated 350,000 displaced Palestinians seeking refuge in Jordan (Khawaja, 2003). Furthermore, other conflicts in the region including the Gulf War I

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