Looking Through the Magnifying Glass: Higher Education Policy Reforms and Globalization in Jordan

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Your file Votre référence
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To my late beloved parents,
for the reverence of learning they planted in me

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Table of Contents

Abstract

This study was based on the assumption that globalization is behind the initiative for higher education reform in Jordan. The changes stemming from globalization are of such magnitude that they are impacting higher education systems almost everywhere, in varying degrees of intensity.

The conceptual framework of this study is shaped by qualitative methodology, and guided by a social constructivist paradigm, using a case study strategy. My aim is to choreograph this inquiry based on the post-modern notion that there is no single correct interpretation that captures reality. In this study, I identify the forces responsible for the restructuring of higher education in Jordan, to help gauge the scope and dimensions of the changes advanced under the banner of reform.

My aim in this study is to expand the ongoing debate on higher education in the context of globalization. And most importantly for Jordan, I aim to help develop a more coherent, multi-linear view of the dynamics underlying the reforms advanced, and the various impacts of globalization. By providing insight into the relationship between globalization and the needs advanced for higher education policy reforms, this study aims to help work with globalization rather than against it, and invest every effort to benefit from its opportunities.

Résumé

Cette étude se base sur la supposition que la globalisation est une des forces majeures qui influencent la réforme de l'enseignement supérieur en Jordanie. Les changements dus à la globalisation sont d'une telle magnitude qu'ils ont un impact à travers presque tous les niveaux du système d'enseignement supérieur.

Le cadre conceptuel de cette recherche se base sur une approche méthodologique qualitative guidée par le paradigme socio-contructivist en utilisant une étude de cas. Le but est d'articuler une méthode d'enquête basée sur les notions post-modernes qui prônent qu'il existe plus d'une seule interprétation juste de la réalité. . Cette étude tente d'identifier les forces directrices de la restructuration du système d'éducation supérieure en Jordanie afin de jauger de l'ampleur et les dimensions des changements proposés par la réforme.

Le but de cette étude est de contribuer et d'élaborer le débat en cours sur l'enseignement supérieur dans le contexte de la globalisation. Plus précisément, cette étude vise à développer une vision plus cohérente de la situation. Cette élaboration intègre les multiples perspectives et forces sous-jacentes de la réforme proposée ainsi que divers impacts de la globalisation. En articulant les relations entre la globalisation et l'étude des besoins proposés par les politiques de réforme de l'enseignement supérieur, cette étude suggère qu'il serait plus bénéfique de capitaliser sur certains aspects de la globalisation et non de la combattre aveuglément.

Chapter 1: Introduction

The importance of higher education and the need for higher education reform has been the subject of a great deal of attention and publicity in Jordan. In this study, I explore the dynamics behind the changes advanced over the past three years and the strategies to reform the system. Acting on my theoretical proposition that globalization is influencing higher education policy reforms, and that the World Bank, a strong proponent of globalization in Jordan, is playing a key role in directing these reforms, I examine how and why globalization impacts higher education in Jordan, and what the implications of the proposed reforms are.

I explore the case of Jordan in order to establish that globalization is behind a range of issues linked to the need for reform that are increasingly challenging higher education institutions. I do not claim to have presented an exhaustive account of the role of globalization in higher education reform in Jordan. Rather, this study isolated some of the aspects promoted for change to develop a clearer picture of the challenges involved in educational policy-making, and underscored the necessity for educational planners to understand the dynamics and dimensions of change involved.

I also tackled some of the changes that have swept higher education. I drew on the work of many scholars to paint a broad picture of how national higher education is being steered to acquire survival skills for the global economy, on both the policy and institutional levels. I discussed examples of how the globalizing rhetoric becomes reality, manifested in trends in higher education reforms and its underlying values in both developed and developing countries. While policy and institutional reform have been key features of several governments' education policies, they have been basic requirements

for receiving assistance from globalization agencies (Chapman & Austin, 2002; McNeely, 1995; Stewart, 1996; Watson, 2000; World Bank, 1994; Ziderman & Albrecht, 1995). Higher education institutions are required to move in the direction of decentralized administration and decision-making as a way of enhancing community participation, local democracy, greater efficiency, and public accountability. They are encouraged to diversify revenue generating outlets through the introduction of tuition fees and privatization. These methods help institutions generate supplemental revenue, outside of public support, and overcome financial hurdles in expanding access as well as equity. This study matched these patterns to the need for reforms advanced by the higher education policy in Jordan, to convey the dimensions of change confronting faculty and institutions, and the challenges and opportunities that lie ahead. Examples of the reforms advanced range from raising fees, phasing out state control, expanding access, privatization, emphasis on information communication technology, concern over graduate economic output and the needs of the local and global labour markets, attention to programs with economic relevance and work-related skills, practical research and application-based research particularly in science and technology, English language skills, international performance appraisal and benchmarking.

Many governments are concerned with higher education reform in response to the rapid expansion in student enrolments. There is pressure on higher education institutions to serve a greater range of functions, and improve their capacity for effective planning and efficient management of resources, both financial and human. One of the major policy challenges has been how best to achieve an appropriate balance between the needs of centralized funding, planning, coordination and accountability on the one hand, and

the need for institutional autonomy and appropriate goal-setting and management on the other. With globalization, many countries have been shifting from state control to state supervision models of higher education steering and coordination (Neave & van Vught, 1994). Governments have been increasingly stepping back from centralized control by encouraging higher education institutions to become more autonomous, self-regulating and market-oriented – albeit within an overall framework of government priorities – as self-regulatory higher education systems are considered more efficient and innovative (van Vught, 1989). Accompanying this shift has been a strengthening of corporate management models at the institutional level. The assumption is that these models make higher education more effective and cost-efficient, in the context of deregulated state control and enhanced institutional entrepreneurship, where market relations, consumer control, user costs and institutional competitiveness help to promote innovation, quality and relevance. The drive towards corporate management within higher education institutions, coupled with the deregulation of state control, is led by an almost universal trend towards privatization and marketization in higher education. In many sectors, privatization is being promoted as a response to the perceived failure of public-run institutions.

My data was collected from as many diverse sources as possible, to corroborate and enhance its trustworthiness. My library search aimed at exploring the links between higher education and globalization, and proceeded in tandem with data gathering field visits to Jordan. These visits introduced me to the higher education reform scene and enabled me to monitor developments by attending key events, examining documents and

materials, following media reports, and maintaining personal notes which helped me to document the experiential side of my visits.

Significance of the Study

This study responds to a dire need for policy-based research in higher education in Jordan, and encourages giving priority to this area. I hope that this study will lead the way for others to conduct similar research to offer globalizing development agencies, such as the World Bank, a communal-based view in framing policies and negotiating project terms. Thus far, no hard core research studies on higher education in Jordan have explored the connection between globalization and the need for higher education reforms advanced by the government and supported by the World Bank. The closest that exist are just think pieces principally cautioning against the sweeping impact of cultural and economic globalization on local values and the national economy (Abul Hayja, 2002; Al-Wazani, 2000; Mahafzeh, 2001; Mekdady, 2002; Zaloum, 2000).

Given this starting point, this study was designed to develop conceptual tools with which the examples of the need for reforms advanced can be investigated. The latter is key to investigate the link between the actors and a particular kind of policy making underlying reforms, which is under investigation. By exploring the reforms via the analysis of the conjunction of the state-development agency, this study reveals intrastate workings relevant to potential research exploring their own aspects of education policy such as higher education programs, reform, legislation, and key decision makers. This study demonstrates that the education reforms advanced mirror the practices, momentum, ideas, and values linked to globalization, which are emerging elsewhere. In my view

therefore, the advanced reforms go beyond the intentions of the state to dovetail with the wider intentions of the globalization agency promoting them. This connection explains the apolitical, value-free nature of the official rhetoric in promoting the need for reform. The legitimacy of these reforms was partly evidenced by the fact that they follow the progressive shifts taking place in the developed countries in the North, which makes them imply that these reforms must be good for a country targeting fast-track development, such as Jordan. These justifications, including linking university with industry, e-connectivity, lifelong learning, and the concepts of accountability, input-output formulae, and outcome-based education have been also presented as scientifically sound by drawing heavily on the sciences of economics and corporate management that apply to higher education and the activities of the state to enhance economic performance. Supporting figures and statistics further lend strength to these idealized forms of reform paving the way for their subsequent reproduction. Combining the legitimacy of these reforms with the endpoint of a thriving economic performance in the global market can mean that the future educational activities of the state can be developed on the basis of parameters laid out by globalization, with state performance accountable to globalization agencies.

By establishing this relationship in the context of Jordan, I intend to help expand the intellectual debate, with the goal of conducting a generalizing analysis to push ahead emerging scholarship on globalization and higher education. As an individual concerned about the future of higher education in Jordan, I feel obligated to generate a greater awareness of the globalization process, because I foresee universities in Jordan modifying their practices along the lines of revised government policies and reform advice flowing

from the supranational agencies of globalization, led by the World Bank. I feel it is important to ask why universities and the government regulating them might opt for this specific route, and at what cost. A principal reason I am concerned about the future of universities in Jordan is because of my belief in the importance of one of the basic features in their operation - the promotion of critical thinking within society. Universities are establishments where knowledge is supposed to be developed and distributed widely. Universities must sustain their ability to maintain critical judgments within society and speak to the wider intellectual community. The importance of providing a space for a critical analysis of social issues is particularly important in the context of globalization, as media is often controlled by groups with vested interests. Accordingly, I strongly believe that universities in Jordan need to be more than engines of economic development and competitiveness. Working to protect this role is challenging, as the higher education sector in Jordan is largely donor-dependent for its development, and must respond to donor pressures to follow the globalization model.

This study deals with Jordan at the macro level, in that it addresses all Jordanians irrespective of their ethnic routes. It provides policy makers and planners with conceptual tools to help them move towards an approach that incorporates a broader socio-economic picture which, when combined with their inside knowledge and experience, will help them determine what policy options are open to Jordan in the context of globalization, and what actions they can take to accommodate the realities of globalization and turn some of its challenges into opportunities. This study sensitizes them to the multiple players involved in the reform process, as well as the wide-ranging implications of globalization, including its direct and indirect effects on higher education. It emphasizes

the need for both government and education leaders to comprehend the dimensions of global, as well as context-specific, issues, and how the global and the local relate and interact, particularly with respect to anticipating the consequences of their actions on both the macro and the micro levels, which I consider as conceptual tools. This study can assist them in moving away from the common technical approach of diagnosis and prescription in the process of higher education reform. This diagnosis and prescription approach is based on singling cause and effect, giving reform an inaccurate analytical and concrete independence, an apolitical and neutral façade, thus masking its underlying ideological dimension.

Background to the Study

Over the past three years I observed that the topic of globalization was gaining a lot of interest in intellectual circles in the West. My limited understanding of it associated it with economic and political spheres. I grew curious about globalization and what it really meant, and began to pay more attention to it. Reading articles and attending lectures made me question whether economic globalization was impacting our lives beyond our being producers and consumers in the global market. Little did I know of its links to education. However, I could not ignore the widespread attention which the media was giving to the importance of education and the need for reforms. I kept asking myself why these reforms were gaining so much attention and publicity in Jordan, compared to previous ones. What made them so special that even the King reiterated the need for them? Why was the World Bank so keen to support them?

I started by reviewing the historical development of education in Jordan, and linked this to the political, economic, social, and demographic webs of wholeness, culminating with my views on reforms, and a sense of advocacy. I wanted to draw attention to tools that I considered necessary to reform education. I also wanted to help promote a more democratic intellectual debate, by adding the case of Jordan to the ongoing debate on globalization and higher education in countries of the North and South.

I relied principally on secondary sources such as books, journals, and the internet for data. I returned to Jordan to gather data by capitalizing on my previous links with the Ministry of Education. This allowed me to get close to the decision makers in education, and hold discussions with them and with other key informants. These visits further enabled me to follow and observe milestone developments in Jordan, and higher education reforms in particular, by monitoring coverage in the media, attending forums and lectures, and following up on observations. Accordingly, I dedicated my summer months in Jordan between 2001 and 2003 for preliminary data gathering, and returned to Montreal in the fall to focus on my literature review on education and globalization, in tandem with my research methodology. I then returned to Jordan for further data gathering, analysis and writing.

Summary of Chapters

In Jordan, as is the case in many developing countries, the World Bank acts as a key umpire of globalization. It promotes globalization and institutionalizes its practices by advancing development reform formulas, with the intention of helping higher

education confront its financial and institutional shortcomings; in this case to assist Jordan in surviving the realities of a global market, and accommodating the needs of the knowledge-based economy. While these responses are not practiced uniformly across countries, in Chapter Two, I draw attention to the converging trends linked to globalization, by shedding light on the challenges and issues confronting higher education at both the macro and micro levels, as well as on the reforms being introduced. I aim to deconstruct the master narratives of globalization by drawing attention to the implications of emerging trends in higher education in both the empowered, globalizing countries of the North, and the less empowered, globalized countries of the South. I also seek to expand the intellectual debate by drawing parallels between these trends and the proposed need for higher education reforms in Jordan.

In Chapter Three, I develop a conceptual framework shaped by qualitative methodology, and guided by a social constructivist paradigm, using a case study strategy. My aim is to choreograph this inquiry based on the post-modern notion that there is no single correct interpretation that captures reality (Denzin & Lincoln, 2000; Janesick, 2000; Lincoln & Guba, 2000b). I draw attention to the emerging trends in higher education in countries of the North and South, in the context of globalization. I expand this intellectual debate by drawing parallels between these trends and the proposed higher education reforms in Jordan. I elaborate on my choices of methodology, paradigm and method as they relate to this enquiry, while situating myself throughout the text.

In Chapter Four, I draw attention to a number of challenging issues confronting university policies in the context of globalization and shed light on some common ways in which universities have been responding to them, in countries of the North as well as

in developing countries. In the context of developing countries, I shed light on the inconsistent waves of interest, and therefore of investment, by both governments and international assistance organizations since the 1950s. I describe the surge of interest in higher education, followed by disenchantment with respect to revenue returns and a redirection of funds to basic education, and the subsequent surge of interest in response to both public pressure and the growing demands of economic globalization.

The sustainability of higher education is being endangered by a combination of intense enrollment pressures, receding public funds, stagnant economies, unmet public needs in social and physical infrastructures, rigid economic planning and control, and intrusive and dysfunctional government regulations. Higher education is acknowledged to be a key anchor of national development, but it must accommodate the realities of globalization so as to bolster the prospects of its own survival as well as those of national development. It must respond to the demands of the global market while grappling with local issues and challenges. This requires focusing on enhancing the quality of human resources, by accommodating the needs of the labour market, diversifying revenue-generating outlets, privatizing, linking with the business sector, and reviewing curricula and instructional methods.

In Chapter Five, I focus on higher education in Jordan and the manner in which it is being shaped by complicated and contradictory phenomena primarily evolving from globalization. I attempt to convey the dynamic interrelationship between globalization and the challenges and issues confronting higher education in Jordan at both the macro and micro levels. I draw attention to the role of the World Bank and the International Monetary Fund as the two umpires of globalization. In this chapter I build on the themes

covered in previous chapters, which have recently emerged in the context of globalization, and link these to key issues which have been brought forward in the context of the need for higher education reform in Jordan.

Chapter Six concludes the study by emphasizing that the far-reaching impact of globalization is manifested in higher education reform initiatives in Jordan as elsewhere. Globalization has been applying pressure on higher education policy makers to re-route their policies and work towards creating converging paths in both globalizing and globalized states. With this being the target, the difference among nations is more a matter of pace in covering the prescribed milestones. Areas of convergence include curriculum, research, programs, access, finance, degree of autonomy, and governance. In drawing this chapter to a close, I propose a number of areas for further research. These include ongoing research on the impact of issues in higher education in Jordan linked to globalization - such as diminishing public funding, privatization, expanding provision, linking university with industry, focusing on ICT, emphasizing practical research and skills-based education.

I espouse the need to look into the global trends behind reform, and emphasize the need for education specialists to go beyond assuming that policy changes are generated exclusively within the confines of nation states, and that national processes are integrally and dynamically linked to international development trends. Identifying such trends conveys a comprehensive depiction of the dynamics of the policy reforms, the changes they entail, and the impact of those changes on the institutions, academic values, and conceptions of knowledge. Acknowledgement of these trends and the underlying globalizing forces, added to experience, should help identify the choices available, and

how these interact with the national institutional context in shaping specific goals. This micro-analysis aided by my magnifying glass, looks at what is behind the highly publicized need for reforming higher education in Jordan.

Chapter 2: The Development of Contemporary Higher Education

Contemporary Higher Education

The post-World War II era witnessed the expansion of welfare liberalism, where social justice was considered the basis for policy making, and aggregate demand was the mechanism for steering the economy. This era was behind the dynamic growth of the public sector and the transformation in social programming, including the development of and access to higher education. The period was associated with the expansion of compulsory secondary education, as well as mass tertiary education.

The recession era in the 1970s was associated with a change in direction away from welfare liberalism toward neo-liberalism and globalization, and the New Right's commitment to competition and privatization (Buchbinder & Rajagopal, 1996; Brown & Lauder, 1996; Currie, 1998). As policies of privatization were introduced to new institutions, the welfare state began to come apart. Attention was focused on deficit reduction policies, inflation control, regressive taxation, disposing of the social safety net, and attacking the cultural institutions and trade unions. As a result the university suffered, because it was part of the welfare state apparatus. Higher education was targeted towards choice, with diversity within a competitive market scenario of institutions from which students could choose. In this context, the concept of education as a public right withered. Non-elite students were left to fend for themselves by competing for the limited number of bursaries and loans.

The transformation in both ideology and policy took place with a restructuring of capital within the global framework. The globalization of capital, together with a rise in

neo-liberal ideologies, launched an attack on the social welfare state and its institutions. The development of free trade agreements offered the means for globalizing capital. At the same time, a new economic state started to take over the receding welfare state. Its role was to monitor and apply the rules of globalization and global trade practices, which required a new policy framework to accommodate the needs of globalization, as these new policies no longer considered full employment as a goal. The concept of universal programs was viewed as dated and to be abandoned; trade unions were to be weakened; job security was to be eroded; and management was to be centralized.

During the 1960s and 1970s, the development of higher education was considered a national priority among newly independent countries (Ziderman & Albrecht, 1995). As a result, substantial investments were directed towards higher education throughout the developing world, by both national governments and international assistance organizations such as the World Bank, regional development banks, and bilateral assistance agencies (McNeely, 1995). In the 1980s, this commitment weakened, as priorities changed in favor of basic education (Barros & Ramos, 1996). International assistance organizations shifted both their attention and funds towards increasing access to and improving the quality of basic education (Chapman & Claffey, 1998). As a result, securing external assistance for higher education became more difficult, and this in turn led to less investment in higher education.

There were several factors underlying this shift in priorities by international assistance organizations. The support channeled to higher education in the 1960s and the 1970s did not yield the anticipated payoffs with respect to national development, and the impact of the investment was further diluted by factors like brain drain, politicization of

higher education, government neglect, and the financial crisis impacting several developing countries (Chapman & Claffey, 1998; Stewart, 1996). Pressing domestic concerns such as illiteracy, disease prevention, and food security became greater priorities for national budgets. In addition, studies conducted by the World Bank and others indicated that basic education provided a higher rate of return than higher education (World Bank, 1994). Many more children could be educated at the primary stage for the equivalent cost of one year of college education, and the basic literacy and numeracy skills acquired by them often proved to be in immediate demand by the labour market in developing countries, as opposed to the skills obtained through higher education. Thus, investment in higher education was seen to extend greater individual benefit to students than to society, and international donors decreased their investments in higher education projects (Chapman & Claffey, 1998; World Bank, 1994).

The post-Fordist era of the 1990s was built on a number of assumptions regarding national development. These included the idea that high skills meant high wages, investment in education and training led to a high-skill, high-wage economy, that the operation of the global labour market solved issues of social justice, with everybody left to do what they do best, and that knowledge is best when it is utility-based. These assumptions were instrumental in making the globalizing countries in the North take up the role of knowledge production, limiting the role of their globalized counterparts in the South to service production. These changes, coupled with the corresponding changes in the political economy over the past three decades, have had an impact on the university system. Public funding to universities began to diminish in the 1970s, followed by the development of corporate-university ties in the 1980s. These linkages were instrumental

in bringing about the commoditization of knowledge in the 1990s (Brown & Lauder, 1996; Buchbinder & Rajagopal, 1996; Cowen, 1996; Currie, 1998; Currie & Newson, 1998; Neave & van Vught, 1991). The 1990s emerged as a centre-left project, whose goals were to achieve economic efficiency and social justice. Economic globalization gave key importance to the role of higher education in development. In the context of micro-economic reform, restructuring higher education was considered both a principal tool and an important site, based on its role as producer and supplier of skilled human capital to industries, in addition to constituting a key industry itself, as an employer of a large workforce (Currie, 1998; Porter & Vidovich, 2000).

The 1990s also witnessed a surge of interest among international donors and national governments in developing countries in strengthening higher education (World Bank, 1994, 2000), related to the interplay of simultaneous forces on both the local and the global fronts, and the need for a more educated labour force. Following the success achieved in raising primary school participation and retention levels in many countries, intense public pressure was put on governments, demanding access to higher education. Governments could ill-afford the political risk of alienating the growing demands of students and their families, as denying them access to higher education meant limiting their job prospects and life opportunities (Chapman & Claffey, 1998; World Bank, 1994).

Channeling investments towards basic education at the expense of higher education in developing countries had been instrumental in creating a deficit in the workforce skills available, especially with respect to technology and management. The national governments and international assistance agencies came to the realization that a better balance in the educational outputs through higher education was needed, and as a

result the emphasis on higher education was restored. This enabled some developing countries to compete in the increasingly technological and information-based global economy.

Leading international assistance organizations like the World Bank and the International Monetary Fund (IMF) shared and acted on the vision underlying globalization, which assumed that societies were shifting from rigid economic state planning and control to more market-oriented economies, and from one-party states to multi-party democracies. This vision saw rights and responsibilities assigned to the state and its citizens as shifting, and the gap of social and economic inequalities as expanding. National economies had to be integrated into a global framework. As state controls diminished, a wave of prescribed reforms swept the public service sectors. State action was increasingly subjected to international constraints, and its ability to control all activities on its territory steadily diminished (Stewart, 1996; Watson, 2000).

Global links have been broadening and strengthening, and have reached a stage where no country is completely immune from events originating outside its national borders. Global networks link seemingly disparate elements, including international trade, the movement of capital and people, multinational investment, and the globalization of culture. Improved technology helps to enhance the quality of life of millions through improved sanitation, healthcare, access to knowledge, and literacy.

The adoption of higher education policy reforms was in response to economic constraints, while accommodating the rapidly changing, highly competitive, market-based global environment and its corporate structures (Currie, 1998; Saul, 1995). Underlying the university's choice to opt for economic globalization was its decision to

abandon its role as an active independent public critic, and align itself with particular market forces (Saul, 1995).

Higher education institutions in developing countries are confronting a financial crisis, as a result of rapid growth in student enrollment coupled with receding public expenditure on tertiary education. At the same time, constraints on the universities impose high financial dependency on the state, low internal efficiency, and low quality. Faced with this, national governments often seek financial and technical assistance from international assistance organizations, such as the World Bank and the IMF.

The history of donor funding of education development is one of significant changes over the past five decades. As the largest financial contributor to education, compared to any public international organization, these changes corresponded to the issues which the World Bank has emphasized in its education development initiatives (Kiernan, 2000; McNeely, 1995; Pickert, 1997). Thus national governments in the 1950s and the 1960s conceded the importance which the World Bank gave to education in general, taking into consideration the importance of developing a national cadre to run their newly-established public institutions. All these reforms required funding from international assistance agencies.

Higher Education and Development

Higher education is acknowledged to be a key factor in economic and social development in developing countries as a result of globalization (Sadlak, 2000). A large part of this is based on its ability to enhance labour productivity, and thereby the country's ability to compete in global markets. In developing countries, its role in attracting and accumulating international capital has become important. Transnational

corporations are selective as to where they invest, therefore the distribution of foreign direct investments is uneven across developing countries. Foreign direct investments favor countries which are rich in natural resources, have large domestic markets, and a skilled, well-educated labour force. Furthermore, although globalization has intensified the need for higher education, its emphasis on the key role of the market and the diminishing role of the state leads to funding cuts for state expenditures, including education, as was the case under structural adjustment policies. These policies were prescribed with the aim of eliminating budget deficits, settling interest payments, and extending tax incentives in order to lure investors, and were introduced at a time when higher education was needed most. However, the negative implications of funding cuts evolved in countries which had initially started with a mediocre human resource base. The failure of their economies further weakened their ability to sustain, let alone improve, their educational resources.

Developing countries with a well-qualified human resource base displayed successful performance in the global economy. Their rising revenues enabled them to enhance their human resources even further, improving their ability to compete in the global economy by attracting and accumulating international capital (Breton & Lambert, 2003; Stewart, 1996). Thus while some countries, such as China, India, and Hong Kong, have been successful as a result of globalization, others, including Sierra Leone, Niger, Zambia, and Peru, have not. Their per capita incomes dwindled, along with their rates of investment and exports. This indicates that economic globalization is not yet for all developing countries, and while it impacts on all developing countries, directly or indirectly, many of them are not yet integrated into the global economy. And in cases

where they are integrated, and are considered to be 'benefiting', the question remains as to who is really benefiting? To those countries not yet included in the global economy, admission is subject to revising government policies and changing their practices in line with the reforms required by proponents of globalization. Globalization in higher education therefore can be considered a phenomenon in process.

The Role of Universities in Economic Development

As higher education is acknowledged to be a key anchor of national development in the global knowledge economy, universities are largely being turned into engines for economic productivity and competitiveness. Besides grappling with local issues and challenges, the reforms advanced require higher education to accommodate the realities of globalization, with its neo-liberal-inspired laws of survival and expansion, by enhancing the quality of human resources, accommodating the needs of the labour market, diversifying revenue-generating outlets, privatizing, linking with the business sector, and reviewing curricula and instructional methods. Towards these ends, research and utilitarian forms of knowledge are underscored and protected. Programs closely linked to the market are gaining centre stage. Lifelong education is increasingly integrated to the average lifestyle. Pressure is mounting on universities to become more competitive, and benchmarking is increasingly becoming a key yardstick for assessing performance (Miller, 1995). Diminishing public funds for universities intensifies the competition for them, and universities are encouraged to generate revenue through student fees, consultancies, donations and research (Hodges, 1994). Universities are being granted more autonomy, in line with the reformulated role of the state as

supervisor, coordinator and facilitator in the context of greater privatization and deregulation (Ball, 1996; Pannu, 1996; Richardson, 1995).

Universities and Globalization

The impact of globalization is felt at universities everywhere with varying degrees of intensity. As higher education has become more widely available due to full public funding, access to higher education has been gradually diminishing. The restructuring of economies in support of economic liberalization linked to globalization is steering the expansion of higher education, its role, and its programs. The corporate influence on higher education is more marked in the rich industrialized countries. These countries are referred to as countries of the North (Gibbs, 2001), and include North America, Europe, Australia and New Zealand. The universities are becoming extensions of the high tech industry and the corporate system. The rules of intellectual property rights (IPR) are drawing the parameters of research in the university, luring researchers to work for profit. Quality assurance standards are being superimposed on the academic world through international benchmarks, and used as preconditions for financial support.

Two simultaneous trends in higher education have evolved. The diminishing level of public funds is forcing universities to raise money from industry, the market, and individual students. Private universities, colleges and other sources of knowledge providers are mushrooming where few or none existed before. Knowledge is becoming commodified, and aspects of economic feasibility in higher education are gaining prominence over social benefits. Emerging is a plethora of higher education providers: non-profit, for-profit, corporate, and entrepreneurs, competing together in a global

academic marketplace. Lines are being drawn between research universities and teaching universities, the former referring to the traditional university and the latter more in tune with labour market demands. Universities have begun to act more like economic development promoters and suppliers for the global economy. Financial rewards overshadow long-held values linked to education as a public right, and education for achieving equality, democracy and social justice (Apple, 2000).

With globalization, universities are being confronted with difficult choices impacting their fundamental character, values and governance. They are under pressure to emulate corporate systems, practices and values in their structure, funding and administration. Their accountability is to the corporate employer, and to a lesser degree the students, as market consumers. Programs accommodate economic relevance, work-related skills and practical research (Brennan, Fedrowitz, Huber, & Shah, 1999; Duderstadt, 2000). To best understand the role of globalization in higher education, it is necessary to consider the evolution of the global political economy and its impact on nation states.

Background on Globalization

Globalization involves the uprooting of social relations from local contexts of interaction, and recombining them across time and space. Globalization means that a nation's investment, production, and innovation are not limited by national borders. Companies in Europe and the United States can produce software in India and computer chips in Singapore, outsource clerical work to Ireland, and sell all over the world. Traversing long distances, time zones, and various cultures is barely a concern.

Telecommunications, satellite television and the linking of computers through cyberspace allow most disembodied service – technological designs, managerial instructions and operational controls - in addition to media images of wars, natural catastrophes and the latest fashions, to enter the minds of people instantly anywhere at any time. This shrinking of the world to a global village amounts to a virtual annihilation of space through time (Giddens, 1990).

The use of globalization as a term goes back to the 1960s. Some background accounts of globalization link it to a single causal view, such as the economic thesis and focus on the integration of international markets (Hirst & Thompson, 1999). Economic globalization is characterized by restructuring parts of national economies onto parts of transnational economies. This process involves the meshing together of key ingredients, including the international economies and systems of communication, as well as the increasingly global nature of markets, capital and labour, and the production and distribution of goods and services through transnational firms. International agreements, such as the General Agreement on Tariffs and Trade (GATT) and the North American Free Trade Agreement (NAFTA), constitute a key dimension of economic globalization. They are instrumental in advancing towards the elimination of trade barriers and the liberalization of trade. Their underlying aim is to open up the world markets by internationalizing trade between nations, and to integrate national economies in order to enhance global connections. The economic ideology behind globalization calls for the primacy of the market, the division of labour based on comparative advantage, privatization, and a diminished role for the public sector.

Others link globalization to a political process that is principally concerned with politics and power. These draw a comparison between the power of business and that of nation states, and argue that the growth of transnational networks of production, trade and finance are making nation states almost irrelevant. National authorities have lost their grip over their economies, and they are merely transmitters of global market discipline to the domestic market (Strange, 1996). Like cultural globalization, political globalization has a dual quality. It can involve fragmenting large political conglomerates, such as the former United Soviet Socialist Republics (USSR), or integrating different countries into new realignments, as with republics of the former USSR joining the European Union, or Mexico joining NAFTA.

Globalization underlies the capacity of the world economy to operate as a unit on a planetary basis. But this capacity does not mean that the entire planet is involved. Under conditions of global competition and relentless innovation, a cleavage has opened up between those areas with networks of capital, labour, information and markets – which link up through information technology - and those populations and territories without. Multinational corporations relocate production facilities to industrializing countries with relatively high levels of technological development and a well-qualified, cost-competitive human resource base, avoiding the lowest cost, least developed countries (Castells, 1993). Information technology driven by global capitalist production permits market deepening rather than widening, which ensures that the 20 percent of the earth's population with advanced technology will be doing better, while the 40 percent without will remain disconnected and marginalized. In between, there is a

subordinate layer of industrial capitalism in which capital and technology continue to provide goods for mass consumption (Castells, 1996).

Cultural globalization refers to the increase in the scale of global cultural contacts, and is associated with a drive toward similarity and homogeneity. In the process of cultural homogenization, the survival of idiosyncratic traditional values and beliefs are threatened. This type of globalization is often referred to as the McDonaldization of the world, especially with respect to the American cultural hegemony. This aspect of cultural homogeneity is, ironically, turning to a contradictory phenomenon of cultural heterogeneity, brought about by waves of migration, which, together with media coverage, has exposed people to the extensive diversity of cultures worldwide and increasingly in their backyard (Featherstone, 1993; Hargreaves, 1994).

In the context of this study, my view of globalization is one of a multidimensional concept, primarily linked to economic factors inspired by the neo-liberal market ideology and the way in which these factors affect cultural institutions such as education. This study considers that, while political and cultural components of globalization are significant, it is economic globalization that has been the most effective in dominating the policy agenda of Western nation states in their effort to position themselves favourably and gain a competitive edge in the global market (Currie, 1998). Economic globalization is behind the intensification of global competition among nations, regions, and industries, and constitutes the driving force behind the significant changes associated with larger markets, increased capital mobility, and more specialized trade. As a result, national markets are being integrated into large trading areas, to cope with the growing needs of

transnational and corporate traders. As part of the globalization scene, universities are affected by circumstances beyond the campus and across the national borders.

Globalization, Development and Policy

In general, globalization plays a key role in many aspects regarding development and policy. Thus foreign direct investment in developing countries witnessed a rise of 17 percent per year towards the end of the 1980s, and was estimated at US $70 billion in 1993 (Lall, 1994a). Trade between the 350 largest transnational companies in the early 1980s amounted to an estimated 40 percent of the global trade (Ghai, 1993). Transnational companies dominated the international technology traffic, and various forms of technology were largely produced by the same multinational corporations that dominated foreign direct investment (Lall, 1994b). The massive growth registered by international trade, which exceeded production, was related to the reduced cost of transportation and communication - factors directly linked to globalization (Stewart, 1996) - as well as achievements in trade liberalization (World Bank, 1994). International trade agreements cut down trade restrictions, and consequently the volume of exports reached 1.6 times the rate of world output in the 1980s (GATT, 1990). Furthermore, financial deregulation was behind the exponential growth of international financial capital, with global dealings exceeding US $500 billion a day. This incapacitated national governments with respect to controlling both their money supply and their exchange rate. In contrast to the explosive growth in international financial trade, globalization was also connected to the simultaneous increase in restrictions on the international movement of people, and the increasing traffic of voluntary and forced migrants. The vibrant

combination of world communications and transnational financial investments has been instrumental in enhancing cultural globalization. Cultural globalization was associated with the spread of the western neo-liberal ideology through international financial assistance organizations such as the IMF and the World Bank, which encourage and sometimes apply pressure on countries to head in a particular direction through policy reforms, which may include opening up their economies, relaxing restrictions on capital movement, trade, and technology imports, privatizing public services, and reducing the role of the state and enhancing that of the market (Reich, 1991; Stewart, 1996). These changes have offered promising potential for economic development. The production of goods and services can be geographically separate from their consumption market, which offers poorer countries an opportunity to create jobs and generate revenue by targeting production to richer countries, instead of being limited to their local markets. The relocation of capital and production to poorer countries is generally expected to enhance their prospects, with respect to production, exports, employment, and income, which in turn is expected to improve their chances of catching up with industrialized countries.

Higher education and market liberalization instruments. The increasing commodification of education, together with the drive towards market liberalization linked to globalization, has subjected higher education to the logic of the market (Ball, 1998). Education became part of a global trade liberalization regime as a result of its inclusion in the World Trade Organization's General Agreement on Trade in Services (GATS) (Singh, 2002). The GATS proposals recognized that private education and training supplement, rather than displace, public education. They therefore allowed governments to enforce regulatory rights in line with their national policy objectives.

However, with the dominant philosophy aimed at removing obstacles to free trade, the degree of regulation is not yet clear, and is subject to negotiation. The idea underlying these agreements is the liberalization of educational services and the free movement of students between countries, in order to produce a more educated and mobile workforce, able to deal with the demands of the global knowledge economy.

With globalization, courses are increasingly being geared to technological innovation and the needs of the job market. This makes education a tool for a three-tiered pyramid, comprising the science-media intelligentsia working in synergy with big businesses and the authorities. The summit is dominated by the powerful proprietors of techno-science, who are linked to finance and industry, and who strongly believe that technology is the root of all change, and that technological developments cannot be resisted. These technocrats control a large share of the world's tangible and intangible resources. They are also connected to the economic and military bureaucracies of the most powerful nations, grouped together in multilateral bodies focused on the economy. These three groups widely promote the notion that globalization and its correlate, the mercantilization of education, are inevitable. In their view, globalization is tied to technological progress, and with it the liberalization of trade, economic deregulation, privatization, and competitiveness. Education in this framework constitutes the principal tool to adapt to these changes and benefit most from them (Marquez, 2002).

The GATS agreement refers to four modes of supply of services, and each carries a potentially significant impact on patterns of current supply and demand of higher education. These include cross-border supply (where services flow from the territory of one WTO member into that of another, and are transmitted via telecommunications or

mail, which has a potential impact on distance learning initiatives); consumption abroad (where a consumer or their property moves into another member's territory in search of a service, which carries implications for the international flow of students); commercial presence (under which a service supplier of one member establishes a presence in another member's territory, which impacts overseas facilities, branch campuses and partnerships); and movement of natural persons (based on persons of one WTO member entering the territory of another to supply a service - examples of which are accountants, doctors or teachers - which impacts academic mobility). Even though all forms and levels of education are listed, it is mainly higher education and adult education that are considered as export commodities. Furthermore, negotiations have almost exclusively involved trade specialists, rather than educational experts, and national authorities, but not general stakeholders (Knight, 2002).

GATS is a legally enforceable agreement. Any member nation can take a dispute to the WTO, which in turn can force the country to change its practices to ensure that it does not restrict trade. Recent proposals by the United States, New Zealand and Australia take the position that the GATS provisions should be comprehensive, achieve higher levels of liberalization in all service sectors, and promote the expansion of market access and the elimination of discriminatory barriers. Overtly, the U.S. proposal is to create conditions favourable to suppliers in the areas of job-oriented training services and educational testing services, but the concern is that this would open the whole higher education sector to globalized trade (van Vught, van Der Wende & Westerheijden, 2002). Some of the barriers which GATS is working to eliminate include government monopolies and barriers against the commercial presence of foreign education providers,

government subsidization of domestic institutions, and differential treatment of foreign students (Meek, 2002).

Individual governments are subject to many constraints under GATS obligations (NTEU, 2001). There can be no restriction ban enforced on the number of service providers; no restriction can apply with respect to the type of legal entity under which the provider may function; no limit can be enforced upon the percentage of foreign ownership; qualification requirements and procedures, technical standards and licensing requirements should not be more burdensome than necessary to ensure the quality of service, and in the case of licensing requirements may not in themselves be a restriction on supply; there may be no restriction on intakes in order to avoid an oversupply problem; and national subsidies which were formerly limited to domestic public providers must be equally available to foreign providers.

Some critics argue that globalization, and in particular the role of the WTO, will harm higher education in small nations, and accentuate the existing inequalities among the world's universities by strengthening the dominant position of world-class learning institutions in advanced industrialized countries. However, the WTO's influence in a particular country is subject to the commitments a government makes to the different agreements, which emphasizes the need to have local higher education policy makers involved in the negotiations. Developing countries remain disadvantaged because of the general trade inequalities directly relevant to higher education (Altbach, 2001).

The significance of these developments is reflected in the data of three leading countries in global higher education services, namely the United States, the United Kingdom, and Australia. Education and training services rank among the top five classes

of U.S. exports, accounting for four percent of total services revenue in 1999 and more than US $14 billion of exports receipts in 2000. In the U.K. they also account for about four percent of services revenue. The U.K.'s share of the global market for international students reached 16 percent in 1998, and the government aimed to increase this to 25 percent. The higher education sector in Australia ranks fifth in general exports, and was estimated at US $3.2 billion, with 150,000 foreign students enrolled in universities in Australia in 2000 (Council for Trade in Services Secretariat, 1998; European University Association, 2001).

Jordan's liberalization measures. Since the early 1990s, with the support of the World Bank, Jordan has undertaken considerable stabilization and structural adjustment measures. The economy's initial response to the government's reform program was strong, achieving an average growth rate of 7.6 percent per annum, a reduction in its fiscal deficit, low inflation, and a conducive monetary management policy, which helped in building up foreign exchange reserves of over five months of coverage of imports. This economic situation witnessed a steady deterioration from 1996 to 1998, as its growth level fell below its population growth rate, and annual per capita income declined approximately two percent. This decline was attributed to extraneous factors outside of its control, including the ailing peace process, the shrinking market for Jordanian products in neighbouring states due to the decline in oil prices, and the spillover effect of sluggish Asian economies. The government believes that fulfilling the requirements of accession to the WTO is bound to enhance the performance of the economy, and has taken a number of measures in this direction, especially with respect to privatization and trade liberalization. It has also undertaken public sector reforms, which include education

as an integral part of its development plan for the coming three to five years (World Bank, 2003a).

Jordan is seeking to become a key player in the higher education market in the region. It opened its domestic market to free trade by granting approval to foreign universities to set up branches there, giving corporations the mandate to establish private universities, and encouraging national universities to set up offshore branches. It is also intent on benefiting from a borderless e-world by working towards internet connectivity for all its public universities, providing on-line education, and participating in the Arab Open University (AOU). Jordan sees this dynamic contribution as a critical response to the education and training needs of the knowledge economy, as articulated in its proposed needs for higher education reform.

Promoting the need for reform. The government, private sector, and academia were invited to participate in taskforces, as stakeholders in the development of the higher education policy reforms initiated by the Minister in September, 2002. These policy reforms demonstrate a broad commitment to directing higher education towards serving Jordan's entry into the global economy. For example, reforms promote training that meets business and industry needs, since programs that prepare students for immediate entry into the working world cut costs for corporations, and can stimulate job creation by luring multinational investments.

The policy reforms articulate the challenges, the vision, and the principles that education needs to support in the framework of two key trends that will have major implications on higher education, namely the global market needs and the information and communication technology revolution. From a distance, the need for higher

education policy reforms seems to be internally driven, as a result of the high profile being given to advocating the need for education reform.

Conditions for funding reforms. Most governments were not able to negotiate on par with donors, due to their inability to articulate needs, and in developing and implementing strategic plans (Kiernan, 2000). At the same time the gap between the development plans and the reality of higher education was increasing. Besides their cost inefficiency, public higher education seemed to largely benefit students from wealthy backgrounds over their poorer counterparts.

It was against this background that the Basic Needs Philosophy of the 1970s gave way to the demands of Structural Adjustment Programs (SAP), initiated and insisted upon by the IMF and the World Bank. These required austerity measures through a reduction in government spending. Since most government spending went towards sustaining the civil service (of which at least half were teachers), any significant reduction in their salaries could have led the government to jeopardizing its chances of survival. As a result, fiscal austerity affected the quality of education, manifested by increasingly crowded classrooms, shortages of instructional material, limited training for teachers, declining numbers of places in higher education institutions, and the introduction of tuition fees. As a result, a common scenario among developing countries was one characterized by continuous hardship on the poor, induced by widespread corruption, particularly as a result of the decline in the value of the salaries of public servants.

Based on the premise that labour was the only asset of the poor, the efficient use of it was considered the optimal tool for alleviating poverty, and a rationale was

advanced for educating the poor. This rationale overshadowed the former one, which supported education as a fundamental human right. Social funds programs were set up. Emphasis was put on the need to engage the private sector in extending social services, with the idea that market forces would make up for the deficits in education and health services. This orientation overlooked the cases whereby the private market did not evolve automatically to fill in the gaps left over by the state in the field of social services. Realizing this weakness, the World Bank assumed a more realistic view with respect to having social services under the complete control of the market.

Higher education is now confronting conflicting pressures from international assistance agencies to expand enrollments and improve equity, while raising tuition fees. Assistance agencies argue that maintaining low (or no) tuition does not improve access for lower income groups, and often it is the middle or higher income groups who benefit most from these policies. They emphasize that the strongest economic factor influencing access is the burden of living expenses, which result from having to move from rural to urban areas to gain access to education. In addition there is the matter of the differential quality of secondary school education that students receive in privileged versus less privileged areas, and differential program access in higher education (Chapman & Austin, 2002; Lewis & Dundar, 2002). They advocate reforms for raising fees to cover most if not all student expenses, with a simultaneous setting-up of a student assistance fund for the needy.

Chapter 3: Conceptual Framework and Methodology

In this study, I try to understand changes in higher education in countries of the North and South, taking Jordan as a case study, and drawing attention to interactions that have taken place in the context of globalization. My aim is to stimulate the intellectual debate to further understand the nature of the higher education reforms, and analyze them with a view to gaining an in-depth understanding. However, I do not intend to forecast what may happen in the future.

I have used a qualitative research methodology, guided by a social constructivist paradigm, that assumes a relativist ontology and a subjectivist epistemology, and follows a set of methodological tools that are naturalistic. A social constructivist view of knowledge questions the universal application and validity of particular ways of knowing dictated by powerful agencies promoting globalization, on the basis of being objective, scientific and therefore legitimate. It helps show that such prescribed ways of knowing end up in a totalizing and confining effect. This view is further anchored by a case study research strategy that makes the case the focus of study, and links it to the theoretical position established in the literature linking higher education reforms to globalization.

Engaging in self-reflexivity throughout the research process has helped sensitize me to my three overlapping, interactive selves (Lincoln & Guba, 2000b). I am a single, middle-aged female, who has been exposed to Middle Eastern as well as Western cultures. I have lived, studied, and worked in both cultures. I am privileged over many others (particularly in Jordan) with respect to education, travel and social status. This makes me feel that I owe it to others, especially those who are not as fortunate, to share

my learning experience. The second self is research-based, reflected in how I tailor my research to incorporate a variety of perspectives regarding higher education reforms and globalization. The third self is that which evolves out of the interface of my personal self and the research context, evidenced by my interactions in the field.

Conceptual Framework

I developed this study with a social constructivist paradigm in mind. Social constructivism sees human knowledge and the criteria and methods we use in our enquiries as socially constructed. Discourse about the world is not a reflection or a map of the world, but an artifact of communal interchange. Social constructivism does not see criteria for judging reality or validity as absolutist (Bradley & Schaefer, 1998). Rather, it sees what is real, what is useful, and what has meaning, as derived from community consensus, especially for action and further steps. It views a large portion of social phenomena as consisting of the meaning-making activities of groups and individuals around these phenomena. It considers social constructivism central to the meaning-making activities, since it is the meaning-making/sense-making/attributional activities that shape action or inaction (Lincoln & Guba, 2000a). Thus, my social constructivist account does not consider scientific formulations to be the result of an impersonal application of de-contextualized, methodological rules, but as the responsibility of globalizing agencies involved in active, communal interchange.

A social constructivist paradigm challenges policy makers to grapple with a new conception of knowledge, and dismisses the traditional empiricist assumptions that hold claims of established scientific knowledge, through the process of empirical verification

and falsification. This traditional Western conception of objective, individualistic, a-historic knowledge has insinuated itself in almost all aspects of modern institutional life. This paradigm removes 'knowledge' from the data-driven domain, and places it in the hands of the agencies of globalization involved in their communal interchange on which the construction of this knowledge is based.

With the emphasis on the social nature of knowledge in this study, I hope to stimulate discussion regarding the process of higher education reform, revisiting background assumptions about the need for this reform, and what is considered the objective basis of reform (Gergen, 1985). I recommend reviewing the foundation of knowledge and knowledge production underlying the World Bank's policy-based research and the formula it prescribes, and I direct attention to the dominant assumptions underlying the need for reform. This study views the higher education reforms advanced by the World Bank as only one of many possible knowledge constructions developed by social processes. In this particular case, these knowledge constructions are influenced by the power relations and the particular interests of powerful board members representing and directing global capital among other globalization interests. The reforms advanced are formed deliberately according to neo-liberal inspired methodological rules and criteria. These provide the material conditions in which the new world hegemony of globalizers is exercised through economic globalization. The reforms are promoted on the basis that they will bring about greater economic competitiveness, lower poverty and inequality, stronger democratic institutions, and greater social stability (World Bank, 1999).

Central to the reproductive modalities of economic globalization are strategies for operating in the global economy. Foremost among these are new education-work requirements and a reconstituted streamlined role for the state to facilitate the needs of global markets and international trade liberalization. These modalities were reflected in the World Bank's diagnosis of the higher education system in Jordan and the prescription it advanced for operating in the global economy. Its diagnosis includes key issues such as state funding, poor governance, lack of economic relevance, centralization, and inequitable access. It prescribes measures of financial autonomy from the state including raising tuition fees, systemic reform including looking at international standards and assessment, preference for investment in ICT, support for practical research and technological innovation, focus on economic relevance of curricula and work-related skills required by the global economy. The potential impact of such a neo-liberal-inspired globalization policy on Jordan is an education system that will serve a narrow economic model, to accommodate the needs of the global economy with respect to knowledge production and innovations, and skilled labour.

In revisiting the reforms advanced by the World Bank in terms of knowledge constructions, it is important to connect the reform process to the role of the World Bank as a global market advocate as well as its disregard of local knowledge and resources in its promotion of standard 'one size fits all' reforms. The role of the World Bank as a global market advocate should be given careful consideration, because this implies that its global capital interests direct its institutional policy and education framework. Accordingly the World Bank Higher Education Development Project in Jordan should be linked to its role of building and stabilizing global markets by providing skilled labour.

At the same time, the social constructivist view of knowledge questions the World Bank's statements and its claims to epistemic privilege, neutrality, and local relevance. World Bank statements linked to its role as a global market advocate help to clarify its underlying one-dimensional economic view of education and its global market-driven imperatives. In order to judge their neutrality, it is important to look closer at sources behind the World Bank's construction of educational knowledge. These sources are principally informed by the World Bank's Education Knowledge Management System (EKMS) whose role is to create, capture, distill, and disseminate relevant development knowledge on education (World Bank, 2000). These knowledge constructions are conveyed by the World Bank research and policy-making group to explain, describe, or account for their views on higher education and the reforms they prescribe.

In this study, I foresee the impact of the proposed reforms to be one of restructuring the higher education system in a way that responds to how the World Bank defines education. Ideologically, the World Bank focuses on the economic role of education that fits within the narrow boundaries of economic growth as an undisputed good. Based on human capital theory, the World Bank sees the role of education as linked to the positive returns it yields on invested educational monies, in the form of economic growth and development. This investment in human capital takes the form of reforming the current system in terms of quality, access, and governance. Policy makers have to expect that such a narrow perspective of education will distance higher education in Jordan from traditional humanist goals. It will also accommodate the World Bank's need with respect to distancing educational policy and practice from its broader social, cultural and political contexts.

Within World Bank policy and practice, education is pursued as a means of economic expansion, made possible through its extensive capacity for analysis and research and its long history of educational projects. However, it gives no mention of its underlying institutional biases as global market advocate, leading policy makers and planners to believe its claims to professional and intellectual leadership in the field. It does not include a plan for using local knowledge, intelligence, values and cultural resources. In the World Bank education sector strategy (World Bank, 1999), focus is on global changes and how they impact education. The strategy talks about drivers of change with respect to globalization, market economies, democratization, technological innovation and a changing public/private role, but overlooks local drivers of change. Thus local values and structures are not heard, and conceptual frameworks based on local knowledge are ignored. Such disregard for local inputs is based on its disregard for local information as important knowledge. The result is a one-dimensional view of education, informed by World Bank references, with unilateral claim to professional and intellectual leadership driving reform. This claim fails to develop a plan for using the knowledge, intelligence, values and cultural resources of the recipient of aid.

Based on my social constructivist paradigm, I draw attention to the possibility of challenging the meaning-making activities of leading globalizing agencies which prompt reform, especially when they are found to be incomplete. This study casts a critical eye on how deficits in local research capacity help in promoting the diagnosis and solutions advanced by international donors promoting globalization, which support reforms promoting capitalist consumerism under the neo-liberal paradigm of globalization. Research by the donor agency applied to justify reforms will stimulate foreign imports,

such as experts, materials and machines from the global market, and orient locals to stimulate the cash economy (Preston, 1997). With the local research skill deficit, international assistance and consultancy will continue to be a means to fill this gap, strengthening their control of research and its consequent impact on policy making and policy reforms. It is against this background that the quality of local research in Jordan must be raised to international standards, to ensure its acceptability, thereby acquire a voice in tailoring Jordan's higher education reform process.

The most critical need is to develop a strong local capacity to appraise and challenge the quality and relevance of the research advanced, particularly when it is externally initiated in a collaborative framework, as well as to evaluate the skill and experience of those who design and execute it. Local researchers need to develop skills across the range of methods appropriate to cross-disciplinary studies. Enhancing this infrastructural capacity is key if research is to be efficient and locally effective in improving the prospects of realistic policy formulation and successful implementation. It is also the only way to enable Jordan to respond to the challenge of the social constructivist paradigm in grappling with a new conception of knowledge, one that provides an alternative to the traditional empiricist assumptions that hold claims of established scientific knowledge through the process of empirical verification and falsification. This traditional Western conception of objective, individualistic, a-historic knowledge has insinuated itself in almost all aspects of modern institutional life. It removes knowledge from the data-driven domain, and places it in the hands of the agencies of globalization involved in their communal interchange on which the construction of this knowledge is based. Thus, scientific formulations based on the social

constructivist account are not the result of an impersonal application of de-contextualized, methodological rules, but are the responsibility of agencies involved in active, communal interchange.

Only by developing a home-grown communal understanding based on an empirically informed base and an analytical framework for interpreting the situation of higher education in Jordan can educational reform be tailored to the particular needs of Jordan's local conditions. This understanding requires conceptual frameworks based on local knowledge and strategies needed to improve higher education.

The degree to which the higher education reforms advanced by the World Bank are informed by its prevalent research-based policy premised on diagnosis and prescription should also be examined. This means that its policy was not fundamentally dependent on the empirical validity of the globalization perspective in question, as much as it was socially constructed through the globalization processes of communication, negotiation, and rhetoric. This study therefore considers the possibility of challenging this communal-based understanding promoting reform. This understanding can falter with time as its intelligibility is questioned within the community of interlocutors. Perspectives, views, and descriptions can then be abandoned. Rules for what counts as what evolve continuously, and vary with the preferences of those who use them. In the absence of a challenging informed voice from Jordanian recipients of aid, those at the top of the globalization political ladder, such as the World Bank, will continue to claim epistemic privilege, constructed by their interactive dialogic community of globalizers. They will continue to promote reforming higher education on the basis of an economistic approach, reorganizing national priorities on the basis of global market needs rather than

local needs. They will also continue to set limits on what local policy makers involved in higher education need to understand about their higher education system and how to make it useful to the world around them (Harding, 1993; Longino, 1990). The main concern of the globalizers is how higher education works to serve the needs of the global market, and how best can it be engineered towards this end. Accordingly, the task of the researcher in the globalization rhetoric is to provide information that is of direct use for this kind of social engineering.

This study attaches critical significance to the higher education reforms prescribed by the World Bank. I view the Bank's neo-liberal-inspired description of the higher education system in Jordan as a form of social action, since it is a reflection of its own agenda and its institutional stake in the outcome of its performance as a global market advocate. It has to stay true to its global capital interests, as overseen by powerful board members, and cannot commit resources that neither build nor stabilize markets. This role explains why its higher education reform formula is intertwined with its other activities serving an engineering model, which pictures society as a machine. In this model, all the various parts of a national society are seen to serve one another, capable of being re-engineered so as to maximize the performance of the whole to accommodate the needs of the global market. Current political discourse under globalization emphasizes the need for a continual improvement in the performance of all institutions, so as to ensure national success, and to be able to survive in the global economy. With the interest of global markets being the focus, this model limits education to one economic model rather than broader humanist goals. Thereby it does not succeed in building on the rich, varied potentials of the human-based landscape of education, and detaches its

policies and practices from the dense linkages between education, and the political, social, cultural and historical dynamics that ought to form the basis of world educational policies. At the same time, these descriptions and explanations form integral forms of various social patterns, which serve to sustain and support certain neo-liberal economistic patterns in higher education reform, such as the view of education as a private good, and those based on human capital theory, which define a solid role for educational investment, leading to a positive return on money invested in education. These descriptions exist to the exclusion of others, such as those based on notions of knowledge as a public good, as well as those evolving from the perspective of the human-based landscape of education. These descriptions also help agents of global markets to maintain a narrow focus on education as a means of economic expansion based on prescribed formulae.

I have based my study on the epistemological premise that reality is constructed by individuals interacting with their social worlds. I see that my role is to understand the meanings that people have constructed by trying to shed light on how they make sense of higher education reforms, and the experiences they have in it. Implied is my concern with the impact of higher education reforms as they are lived, felt or experienced (Sherman & Webb, 1988). Throughout, I aim to understand the meaning of higher education reforms, in their wholeness, revealing the manner in which all the constituent parts advanced under the banner of reform work together to form a whole. My study aims to expose the underlying ideal of global market integration as a strong notion of causality, whereby a fixed relationship can be expected to take place between cause and effect. With qualitative research, this notion of causal determinism can be rejected, supported by

quantitative research (Crossley & Vulliamy, 1997). Accordingly, it can lead to the realization that globalization can create a number of outcomes in higher education, and that causal factors operate on an existing state of affairs of the human-based landscape of higher education at particular points in time. These outcomes can neither be predetermined nor predictable, since events can branch out into various routes, subject to the sequencing of events and the particular factors coinciding with the policy intervention. In addition, this assumes a linear relationship between economic strength in the global economy and a sound educational system.

Research on low levels of economic development is frequently attributed to weaknesses in higher education, in order to justify foreign assistance loans. Despite its good intentions, this approach helps to promote a deficit model of countries in the South. Such tendencies often lead researchers to unhelpful intellectual and planning frameworks which result in findings that are unrealistic for the relevant context (Hammersley, 2002). This functionalist quantitative approach to policy-based research should be rejected, along with the correctionalism that often follows from it, which gives the impression that functional analysis can lead directly to a diagnosis of what is wrong, and to recommendations about what should be done to remedy the situation.

Adopting a social constructivist paradigm emphasizes the communal basis of knowledge, the processes of interpretation, and concern with valuational underpinnings of objective accounts. I deliberately chose this approach for my study in order to open an avenue that may emancipate higher education reform from the demands of convention. A social constructivist lens provides the ability to see beyond what is considered as higher education reforms prompted by objective knowledge, by unveiling the globalization neo-

liberal inspired ideology accounts on higher education which are driving reform. I hope that following this approach should help broaden and democratize the intellectual debate on the impact of globalization on higher education, besides submitting this impact to a continuous process of reflection. The need is to be proactive in bringing forward home-grown perspectives of the higher education scene, questions of interest for inquiry, and in designing outlets for findings to be shared more widely within their community in Jordan and beyond. I believe that this active role fosters a broader community engagement, thus working towards redressing power imbalances by giving voice to the lesser-able when engaging with the empowered (Mertens, 1998).

Since social constructivism offers no foundational rules of warrant, it is in this sense relativistic. However, this does not mean that anything goes, because of the inherent dependency of knowledge systems on communities of shared intelligibility (Gergen, 1985). Policy making activity in this context will always be governed to a large extent by normative rules, but these rules can be viewed as historically and culturally situated, thus subject to critique and transformation. 'There is stability of understanding without the stultification of foundationalism' (Gergen, 1985, p.273).

Reliance on community narratives grounded in the democratic focus of inquiry underscores the need of having these accounts bounded by moral considerations. In contrast to the moral relativism of the empirical tradition, moral criteria are considered relevant in the context of objective policy making. Thus the impact of globalization and its related practices on higher education, sustaining certain patterns of conduct and destroying others, must be assessed in terms of good and ill. Shifting to the social constructivist paradigm exposes two inherent dangers in the conventional texts which

claim to be scientific, which are that they lead us to believe the world is simpler than it is, and may re-inscribe enduring forms of historical oppression. In other words, they confront us with two simultaneous crises, a crisis of authority, which tells us that the world is one way, when perhaps it is not, and a crisis of representation, which serves to discretely re-create this given world, rather than some other, perhaps more complex but more just.

Higher education reform in Jordan therefore needs to work towards the creation of new texts, that de-centre the centre, by allowing the globalized party and those concerned in both the North and the South to comment upon the underlying ideology of globalization that the dominant texts of the World Bank fosters. Only then can national higher education policies forgo the closed, neatly bounded world of the dominant texts of the globalizers in favour of more open-ended and less conveniently encompassed texts. With that, policies of higher education in Jordan will be able to transgress the conventional boundaries of what are considered objective texts, and represent texts reflecting the multiple realities of the human relations-based landscape of education.

In essence, by following the social constructivist approach, higher education policy makers endorse the concept of expanding the ideas of what constitutes legitimate inquiry on the basis that each inquiry contributes a unique perspective to understanding. This makes the possibilities for variation and exploration open-ended, limited only by those engaged in the enquiry, and the realms of social and interpersonal life that captures the interest of researchers. Following this approach promotes multi-vocality, new textual forms, and contested meanings and endorses emancipation from what Hannah Arendt

calls 'the coerciveness of truth', emancipation from hearing only the voices of the globalizers and from seeing the world from their perspective (Lincoln & Guba, 2000b).

Research Questions

The study aims to examine the following questions: (a)how and why globalization impacts higher education policy reforms in Jordan; (b)what are some of the implications of the implications proposed, given that globalization is directing the education framework at the expense of national interests.

Data Collection Strategy

My first field data gathering attempt was from May to September 2002, concurrent with my ongoing library and electronic search in Jordan. A more intensive library and electronic search, covering books and journal articles published over the past five years on education and globalization, coupled with a thorough exposure to the literature on qualitative research methodology, followed on my return to Montreal in October 2002. Another period of field work for data collection took place starting in May 2003, for almost eleven months, keeping me abreast of the developments in the higher education scene in Jordan, in addition to exploring different perspectives by meeting and holding discussions with policymakers and key informants in the National Centre for Human Resource Development (NCHRD), the Ministry of Education, and professors at the University of Jordan. Being well-versed in the local culture, I chose to avoid interviewing these people, so as not to risk jeopardizing their openness towards me, as they considered me almost as a former colleague. I know that they generally disfavored giving official interviews because even giving public information made them feel

accountable. My visit to Jordan also helped me in collecting more focused archival material and current documents, and I was able to monitor the media for coverage of news, interviews, and analysis. I relied on the newspapers *al-Rai* and *The Jordan Times* as my two key resources for coverage of events in higher education, since they have the widest circulation with respect to Arabic and English-speaking readers in Jordan. I also attended relevant events, including conferences and lectures on the future of education, the reform initiative, scientific research, and intellectual property.

I chose to carry out a preliminary data gathering field study for a number of reasons. Foremost among these was to gain a broad view of who and what was involved in the education reform scene, prior to the selection of the higher education reform initiative, and the development of a theoretical proposition for the study. I carried out my initial data gathering field study with the awareness that the data collected at this stage would be much broader and less focused than the final data collection. This study helped me in a number of ways, including developing a data collection plan, covering the data needed, the people to be contacted, and the procedures to be followed to get to key resource people. Oftentimes I approached potential informants without prior introduction, especially when I found that the people I knew were too busy to find time for me. The high-ranking officials at the Ministry of Education are cordial to the many people who drop by their offices daily with grievances, or who require assistance of some nature. In addition, officials answer many phone calls of the same nature. They serve on many committees, and must attend many daily meetings, as well as respond to bureaucratic procedures, manifested daily by the numerous files on their desks waiting for clearance.

It helped to learn who was involved in educational policy making, and establish contact with key informants across the education spectrum.

I took different routes for data collection, and gathered as many documents as possible with the help of my contacts. I know from previous experience that, even with their manifold responsibilities, these officials would still welcome me, insisting that I sit and have a cup of coffee. Then I would have to wait, exercising the utmost patience and restraint. This typical hospitality pattern is entrenched in the Arab culture, and is manifested in the attitude of officials receiving guests in their offices. It follows, therefore, that guests cannot be turned down, despite the burden of one's workload, as everyone is entitled to be listened to. Taking this into consideration, I would sometimes try to cut down on the time-consuming chain of introduction, whereby I would be referred to somebody by an acquaintance, by venturing to contact people whom I didn't know. This was not typical of Arab culture, but as the population of Jordan grows beyond being a tribal society, people have begun to become used to receiving individuals they do not know.

I started developing and solidifying a rapport with key informants, and succeeded in initializing instrumental communication channels. Some of these informants within the Ministry of Education included the Director of the Training Department, the Press Secretary, the Director of the Minister's Office, and the Director of the Relations with Foreign Assistance Projects. Others included the Director of the Social Projects Department at the Ministry of Planning, a journalist at *al-Rai*, professors in the Humanities and Social Sciences Department at the University of Jordan, and the Vice-

President, Project Director of the Higher Education Reform Project, and librarian at NCHRD.

Having established these interpersonal relationships, I began developing some insight into the shape of the study, drawing questions and launching my first attempt to develop my research design, fully aware that it would be revisited, fine-tuned and readjusted. The research design was informed by significant theoretical issues in the literature, together with my background experience with the Ministry of Education. One question that I had to tackle was whether to wait until the proposed policy reforms for higher education were put into action. Taking into consideration my time limitations, especially as new policies generally take time to be finally endorsed, I chose to focus on collecting as much information as possible on the principal issues and concerns confronting higher education. This choice led to the question of who to contact in order to gather documents on higher education reforms. I tried to link my choice of informants to those seasoned enough to expose me to the background leading to the current developments in this area. For example, my choice to contact the Project Director of the Higher Education Reform Project at NCHRD was not only based on his current position, but equally on his many years of experience at the Ministry of Planning as Director of Social Projects Department.

Sources of Data

Examining documents and materials on higher education reforms in Jordan was crucial to my data gathering field study. I conducted a review of all the available data by visiting the main local libraries and reference centres, including those found in the

universities, NCHRD, the Shoman Foundation, the Department of Statistics, the Ministry of Planning, and the Ministry of Education. In addition, I was in constant e-mail contact with the World Bank's Middle East Information Desk.

I collected data from as many diverse sources as possible, to corroborate and enhance its trustworthiness. I examined public documents and materials to help me gain in-depth understanding. These included internal reports such as project proposals and evaluations, progress reports, formal studies and diagnostic reports on higher education in Jordan. Some examples are *Annual Statistical Report on Higher Education: 1999-2000*; *Draft Strategy of Higher Education E-Learning: A Strategic Framework*; *Human Resources Development Strategy in Jordan*; *Launching E-Government in Jordan; Jordan in Figures: 2001; 2002*; *Computerization Projects: Assessment of Existing ICT Capacity*; *Human Resource Development: The Route to Manufacturing the Future*; *Proposed Framework for Future Action: Final Statement of the Vision Forum for Higher Education*; *Strategy Reform Plan for Jordan's Higher Education*; and *Tertiary Education in Jordan: A Vision for the Future.* Further documentation included World Bank studies and project documents for Jordan.

My personal notes included a record of the chain of contacts I had to go through to reach the key resource people needed. The data collection took me through different routes, most of them on a trial and error basis. Some capitalized on my previous involvement with the Ministry of Education, others were based on the information I gleaned from documents regarding names, positions and titles of the relevant people, as well as the names of organizations involved. Appendix 2 illustrates a clear timeline of the events and people involved.

My notes included summaries of the activities I attended. Key among these activities were the Vision Forum for the Future of Education conference; a number of lectures, open discussions, and press conferences on education reform by the current and former Ministers of Education, Higher Education, and Planning; Jordan's Intellectual Property Rights Conference; and a forum on Distance Education and the Future of Higher Education, which included the Minister of Higher Education and the presidents of the Arab Open University, Jordan University and Philadelphia University.

My data collection was guided by my research questions, educated hunches, and emerging findings. Public records, such as government documents, program documents, and project documents were helpful in grounding my study in the context of Jordan, furnishing me with historical understanding of the changes and developments in education. Together with newspaper articles, these documents gave me descriptive information on the status of education. These were added to the different perspectives on the issues and concerns surrounding education in Jordan, and the latest developments in the education scene and the national front in general. I found project documents and correspondence useful with respect to people's names, titles, and positions, as well as the names of organizations involved in education reform. They led me to information and insights relevant to my research questions, and the serendipitous discovery of reforms linked to globalization in other contexts, which in turn helped me corroborate my theoretical construct linking reforms to globalization.

This inquiry capitalized on the flexibility of the case study method with respect to analyzing data as they were being collected (Gillham, 2000; Gomm, Hammersley, & Foster, 2000; Simmons, 1996; Stake, 1995, 2000a, 2000b; Yin, 1982, 1993, 1994). It

gave me the opportunity to review the documents as I was gathering them, while bearing in mind that they were part of a communication process among parties attempting to achieve a certain objective - they had been written for a particular purpose, and a particular audience. Awareness of these undertones drew my attention to the need to hear other voices, and broaden my data sources

I searched archival records in conjunction with other sources of public documents in developing this case study, including census records, statistics and charts. As expected, the archival data available was more quantitative than qualitative, as most of the research conducted in Jordan tends to be quantitative. Simply having numbers did not enable me to ascertain their degree of accuracy, so I was wary in referring to them as evidence, considering them only as indicators. I applied triangulation in this instance, considering it as the most effective tool for checking the trustworthiness of my data.

My study included personal documents, which were based on the notes I took to document clues, insights, and the experiential side of my study. Through those documents I wanted to remind the reader of my presence and the subjectivity of my account. It was important for me to provide description to make myself visible to the reader and to establish interactivity between me as a researcher and phenomena. In the process I did not focus as much on content but on giving the reader a sense of the ambience by describing the setting or the physical context.

Preliminary Research in Amman, Jordan

Previous involvement with the Ministry. This section presents a narrative of my personal experience in gathering data from the field. Having established a favorable

reputation through my work on a development project with the Ministry of Education was conducive not only to gaining access to the field, but also capitalizing on the trust they had for me in building a new collaboration for this study. I had been exposed to the public education scene in Jordan, through my work as manager of a Capacity Building Project for the management of the education sector; a £1.5 million pound project funded by the British Department for International Development (DFID), and run by the British Council. The Ministry of Education constitutes the second largest government body in Jordan, after the military, and work on this project involved dealing with staff across the Ministry on a daily basis.

This project coincided with a critical time period for the Ministry. Scores of staff were being laid off and many others given early retirement. Nobody was indispensable. Many of the staff members who had participated in rounds of training workshops under the Capacity Building Project, with the expectation that they would lead the process of development in the Ministry, were among those who disappeared. I had to maintain closer proximity to the Ministry staff in these stressful times, to keep up with the rapidly changing scene, and to be able to propose candidates for training in both Jordan and the U.K. My daily experiences at the Ministry exposed me to scenes of political factionalism, resistance to change and communication breakdowns. It came as no surprise that feelings of animosity, fear, and insecurity were rampant. Introducing change in this context was a big challenge for me as project manager, compounded by the requirement of my gaining their acceptance before they would listen to talk of changing their traditional management practices. Acting on my strong belief in the importance of this project for Jordan's national interest in upgrading the management of its educational sector, nothing deterred

me from investing every effort to move this project forward, by helping to make it reach its intended participants and by ensuring that its content was tailored to their needs.

After about 18 months, going to the Ministry felt like going to my second home. Not only was I made to feel one of them, but a feeling of bonding developed between us. Thus, all my contacts were very friendly to me, welcoming me in their midst, not hesitating to be cooperative in accommodating my needs, and assisting me in moving the project forward. My experience with the Ministry through this project made me feel that I owed it to the people of Jordan to acquire a higher university degree to be better able to serve them. And it was this moral commitment that made me choose a topic relevant to the issues and challenges confronting higher education in Jordan today, one that has been of special concern to the key policy makers in Jordan including H.M. King Abdullah, as well as the World Bank, in its established capacity as the only development agency involved in the comprehensive higher education reform in Jordan.

Almost two years after having left the project, I approached the Ministry in July, 2002 for my research. Despite the many changes that had taken place, my reputation opened doors for me. I was struck by the very warm welcome I received from everybody I went to see, from the office of the Minister to the directors, to junior staff members, to the janitors. Their reception was most reassuring, and I took this to mean that I left them with a positive image. Besides my established status, I believe that my mature age, in addition to a bit of luck, stood in my favour. I was granted permission to meet the Minister of Education, who expressed every goodwill in assisting me in my research endeavours. I briefed him on my previous engagement with the Ministry through my

work on the Capacity Building Project, and presented him with some samples of my research work, which he asked if he could keep.

Gaining access. The Minister expressed a great deal of interest in what I was doing, and immediately headed to his computer to retrieve some draft documents regarding the Ministry's reform plan, and its plan for expanding e-learning to cover all of Jordan. He explained that the Ministry would be submitting these to an upcoming conference, the *Vision Forum for the Future of Education in Jordan*, to be held on September 15 and 16, 2002. He elaborated that the King had taken special interest in hosting this conference, and that many high-profile representatives from the World Bank and the OECD, as well as all the national educational institutions and the business sector would be participating in it. Once he discovered that I was planning to leave for Montreal on August 30, he asked if I could prolong my stay in Amman in order to attend the conference, which he felt would provide an interesting lead for my research. I expressed my gratitude for including me in this conference, and he asked me to return on August 23 to join, as an observer, a sub-group preparatory meeting for the conference. He then directed me to meet the liaison officer for foreign assistance projects. I came out of this meeting feeling both happy and reassured. Not only was I granted access to and offered the support of the highest gate-keeping official in the Ministry, but I was also encouraged to pursue my particular research interests with full accessibility to any information that would help me in my endeavour.

I met the liaison officer on August 20. She was very warm in her reception, and I realized that she was a former colleague of mine, when we were both working in the Arab League in Tunis, at least a decade before. In response to her asking how she could

be of help to me, I requested the three World Bank project documents, which she willingly gave me, in addition to the proposed fourth one which was under study, as well as the Ministry's Statistical Yearbook. Although these documents were supposed to cover all the World Bank projects with the Ministry of Education, I discovered later, as I was reviewing them at home, that none tackled higher education. It was then that I started developing my data gathering list to help me focus on the information I needed, based on the issues of immediate concern and the potential sources of information. A one-year break followed my first data gathering visit, which I used for preparing for the next data gathering visit.

On my return to Jordan in September 2003, I contacted the Project Director of the Higher Education Development Project at NCHRD. I assumed that he had forgotten who I was, but contrary to my expectations, he remembered instantly, and inquired how far I was in my studies and whether I had completed my doctoral degree. He was most welcoming and we had a number of meetings in his office. He briefed me on the milestone developments with respect to the higher education reform, especially regarding the directives of His Majesty to the Minister of Higher Education, and the draft strategy soon to be discussed with the Higher Education Council. He patiently browsed through his documents looking for material, and gave me all the documentation that he felt could assist me in my dissertation, such as NCHRD and World Bank progress reports on the Higher Education Reform Project, in addition to some statistical data. He also connected me to the NCHRD librarian and helped me locate other data sources such as the Shoman Resource Centre.

I approached my participants in a relaxed, comfortable manner as one of them, since I was almost a former colleague of theirs by virtue of being involved with them in the Capacity Building Project. Throughout this involvement, I built on this feeling of oneness by making them sense that I was acting as much on their behalf as out of feelings of our mutual national concern for the development of the education sector. They sensed my feelings when I brought forward the topic of concern that they had identified to me as needed, as I was organizing training workshops under the project. At times these topics were at variance with the ones prescribed by the project consultants. On other occasions I emphasized the need to solicit the input of local consultants and to involve them in work in conjunction with expatriate consultants, in helping the Ministry gain accreditation for international standards for quality management systems through ISO 9000.

My frequent visits to the Ministry helped me become a familiar face in their midst. I was aware of the need to show them I was considerate and grateful for whatever assistance they gave, and that I was competent and responsible, and could therefore be trusted with information. By earning their trust and respect, I won their confidence, and felt that I was considered as one of them.

By almost completely immersing myself in their midst in my daily encounters at the Ministry, as a participant and an observer, I developed a sensitivity towards the difficulties these people encountered on a daily basis, most notably the threat of losing their only source of livelihood, considering the massive layoffs hitting the Ministry. I learned never to lose sight of the big picture: that staff in the Ministry were cooperative in their own way, and had always been hospitable and cordial to me, irrespective of the problems they faced. They did not appreciate the patronizing or arrogant approach of

some foreign consultants, who often launched headlong into business and hurried them to meet deadlines, with no consideration for the staff's other work obligations. Very often these consultants chose to focus on the problems and obstacles. Their concern to meet deadlines sometimes made some of them overlook the tireless efforts of many people working in the field of public sector education despite the formidable challenges facing them. Also as important was their lack of appreciation of the need to invest effort in building relationships of trust, which in turn need connecting on a human level.

Activities leading to data gathering. I attended the sub-group preparatory meeting for the conference on August 23. There were about 30 participants, a quarter of whom were females, who were quite vocal in expressing their views. I spotted several familiar faces, including the Secretary General, the media officer, and a number of directors. Also in attendance was a professor from the Faculty of Education at the Hashemite University, whom I had dealt with closely in his former capacity as director of the Directorate of Education in the Ministry. Other attendees included representatives from other universities, the NCHRD, in its national monitoring capacity of World Bank projects, as well as the Ministry of Planning, as a co-host of this conference. The Minister opened the meeting with a brief word welcoming the participants and included me among them, in my capacity as a doctoral student at McGill University. He struck me as a person intent on impacting the educational scene in Jordan, by re-routing its principal directions.

Attending this meeting was very important. It cemented my return to the Ministry with the blessing of the highest-ranking gate keeper in the Ministry, which helped me rebuild an officially recognized position in their midst. It also helped connect me to key people in the Ministry of Planning. The role of the Ministry of Planning in this context

was most important, since it negotiates project funding agreements on behalf of all the ministries requesting outside assistance, including the Ministry of Education.

On reviewing one of the key documents for the Forum, I noticed that it required careful editing. I took the initiative of working on it for three days, and then delivered it to the Minister's secretary. I also handed him a possible design for the cover of the folder of the conference papers, which I thought might be of interest to the Minister. Acting in a very low-profile way, I just said that upon reading it at home, I felt that it needed a bit of touching up, especially as it would be presented in the name of the Ministry. He conveyed his thanks and I left quietly.

On August 27, I headed to see the Minister's secretary. Prior to stepping into the office, I sensed a lot of commotion. The King had been there just before, to follow up with the Minister matters regarding the conference. I sensed that that the timing was inappropriate to be asking for help of any kind, or to even think of finding out whether his secretary had managed to find any information for me. But it was during a few moments of reflection that he spotted me and insisted on welcoming me to his office. I was happy to greet him and wish him well, but then parted. I then went to see him again on September 1. He welcomed me as cordially as always. Many people were waiting for his advice on different matters, yet he asked me to sit and wait until he cleared a few issues. He then asked me to join him, and told me that he had contacted the director of the Higher Education Development Project at NCHRD, and asked him to help me in gathering data for my dissertation, and he advised me to go meet him.

Immediately after this, I contacted the Project Director, and arranged to see him on September 2. He struck me as an authoritative, experienced contact, whose

background experience made him capable of conveying a comprehensive grasp and insight regarding the whole picture. We carried on a brief but cordial conversation, and he then offered to give me the project document I needed, drawing my attention to the fact that it comprised the latest information regarding higher education in Jordan. He gave me his card and asked me to contact him if I needed further information, and he then offered to introduce me to their chief librarian. The librarian was not available, so I arranged to meet him on September 23. At that meeting, he briefed me on the resources they had, and pointed me to the latest book on higher education in Jordan, which he offered to loan me. I instead took the details of its publishers, the Shoman Cultural Foundation, and headed to the Foundation's Cultural Centre, who referred me to their head office. Once there, I was given a copy of the book, as a gift from the Foundation.

The Vision Forum for the Future of Education. Attending this conference constituted the highlight of my data gathering field study. It familiarized me with the key concerns and challenges confronting education in Jordan, taking into consideration the pressing demands of the global economy and the official determination to meet them. The Forum was convened with the aim of putting into action the official policy calling for a remodeling of the education system as a critical step towards realizing Jordan's vision of becoming the information technology hub for the region. This vision was linked to the country's broader economic development imperatives, foremost among them being Jordan's rapid entry to the global economy through its commitment to free trade agreements, and focusing on information technology in its economic development plans. The Minister of Higher Education advocated the need for higher education reforms, and presented a relevant policy for discussion. The policy presented was to be presented

shortly afterward to the Economic Consultative Council (ECC) for further scrutiny. Once it passed through the ECC, it was expected to be taken up by Parliament for final endorsement. Attending this conference was highly beneficial to me, bringing me closer to the Ministry staff, and instrumental in helping me build new contacts. On the intellectual side, it familiarized me with global patterns of reform, promoted by the World Bank and OECD. Identifying these helped me see the close correspondence between them and the reforms promoted by national policy makers in Jordan.

Ninety participants attended the Forum. Key among them were the Ministers of Education, Higher Education, Planning, Labour and Social Development, Secretary General of the Ministry of Higher Education, Secretary General of Amman Chamber of Industry, General Director of the Institute of Banking Studies, and President of the National Centre for Human Development. Also participating were seven international experts in various aspects of reform. These included the World Bank's Lead General Educator for the Middle East and North Africa, OECD's Counselor and Head of the Centre for Educational Research and Innovation (CERI), IT project formulation advisor to Japan International Cooperation Agency (JICA), President of the National Computerization Agency in Korea, and General Manager of City Bank, Amman, as well as some prominent business figures in Jordan.

Preparing for the Case Study

Developing a case study research design. The case study research design played a significant role in this study. It helped me to ensure that the data gathered was pertinent

to the questions of the study, and that its analytical strategies covered alternative theories to that underlying the case study.

Building a case study research design helped me to formulate a theoretical proposition concerning the impact of globalization on higher education policy in Jordan, and confirm it on the basis of established theories and trends linking globalization to higher education policies in other parts of the world. It also determined which explanation was more relevant with respect to the impact of globalization on higher education policy in Jordan. My choice of case study design was intended to be instrumental for advancing knowledge as well as theory building.

Components of the case study research design. This case study research design includes five components. The fist component is the unit of analysis, higher education policy reform. It was investigated in the context of its advancement by the Minister of Higher Education, in the *Vision Forum for the Future of Education*, as well as the Economic Consultative Council Meeting a month later. These reforms have been drawn together in the form of a draft National Strategy (Appendix 1), soon to be passed on to the Higher Education Council for clearance.

The choice of the unit of analysis was based on the high profile given to higher education reforms in Jordan, and evolved from the primary research question of this study, which is the second component.

The third component is the purpose: the assumption of this study is that globalization is influencing higher education policy reforms, and that the World Bank is playing a key role in directing these reforms as a strong advocate of globalization. Exploring the case of Jordan was intended to establish that globalization is behind a range

of issues linked to reform and that the implications of globalization pose challenges to higher education institutions. The choice of case study was intended to help expand the intellectual debate and generalize these theories, with the goal of conducting a generalizing analysis to push ahead emerging scholarship on globalization and higher education.

The fourth component is the data analysis, which examined the impact of globalization on higher education. Using the sources of data available to me, I studied whether corresponding patterns existed in the higher education reforms advanced in Jordan by the Ministry and the World Bank. These reforms were related to the pattern underlying the theoretical proposition, and were considered necessary for Jordan to build a knowledge economy and acquire a niche in the global market. Examples of these included the widespread application of ICT to teaching, learning and administration; higher fees; more private education; more attention given to disciplines and research closely aligned with market needs; a focus on job-related skills; and the need for continuing education. The data analysis involved setting criteria for interpreting the findings.

One criterion was based on the economic globalization discourse; and another on the role of the World Bank as an agency of globalization that puts into action its neo-liberal policy, which aims to promote the free market global economy, by addressing its need for skilled human resources and quality research. I interpreted these criteria on the basis of two rival propositions, one representing the globalizers, and one representing the globalized. These were articulated by the official rhetoric promoting reform in Jordan in forums and lectures.

The flexibility of the case study method gave me the opportunity of analyzing documents as I was collecting them. I found it evident that the documents diagnosing the problems facing higher education in Jordan and prescribing solutions were prepared by a banking institution promoting globalization, as was indicated by their neo-liberal undertones and focus on finance issues as constituting both the key problem and core remedy. Awareness of these undertones made me broaden my data sources to hear the voices of the non-globalizers, the critics of globalization.

The fifth component was the development of a theoretical proposition, which evolved from the components of my research design. It confirmed the presence of an impacting relationship linking globalization to higher education in Jordan, manifested in the higher education policy reforms. The theoretical proposition saw the World Bank playing a key role as a globalizing agency in Jordan, based on its capacity as the only funding and development agency involved in comprehensive higher education reform. It thereby put into action its neo-liberal-based policy, to promote the free market global economy, by addressing its need for skilled human resources and quality research. It advised institutionalizing structural reform in higher education institutions, so as to enable them to proceed along the globalization path. The theoretical proposition anticipated that the policy reforms designated by the Minister, in the *Vision Forum*, would finally be granted clearance by the Higher Education Council.

Relationship between Case Study, Qualitative and Quantitative Research

The case study has a distinctive research strategy, which seeks to understand a particular case as a unit, in its totality (Gillham, 2000; Gomm, Hammersley, & Foster,

2000; Simmons, 1996; Stake, 1995, 2000a, 2000b; Yin, 1982, 1989, 1993, 1994). Locating this case study within a qualitative research philosophical tradition has a number of implications. Foremost among these is that it follows the epistemological philosophical orientation of qualitative researchers, with respect to their view of the nature of reality, knowledge, and the production of knowledge that reality is constructed by individuals interacting with their social worlds. This study tries to understand the proposed higher education reforms within their dynamic web of meaning, rather than viewing them as variables. Meaning is seen to be embedded in the dynamics framing the reforms, and is conveyed through my perception as researcher. At the same time, this study rejects the concept of causal determinism, between a sound educational system and a strong performance in the global market, which underlies the ideal of global market integration. Reforms are introduced to an existing state of affairs of the human-based landscape of education, and their outcomes cannot be predetermined due to their multiple realities and potentials.

In this case study, I investigate globalization as it pertains to higher education in the context of Jordan. The questions I pose are how and why does globalization impact higher education policy reforms in Jordan. I then demonstrate that the direction which higher education is taking corresponds to a pattern of similar initiatives in countries of the North and South, which have a characteristic capitalist economistic approach with neo-liberal undertones. As to why globalization impacts higher education policy reforms in Jordan, I am able to show that the reforms advanced are principally targeted to accommodate to the needs of the global knowledge economy, based on the niche assigned for Jordan, which also coincides with the one Jordan chose to adopt. Thus, the

main aim underlying the reform effort is to synchronize the human power capacity in Jordan with the needs of the global labour market. Through this study, I explore the competing visions of higher education reform in the context of globalization worldwide, and compare these perspectives to the emerging realities of the policies in Jordan, in order to be able to expand the debate on the impact of globalization on higher education.

Analyzing the Case Study

The analysis of this case study was guided by the theoretical proposition that globalization was behind the higher education policy reform initiatives in Jordan, which was reflected in my research questions. These questions gave me direction in my review of the literature and my data collection plan, by channeling me to what I mistakenly anticipated to be divergent paths of higher education reforms in the context of globalization in countries of the North and South. I then discovered that these paths converged on several reforms, with different paces. As I began my first attempt at data gathering in the field, I isolated aggregates of individual reforms advanced in Jordan to see whether my proposition fit the case of reforms in Jordan. The reforms were promoted as a prerequisite for economic development, which the state saw as conditional to its admission to the global economy. Key among the reforms advanced were the introduction of ICT across the board in education driven by the need to enhance Jordan's economic performance in the global market; governance reforms driven by the need to enhance the economic efficiency of state universities, including streamlining recruitment and raising fees; enhancing equity by establishing funds to assist needy students; expanding access to higher education through the private sector; reviewing programs and

skills with the aim of making them economically relevant and labour market driven; focusing on the development of practical marketable research; and encouraging lifelong learning.

I examined this proposition in tandem with my ongoing data collection, which I found stimulating and helpful in enhancing my analysis. I took notes as I read and re-read my data, commenting on it, writing ideas, making observations to convey my reflections and the things that I needed to look for in my next data gathering visit.

My analysis of reforms in Jordan was informed by the recurring patterns in other countries on both hemispheres, whose links with globalization were established in the literature. In using both pattern-matching and explanation-building analytical strategies, I sought as much evidence and alternative interpretation as possible, especially that promoted by the globalizing agency (represented by the World Bank), in addition to those advanced by the globalized party (represented by Jordan and other countries in the North and South). My interpretation accounts for all this evidence, and my analysis attempts to remain focused on the most significant aspect of my instrumental case study - the impact of globalization on higher education policy reforms.

Chapter 4: Issues and Challenges Confronting Higher Education in the Context of Globalization

A common pattern of challenges has evolved over the past three decades, prompted by economic globalization and manifested in higher education policy reforms. Underlying this trend are several political and economic developments, most significant among them being the receding influence of the social welfare Keynesian economies, and the taking over by neo-liberal policies. Like other state-funded institutions, the contemporary university has been portrayed by supranational organizations, such as the World Bank and the Organization for Economic Cooperation and Development (OECD) as a cumbersome and financially inefficient, poorly administered and sheltered institution, slow to make decisions and implement the changes necessary for globalization, unaccountable and unresponsive to market realities. The neo-liberal policies were followed by economic globalization, which was consolidated by the signing of international free trade agreements, as well as by the development of communications and computer-assisted educational technologies. These factors were instrumental in driving higher education to adopt globalization-inspired policy reforms where the World Bank plays a highly visible role.

The Role of the World Bank

The Bank's visibility with respect to educational development derives primarily from the fact that it is one of the leading international organizations involved in educational reforms in developing countries as well as in central and eastern Europe. Support for higher education constitutes about a quarter of the World Bank's total

support for education. The Bank acknowledges the role of education in nation-building and national cohesion as well as in the enhancement of ethnic identity, general health and population control. Yet the strategic objectives of the educational reforms they promote are formulated in the context of liberal economic reforms and its concerns over the effectiveness of public funding of post-secondary education.

Based on this analysis, the World Bank offers to assist higher education only when it is seen to meet a number of key objectives (World Bank, 1994; 1995). Foremost among these objectives is a better response to labour market needs. Another is increased demand for higher education and training, encouraging a greater variety of higher education institutions and programs, including the establishment of private institutions and better use of distance education. Additional demands include strengthening the financial sustainability of public higher education institutions by diversification of fund sources and promotion of cost-sharing through tuition fees, reconstitution of the state role in higher education by emphasizing the need for greater institutional autonomy and accountability, the realization of equity objectives, and introducing mechanisms such as accreditation and assessment systems. Some of these demands were in conflict. For example, how can equity be enhanced with privatization? And how can institutional autonomy be increased with more accountability and the introduction of performance monitoring and evaluation mechanisms, as well as by expanding links with industry?

Changes in Higher Education in the Context of Globalization

A number of common themes have emerged from the globalization-prompted policy reforms and the reaction of higher education academics. These include

privatization, diminished public funding, downsizing liberal arts programs, the changing nature of research, and the incorporation of new technologies.

Privatization. Privatization includes a range of practices through which knowledge is commodified, and universities' services and activities become commercialized and offered for sale to private owners. Knowledge is packaged for overseas consumption, recruiting students into specially tailored programs that charge full cost recovery or even profitable tuition fees, and selling self-teaching, do-it-at-home course modules to local students. These forms of privatization are increasingly being adopted by universities in the North for use by students and institutions in the South. With globalization, public universities in the North and governments are relying more on the foreign exchange and the differential tuition rates they generate from foreign students. The rationale for attracting overseas students has changed from cultural and intellectual exchange to an emphasis on foreign exchange to enhance export earnings. With market effort permeating higher education institutions, administration is expanding the university's sales and services functions, through things like stocking their shops with a range of logo-bearing items, and privatizing food services by licensing concessions to fast food chains.

Privatization does not only encompass the sources of funding for universities and their activities. It can involve the continuation of public funding while the uses of university activities become privatized. For example, matched funding for university research may require public investment, but is accomplished through the operations of universities – their faculty and staff, laboratories, buildings, libraries and computer resources. However, matched funding and other forms of private sector research support

open the door to patent and licensing agreements that shift ownership of the research results to their private sector sponsor. Likewise, students are encouraged to view a university degree as providing them access to a particular level of income and to therefore accept increased tuition fees as investments in their future financial security. As a result, education is viewed as a private commodity for the degree holder rather than a public good that serves the interests of society as a whole.

Leading agencies promoting globalization, such as the World Bank, IMF, and OECD have had marked influence in encouraging governments to head toward privatization (Currie, 1998). They have urged governments to change public policy, from being based on the social good to being based on the economic good. Privatization comes through deregulation, to allow for-profit institutions to enter the marketplace. To implement market practices, public universities are increasingly functioning like private businesses, adopting corporate practices. They are increasingly relying on corporate sponsorship for specific research and teaching projects, as a result of reduced public funding. Other corporate influences include the endowment of chairs and revenue-generating athletic programs (through sponsorship by clothing and food companies, and television networks). Universities are emphasizing the need for full cost recovery. Institutional resources are increasingly being allocated to support academic personnel or professional officers in assisting faculty to apply for and execute grants, contracts, partnerships, and technology transfer, among other things. More funds are being allocated for managing entrepreneurial endeavours, including offices for patenting and licensing, technology transfer, business spin-offs, and research parks. The diminishing attention to instructional activity by entrepreneurial faculty is compensated for by hiring more part-

time appointments to limit extra cost. Giving more attention to practical research, and favouring collaborative arrangements with industry enhances university dependency on industry and jeopardizes the growth prospects of the theoretical base of knowledge. With the growing importance of individual ability to attract revenue, personnel decisions take on added importance. The tenure process becomes increasingly stressful, in part because the standards are constantly being raised.

In the competitive market, those who generate resources possess the leverage of internal power. This is in contrast with traditional universities, where internal power is centralized, and the government exercises control through regulation. In the competitive case, resource providers exercise power over the university. Budget devolution is a primary vehicle for decentralization of power and authority, giving greater power to staff at the operating unit level, and leading to tensions between academics and central administrators. The diminishing financial authority of central administrators makes many of them oppose budget devolution even where the market presence in the university is broad and deep (Williams, 1992).

Market, and market-like, activities can have a negative impact on traditional academic values. The concern is that these values are threatened by the heavier emphasis in higher education on for-profit activities, as well as response to market forces. At worst, higher education might become just another business interest, adopting the attributes of the corporate world and in the process losing sight of its traditional values, such as the pursuit of scholarship, curiosity-driven research, social criticism, and preparation for civic life (Newman, 2000). This impact on traditional academic values is an extension of the value system promoted by globalization, attuned to the demands of productivity and

output. Human beings are reduced to the status of mere resources, products that are open to improvement through education. Education is no longer focused on the all-around shaping of the individual. In the context of globalization, the concept of society has been drained of its social content, with the state streamlining its funding of higher education, health and social policy, focusing instead on its role as a law and order watchdog. With globalization, labour is being deprived of a social or cultural identity, increasingly becoming another resource which can be used freely, subject to the availability of financial resources. The right to work is replaced by the principle of employability, against which every job seeker is assessed. The task of education has therefore changed, since employees need to be given lifelong training in order to avoid becoming obsolete, a condition that negates prospects of employability. The need for companies to stay competitive has also been linked to creating conflicts of interest among staff, by reducing unqualified staff in favour of recruiting more qualified staff, or by searching globally for low-cost personnel, whether qualified or not (Marquez, 2002). Thus higher education is increasingly becoming a place in which one is taught to impose oneself upon others, rather than make progress in the interests of the common good. This is principally linked to the pressure on companies to be competitive, especially as their success determines the prospects for the country's economy, and by extension, the people's level of employment and well-being. As a result, contrasts are being drawn between highly qualified people, who have good prospects of finding a stable, well-paying job, and others who did not have the benefit of higher education, and are more likely to end up unemployed. This situation reinforces values that urge students to struggle to come out on top at graduation time, and to graduate from prestigious universities. This trend has been systematized with

globalization, which classifies universities based on their academic excellence. It helps to explain why universities are concerned with attracting the most gifted applicants with the most favourable backgrounds, instead of assessing the particular capacities of all potential students (Marquez, 2002). Accordingly, it is of little or no significance if education aims to achieve public good, and improve the quality of life for society as a whole through a socially integrative role. What counts most is its capacity to accommodate the needs of globalization and its offspring.

Diminishing public funding. Public funding of higher education has continued to diminish since the 1970s, with the corresponding expectation of doing more with less. The erosion of public funds meant that universities were less able to sustain their ongoing obligations and develop new initiatives. Unfortunately, budget cuts coincided with increasing demand for higher education, which became instrumental in creating financial crises for many universities. Governments applied pressure on universities to diversify their funding base (Axelford, Anisef & Zeng, 2001; Buchbinder & Rajagopal, 1996; Burton, 1998; Currie, 1998; Mount & Belanger, 2001; Slaughter & Leslie, 1997) and opt for an entrepreneurial model to survive, forcing them to go through a process of transformation. The universities' entrepreneurial initiatives also included privatization, which was commonly manifested in reshaping research agenda to respond to the needs of the private sector, forging corporate and international research partnerships, and channelling funds to high profile programs in science and technology.

Downsizing liberal arts programs. By adopting market values and business practices, universities are extending neo-liberal hegemony into the intellectual work of everyday academia. The core subjects of a liberal arts education, including humanities,

social sciences, and fine arts, are being increasingly threatened by the reorientation of higher education to the assumed needs of the global knowledge-based, market-driven economy. Policy makers tend to focus on the exchange value of education, giving more attention to professional skills and market-worthy programs, including business, computer sciences, engineering, and high technology, rather than liberal arts.

A liberal arts education builds intellectual creativity, autonomy, and resilience; critical thinking skills; comprehension and tolerance of diverse ideas and experiences; and informed participation in community life. The pursuit of intellectual creativity, autonomy and resilience enables students and professors alike to expand their intellectual horizons and continue their learning process outside the context of formal education. Autonomy encourages student and researcher alike to engage in the search for knowledge without being constrained by external authority, which constitutes the basis of academic freedom. Likewise, critical thinking emphasizes the value of questioning received knowledge, not only on the basis of opinion, but also on the basis of informed analysis and understanding. Integral to the ideal of a liberal arts education is nurturing tolerance of diverse ideas and experiences for the enrichment of academic life, and rejecting the notion of imposing a single or universal body of thought on the university curriculum.

A unidirectional focus overlooks the fact that a young person may become a more humane technician following some exposure to Gandhi, Confucius, Ibn Khaldoun, and Dostoyevsky. The challenge for universities is to succeed in producing specialist professionals with a generalist view, whether in calculating the costs of environmental conservation or the ethics of genetic engineering. Market-driven policies tend to be misguided as a result. On a national level, they overlook the major economic

contributions of writers, performers, and producers who enrich the country's cultural and artistic life, in addition to its tourist industry. On an individual level, they neglect the fact that liberal arts graduates reap significant economic benefits from their university training, especially in the long term, due to the broad range of mental and life skills it cultivates (Axelford, Anisef & Zeng, 2001).

By the same token, current trends which support an educational approach that gives more weight to technical training miss the main aim of teaching, which is to enable students to trace the pattern behind the systems of inquiry rather than to focus only on technical knowledge with its limited life span. This does not help students acquire the intellectual tools needed to learn new skills, cope with uncertainty, or change fields, and that in turn limits their job prospects in today's rapidly changing world. Technical training is in sharp contrast with a liberal arts education, which broadens the intellectual horizons of students in the technical and business fields, thus better preparing them for the digital economy. It makes them more flexible and adaptable, gives them breadth of knowledge, enhances their analytical thinking, and enables them to pursue lifelong learning.

The effect of focusing on professional skills in education has been shifting student interest, from pursuing an education to pursuing a career. Focused professionalism and blinkered careerism can diminish the variety and impoverish the richness of the undergraduate experience by conveying knowledge as a commodity, to be purchased and applied. Globalization-linked reforms value education in terms of vocational training and learning a skill, rather than in terms of personal illumination. Focusing primarily on professional skills training risks producing graduates who are specialists, and know little

of what lies beyond their field. Accordingly, the challenge for educators is to ask themselves what makes a full human being, capable of informed selection, evaluation, and action based on the well-being of the community as a whole.

Changing nature of research. The diminishing public funding to universities has prompted them to change their knowledge production pattern to fit a socially distributed production system. The emergence of distributed knowledge production promotes the globalization of higher education by drawing universities into a much larger knowledge production system (Gibbons, 2000). In a socially distributed knowledge production system, different rules operate. The research agenda and funds are generated in a different way. Researchers work in teams on problems that are often transient, and are steered by the dictates of a particular problem, rather than by disciplinary structures or a national policy. For universities to operate at the leading edge of research, they need to learn how to exploit the benefits from sharing their intellectual resources, and their faculty need to participate in the appropriate research and problem-solving areas.

For the universities to benefit from the economics of shared resources linked to globalization, they need to maintain a small core of permanent full-time faculty, and a larger circle of diverse intellectual resources. This change in policy is bound to transform the landscape of the university into one that is more flexible and adaptable to the intellectual demands of new problems, by requiring that universities introduce different types of employment contracts. They also must accept the fact that they no longer own all the human resources that they require, as the demands of teaching and research are growing and diversifying, and pressures to reduce expenditures are mounting. To meet these demands, universities must pull together a broad complement of intellectual

resources from industry, development labs and government agencies for innovation. This requires them to make more use of mutual sharing of resources, a situation that in turn demands addressing a number of structural issues. How will outsiders fare in a traditional university setting? How will their contributions be recognized? How will they be promoted, and according to what criteria? How much will they cost? How will they relate to graduate students? Will they be teaching? These questions cannot be answered without introducing substantial changes to the nature of traditional universities.

Both the substance and the methodologies of research are likewise being challenged in the context of globalization. University researchers were traditionally guided by expectations from the peer-referenced and peer-evaluated professional norms. The intrinsic value of the questions that most concern researchers revolved around originality and the rigour of methodologies adopted. These were valued far higher than the actual payoffs the research may have had with respect to particular policy initiatives. Bending to market values and a corporate-driven agenda is steering universities to the other end of the research spectrum, where they are confronted by the more task-oriented culture of research adopted by institutional development and government policy analysts. Such researchers focus on the bottom line, and find it difficult to see the immediate relevance of academic-led research. Increased interaction between both types of researchers means that university researchers will become their partners in their global economic strategy. With funds earmarked for particular areas of research or growth in teaching, the implication for the university is that it will have less autonomy in shaping its future. The fundamental essence of the university must be transformed, with its mandate shifted to a more client-focused environment. Shaping the populace to function

effectively in the new global economy, and having their attention set on the bottom line, will need to take precedence over the traditional focus of the pursuit of truth (Archer, 2000).

Changes in the nature and structure of research linked to globalization in countries of the North are not replicated to the same degree, if at all, in countries of the South. The variance is related to the status of research in these countries. Universities in developing countries are increasingly lagging behind those of developed countries, particularly in scientific and technological research and development. Much of the dramatic expansion in university enrollment in recent years has taken place in traditional areas of education including law, humanities and social sciences.

Success stories of the four Asian tigers - China, Singapore, Hong Kong and Korea - demonstrate the heavy investment of the state in primary, secondary, and high quality public universities. The universities focused heavily on training scientific human power, and vocational education was geared to rapidly growing industries. This resulted in a highly schooled labour force, able to adapt to constant industrial upgrading and economic restructuring. Another salient feature of these successful experiences is the emphasis given by public policy to science and technology throughout the economy, demonstrated by large investments in research and development, and liaisons between importing, diffusing, and developing technology. This policy invigorated the private industry effort, making it the principle source of research and development funding, and the main user of research and development public funds in Korea and Taiwan. The research and development emphasis became the basis for a highly articulated system of innovation, which tied in with their rapidly expanding, export-oriented and flexible industry. The role

of universities in bringing these countries into a competitive position in the global economy was also tied to other key factors, including broader state policies to produce overall economic change through technological diffusion and innovation. It demanded an efficient public administration, and public support to put a series of institutional changes into place. The underlying impetus for innovation evolved from state action in backing research and development in universities, as well as from public and private firms, and extending tax incentives to industry.

Few universities or higher education systems in developing countries integrate training and research, and research done in university is rarely related to applications in local industry. As a result, there is little connection between the innovation and technology transfer that occurs in industry and the research that goes on at the university, either directly or through the research experience that students might have gained there (Carnoy, 1994). The challenge for higher education in developing countries is to play a significant role in building a national innovation system of adopting and developing technology for local needs, and to develop the production and management skills needed to make use of and organize new technology, in addition to producing high quality graduates in non-technical fields. The effectiveness of the higher education research-training systems needs to be linked to the degree of cross-activity taking place between universities, industry, and scientific research centres, with respect to training, research, and practical industrial applications.

Incorporation of new technologies. Globalization has been linked to a growing demand for specialist knowledge. As international competition intensifies, firms will try to meet the challenges for specialist knowledge by introducing new technologies. While

important, technology alone is not sufficient for successful innovative performance. Innovation depends upon using specialized knowledge to develop technologies in directions determined by competitive pressures. While specialized technological knowledge places firms at the forefront of international competition, its acquisition is difficult and often too costly for individual firms to produce and replicate entirely in-house, hence the current growth of networks and proliferation of research and development partnerships and alliances involving universities, governments and other relevant firms.

The rapid advances of computer technology and communications have triggered a plethora of developments in interactive computer-assisted learning, distance education, information networks, and online education. These developments can have far-reaching implications on commercialized and privatized higher education institutions. The use of modern technology impacts pedagogy, with computers and multimedia being instrumental in developing new pedagogical approaches, which include both active and interactive learning. Conventional one-way classroom instructional teaching is being supplanted or supplemented with online classes that can be either scheduled or self-paced. The integration of technology in the curriculum is enabling teachers to shift away from one-way delivery instruction, toward assuming the role of facilitators of learning. However, computer technology cannot supplant all forms of practical training, in areas such as engineering or other scientific or technologically-oriented programs. The introduction of active and interactive learning requires that faculty educate themselves in the use of new pedagogical channels and supports, so as to be able develop a clear idea

about the objectives behind using new technologies, and how best to integrate them in both program design and delivery.

At a time of diminishing public support for higher education, the incorporation of new technologies holds great potential in transforming higher education, with many benefits to materialize from electronic information flows (Rosenberg & Nelson, 1994). This makes it possible for instructors to deal with students on a global scale, extending outreach possibilities and library access to anyone, at anyplace and anytime. It will enable the advancement of knowledge, by allowing researchers to communicate with each other and exchange data. It will result in a restructured curriculum, fashioned and mediated by new technology. Other benefits include the improvement of variety and quality of courses as the scope of university services expands, rapidly connecting specialized instructors to students or any group of professionals needing updating or retraining, to serve one's changing educational needs throughout life. Quality is also expected to improve with competition as virtual universities and learning ware providers begin to enter this market to compete with traditional universities.

However, there are still many potential drawbacks to new technologies. Most professors are still divided in their views over the merits of online education (Lemasson, 1999; Topper, 2002; Turk, 2000). Some university administrators fear that their institutions will suffer financial losses in the long term if they do not act quickly and respond to the opportunities and challenges of the new knowledge media and the needs of the digital generation, and yet they must win the support of faculty members. Professors may feel increasingly pressured to leap into the unfamiliar territory of internet delivery, although online education has been associated with deteriorating education conditions in

some cases (Buchbinder & Newson, 1990). Some problems include larger classes, skewed teacher-student ratios, multiple choice examinations, fewer laboratory sessions, and limited interaction between faculty and students, and between students themselves, and diminished human contact in society as a whole. In addition, pedagogical considerations are often overshadowed by fiscal constraints.

Past experience further cautions against the extensive, indiscriminate use of online education. Quality online education was found to achieve the best results in classes not exceeding 30 students (Mendels, 2000). It is not desirable to teach an entire undergraduate program through online instruction if the aim is to help students develop their critical thinking and social interaction skills, and make them better equipped for their professional careers. Courses providing a combination of both online and regular classroom instruction give students more scope for interpersonal interaction, which helps in the development of the social aspects of learning through direct communication, argumentation, and consensus building (Mendels, 2000).

Advocates of globalization support the large-scale introduction of electronic modes of organization and delivery of higher education as a more cost-effective option to conventional models of tertiary education. Foremost among these factors are the fiscal crises confronting most countries, and the escalating cost of and increasing demand for higher education. Yet this cost differential can be delusive, since the cost of information technology and its infrastructure extends beyond the basic capital to cover the recurrent budget required for maintenance, training, and technical support. It is estimated that these recurrent costs can constitute as much as 75 percent of the total cost of the technology investment (Chapman & Austin, 2002). Besides being a financial burden, importing this

technology, know-how and curricula will increase South-North dependency. It will also promote global homogenization by inhibiting effort for local adaptability of curricula. Overall, this situation fits the equation where we will lose some things and gain others.

Impact of Change in Higher Education

Changing role of universities. Economic factors have been prompting key changes in the role of universities in society in the context of globalization. The growing impact of market forces, added to the growing emphasis of education as a private good rather than a public responsibility, is gradually diluting the role of the university as a social democratic institution. This situation demands the support of the university as a forum representing the broad interests of the community through which the rights, needs, and aspirations of individuals from all social backgrounds can be expressed alongside consumer rights in education. It should provide opportunities for democratic debate, nurturing seeds for new ideas and issues, and cultivate different visions of what is possible with respect to issues such as economic performance, the tide of market values, the promotion of democratic values, and the advancement of civic consciousness to foster commonality and social cohesion. Higher education would then be better able to redress the danger of being captured by the discourse of marketization, and would be able to reposition itself in relation to the implications of the dynamics that underlie policy reforms by striking a better balance between citizen rights, the fledgling control of the state, and the prerogatives of the global market. Electronic communication can provide the universities with the medium to reassert their social democratic role as a locus of intellectual life, responsive to the changing social, political and economic conditions of

higher education. Building websites and e-mail communication can engage everybody on campus and beyond to participate in discussion platforms. E-mail can help process discussions of intellectual interest beyond the usual communication lines and capture creative possibilities. In addition, electronic communication can allow the university to serve the broader needs of society by making their research and teaching resources available on the net for local communities and groups that could not otherwise afford to access them. The challenge for education specialists is to make that possible.

Debates on the changing role of the university in society address key issues such as the autonomy of universities as institutions, and to what extent universities must be accommodating with respect to governments, student demands, and the market. All of these challenges and threats reveal emerging trends which confirm that the contemporary university is starting to shift away from being an influential agent with an independent critical voice serving the public interest. It is increasingly being subjected to the influence of the neo-liberal globalization forces, and as a result is becoming increasingly corporatized. This transformation has entailed reorienting, restructuring, and reconfiguring its goals, as well as its modus operandi (Currie & Newson, 1998).

In a knowledge-based economy, the role of the university as a primary source of new knowledge, ideas, and skills is attracting public interest (Drucker, 1993; Florida, 1995; Leonard-Barton, 1995; Romer, 1993). As an inherent feature of globalization, the global flow of information and data makes the production of research the area most likely to affect higher education, since universities have modeled themselves as producers of knowledge and taken the lead in the area of basic research. Specialized knowledge is produced by and distributed to individuals and groups across the social spectrum.

Universities are called upon to assist in economic activities. They participate in setting up programs that create new businesses, or attract outside businesses, create jobs, provide technical assistance to local industry, and help in training, or re-training people for employment. With globalization, however, knowledge production is not confined to universities, but involves many different kinds of organizations linked together through a vast array of different relationships. Knowledge production is increasingly becoming less self-contained. It is expanding not only in its theories and models, but also in its methods and techniques, beyond the boundaries of academia. It has become a distributed process, founded on the expansion of sites which form the basis for continual combination and recombination of both new and old knowledge sources. The potency of this dynamic is key to the development of higher education in that it will determine its pace of globalization. This has increased the importance of the university as an economic and social institution to where it can be considered an engine of economic development. But how will the distributed knowledge production impact upon universities?

Universities are finding themselves increasingly embedded in a process of knowledge production that involves a number of other participants, creating a world of collaborative arrangements. The growing need, generated by globalization, to acquire specialized knowledge that leads to new products and processes lies behind the current growth of networks and the proliferation of research and development partnerships and alliances. As universities multiply the number of alliances and partnerships in which they are involved, they must share their staff and other resources with problem-solving teams around the world, which will require changes to their organizational structure. This change will have the most impact on their intellectual capital. The challenge is in how the

university organizes such activities, and how this impacts its organizational structure, and forces it to redefine its role in society. The more successful a university is in performing non-core, non-traditional functions, the more likely that it will be able to maintain a coherent structural identity in a globalizing society, and the more at variance it will be from its traditional identity.

The global and information economy draw on the university as a basic component of the infrastructure for innovation and talent. This explains why leading research universities compete to attract the best talent, and do so by publicizing that which they already have. Eminent scientists and engineers, for example, attract graduate students, who in turn create spin-off companies, and gradually encourage industry to locate in the area, thus helping the region to develop. This pattern for attracting talent is highly dynamic, and enables leading universities to replenish their sources of talent, as professors and students move in and out. Accordingly, the challenge for universities is to continue this process, which undermines the assumptions that commonly underlie public policy. It implies that nations intent on building the capability to survive and prosper in the global knowledge economy will need to go beyond enhancing the ability of the university to transfer and commercialize technology. The challenge is to learn from the experience of leading research universities, which have been working on the infrastructure both inside the university and in its surrounding area, creating organizational and institutional environments that knowledge workers find both attractive and conducive (Florida & Cohen, 1999).

With globalization, economic development activities are expanding and becoming an important feature of higher education. University economic development activities

have been housed in a wide variety of organizational arrangements, both within the traditional academic departmental and disciplinary structures, as well as in auxiliary enterprises. Continuing education and technology transfer are part of an innovative, entrepreneurial, expanding dimension of higher education which is often at odds with the traditional core functions of the university. They represent opportunities to broker resources in order to facilitate economic development opportunities. Continuing education refers to part-time degree programs, non-credit programs, and other educational experiences, including technical assistance programs. It involves knowledge and skills development, rather than technology transfer. The relationship of continuing education to economic development is in helping to prepare a competitive, skilled workforce. Technology transfer is the transfer of the outcome of research to the design, development, production, and commercialization of new and improved products, services, or processes. Continuing education and technology transfer activities are increasingly being used as a mechanism for stimulating trade and business development by connecting service and product suppliers with purchasers, establishing neutral forums in which executives can exchange expertise on the latest market commodities, as well as opening international channels for higher education institutions to build contacts and expand economic development opportunities.

One such experience from the U.S. is known as Partnership 21 (Pappas & Eckart, 1997). This program developed as a collaborative partnership between the University of Oklahoma's College of Continuing Education and the U.S. Federal Aviation Administration (FAA), following a partnership of more than two decades. As a result of the university's experience in aviation-related research, education and training, the FAA

requested assistance in planning a series of international symposiums. Three symposiums were designed to discuss the current status of participating countries' aviation infrastructures and systems. Officials were guided to the resource expertise needed for modernization assistance. The symposiums generated business opportunities for U.S. corporations by giving decision-makers a better understanding of how to fit U.S. products and services into their development plans. They resulted in a number of spin-off business activities between the participating countries and U.S.-based aviation industries.

Changing university values. The narrow focus on professional job training threatens to diminish the role of the faculty in developing the student as a whole person, including his or her moral values. Focus on skills training is causing the loss of an implicit set of moral assumptions that once provided an educational framework for the curriculum. Moral aspirations were regarded as the foundation of a successful education. The faculty member is now the student's instructor, and at a more personal level, the academic adviser. The once-common set of moral assumptions that extended an ethical context and educational framework for the curriculum is receding in favour of more utilitarian values linked to the market. Education involves knowledge for specific ends, in preparation for a job, raising no questions of the larger issues of life; it has no interest in the social context and overlooks the social goals the profession promotes, and the ethical standards it demands. The challenge for university research personnel is to speak out or risk being accused of abandoning their responsibility.

The growing emphasis on science, information technology, and professional skills training risks contributing to the gradual loss of the university community. The growing need for specialist knowledge to produce new products and processes is behind the

current growth of academic niches. Niches of any kind risk shielding their members from lively interaction with the wider community, while the university pursues its various tasks of learning, discovery, and service through its community. Without community, the learner studying in isolation is at risk of narrowness, dogmatism, and untested assumption, and learning is neither informed nor challenged by conflicting perspectives and different experiences. The loss of community also acts against the humane application of knowledge since knowledge cannot be pursued in isolation. Its very nature demands the recognition of need in others, and the application of knowledge and skills to fulfill that need. The challenge for universities is to capitalize on community, by educating students to welcome diversity with confidence rather than escaping from it in isolated niches, to accept and challenge disagreement rather than avoid it by resorting to silent retreats. With that, universities can extend their power and expand the reach of their members.

Universities are distancing themselves from their traditional commitment to developing and disseminating knowledge as a public resource rather than a private one. They are also moving away from their historic association with democratic life and its underlying values (Currie & Newson, 1998). With the growing emphasis on market forces in state education, the idea that universities ought to serve the public good is slowly losing ground. The public agenda which held the university as a social democratic institution promoting the well-being of citizens is giving way to one that serves the marketplace (Lemasson, 1999). Calls for decentralization under higher education reform are leading to the fragmentation of the national system in the desire to encourage diversity on the supply side. Quasi-autonomous public universities with devolved budgets

are competing for clients in the marketplace: students, faculty and resources. A system of market accountability is being assisted by benchmarking agencies and regulators monitoring the job market. Even with state funding, such quasi-autonomous institutions have considerable private and external involvement in their operation which makes education seem less of a political matter and more of a market issue.

Dominance of English. With globalization, the use of English has become the standard for communicating knowledge worldwide, for instruction (even in countries where English is not the language of higher education), and for cross-border degree arrangements. The dominance of English is a factor of globalization. It tends to orient those who use it towards the main English-speaking academic systems, which further nurtures the status of universities in many developed countries and works to the benefit of the multinational companies based there. Increasingly, international and regional scientific forums are conducted in English, placing another premium on fluency of the language.

English language products, including journals, databases, textbooks, programs and testing material dominate the international academic marketplace. As most of the universities in developing countries are teaching institutions, and must look elsewhere to obtain new knowledge and analysis, they provide a ready market for these expensive resources, which are priced to sell to consumers in developed countries, thus making them costly to users in developing countries.

Leading internationally circulated scientific journals as well as internet websites and databases devoted to science and scholarship are largely published in English. English is the most widely studied language, and also the most widely used second

language. The majority of overseas students go to English-speaking universities. Developing countries are increasingly offering programs in English, in order to attract overseas students unwilling to learn the local language, and to improve the English language skills of the local students, as part of equipping them with the necessary skills needed by the global market. Increasingly English is becoming the international medium of instruction, further limiting the importance of other languages such as French, German and Spanish.

The dominance of English impacts the work of students and scholars in higher education. It gives significant advantages to scientific journals edited in developed English-speaking countries and their authors. These include writing in their mother tongue and having the peer review system dominated by people who share the same language, academic norms and research methodology. This places authors in developing countries at a clear disadvantage, as they must communicate in a foreign language, and conform to unfamiliar academic norms when they attempt to publish in internationally circulated scientific journals, to establish validation of their work. The challenge for universities is to equip students and faculty for publishing and contributing to research work, by helping them strengthen their English language skills, and exposing them to the academic norms and research methods required by major publishing houses and established journals.

Commercialization of research. The commercialization of research constitutes a very controversial aspect of the commodification of knowledge and the corporatization of the university. Traditionally, universities regarded patents as being outside their orbit, believing proprietary claims to be fundamentally at odds with their obligation to

disseminate knowledge as widely as possible. Research was conducted for non-commercial purposes, as researchers are motivated by the drive for discovery rather than stock options or royalties, unlike corporations, which are motivated by profits, the challenge of product development and market risk. In the process of forging a strategic alliance between the university and the corporation, the possibility of a clash between the two cultures looms large (Hum, 2000).

Allowing market criteria to steer research and scientific inquiry is behind a number of problems. Vital areas such as science and public health, which may generate less profit, are being excluded. Examples of these areas include vaccine research, and scientific efforts geared to ecological approaches, as opposed to molecular science and genetic engineering. Partnerships forged for funding research lend an air of legitimacy to some of these corporations and their questionable ventures, such as Novartis' co-involvement with the University of California in genetically modified crops (Eyal & Washburn, 2000). Turning to corporations for support further subjects research work to the dangers of having strings attached, which could include signing over rights to any data or discovery, maintaining the secrecy of the results for prolonged periods, and introducing biases into the conclusions of work. Accepting support from corporations to fund research makes it more difficult to question who profits from the results of the research. Such threats jeopardize the autonomy and the integrity of higher education institutions, whose ultimate goal is truth and knowledge.

Commercialization of research is expensive, and requires skills well beyond those possessed by universities. Once university researchers develop or invent a new piece of technology, converting their idea into a marketable product demands a substantial

investment in applied research, development, and marketing, which can deter them from moving forward with it. In fact, post-research investment is often significantly higher than the costs of basic research. Thus, although published research results can be used by any firm, they are of limited interest to industry, where significant investments are required to translate the invention into a marketable product.

The foremost challenge for universities is to develop the ability to negotiate the best arrangements between faculty and university administration on one hand, and university management and private corporations on the other. These negotiations in turn require developing strategies for patents, copyrights, spin-off companies, and royalty arrangements (Hum, 2000). But the greatest challenge goes beyond money, to forging congruence between the divergent cultures of the university and that of the corporation.

Intellectual property rights. Intellectual property rights (IPR), such as patents and copyrights, are the main unit of value in an information economy. Copyright law is a mechanism for balancing the owner's need for reward and the public's need for access. In the absence of IPRs, rights owners must operate a system of private contracts. With globalization, IPRs are a key infrastructural component to facilitate trade and information exchange on a planetary basis. As a result, policy makers, executives, academics, and lawyers are being urged to understand IPRs, and encouraged to use them. The rationale given is purely economic, as observance of IPRs is required for a country to stay within the international copyright conventions, which are considered instrumental in creating an enabling environment for attracting foreign investment.

Traditionally, technology and knowledge transfer from university to industry have largely been accomplished by publishing articles in leading journals, and disseminating

research in conferences and seminars. With the global knowledge-based economy, higher education research has moved to centre stage, since it constitutes a regenerating source of value-added knowledge, which in turn is a decisive factor in helping firms to achieve a competitive edge. As a result, the university-industry interface is steadily expanding, which has been manifested by a significant increase in consultancy assignments, technical assistance programs, collaborative and contract research, training and professional development, and internships.

Partnerships between universities and firms often constitute a two-way process. Graduate students and academics may have to bend their research priorities to get grants. This has a potential downside, especially that it inhibits curiosity-driven research. Other than that, partnerships allow university researchers to be receptors of technology and know-how from industry, including information on the specific needs of firms, which can encourage them to explore commercial research venues. In addition, working relationships between university and industry also provide a means for researchers to exchange their tacit knowledge (Ganguli, 2003).

Patents. Patents provide exclusivity over the commercialization of an invention or new technology, giving industries an incentive to invest in translating that technology from the research laboratory to the market. With patents, firms acquire a legal monopoly over the exploitation of a particular product. At the same time, in cases where royalties obtained from licensing a given technology are shared by the university and the researchers, patents provide an incentive to search for partners in industry to commercialize their inventions and technologies. The rapid growth of academic patenting is a clear manifestation of the deepening relationship between university and industry.

This is particularly noticeable in the United States, where in 1984 there were 408 research universities awarded academic patenting, compared to 1998 when 158 universities were awarded 3,000 licensed patents, generating US $500 million in royalty income (Cohen, Florida, Randazzese & Walsh, 1998).

Patent protection and exclusive licensing promote an entrepreneurial culture motivating researchers and universities to explore ways of exploiting their inventions in return for financial incentives, and encouraging industry to invest in their commercial development. An industrial culture is based on profit maximization, secrecy, and competitive advantage, while a university culture is based on broad dissemination of knowledge and sharing of research results. The patenting of inventions contradicts the knowledge-sharing world of universities. With publishing perceived as enhancing academic credibility, university researchers rush to publish research results, which frequently results in the disclosure of the invention, compromising its patentability. The incompatibility in perceptions explains the current emphasis in the global market on the need to create an awareness of the usefulness of intellectual property rights and training, and how to use patent databases.

One of the greatest factors hampering universities from successfully managing the commercialization of intellectual property evolves from their focus on technical expertise instead of legal and business expertise. Technology transfer requires the appropriate blend of scientists, lawyers and businesspeople, supported by a well-organized back-up office. Limitations in expertise frequently force universities, especially in the U.S., to involve external patent agents, technology brokers and business consultants in drafting patent applications. The challenge is to develop a national strategy to clarify issues of

ownership under different scenarios, particularly when research is publicly funded. This would cover items including the conditions and criteria for the exclusive licensing of technologies, in addition to broader issues concerning the role of university in science and technology policies, as well as educational and cultural policies. The importance of considering broader issues is underscored by the need to avoid potential conflicts that could arise from the efforts of universities to facilitate the exploitation of their research results with their other educational research objectives. Every university needs to create its own policy on the commercialization of research results and distribution of benefits, in addition to the responsibilities for patenting and marketing inventions. Universities in the advanced industrialized countries have developed a range of different policies on patent ownership and royalty-sharing formulas.

Technology licensing offices. Over the past two decades, attempts have been made by several universities and research institutes to set up institutional structures that would take charge of all aspects of technology transfer activities. These institutional arrangements include off-campus private technology brokers, technology incubators for university spin-offs, and university-managed units integrated to the overall university administration, commonly termed Technology Licensing Offices (TLOs). The TLO has a very important role within universities, as it identifies technologies with commercial prospects, assists researchers in patenting their inventions, packages technologies so that they are attractive to industry, develops marketing strategies, and leads negotiations with potential licensees.

Benchmarking and quality assurance standards. Benchmarking is an ongoing, systematic process for assessing and comparing the work processes of one institution to

those of another, by bringing in an external focus to study internal activities, functions, or operations (Kempner, 1993) and adapt the best outside practices with the intention of complementing internal operations with innovative ideas (Jackson & Lund, 2000; Schuler, 1998). The goal of benchmarking is to provide the staff in charge of processes with an external yardstick for assessing the quality and cost of internal activities, and to help identify opportunities for improvement.

The demands of the global economy are applying pressure on higher education institutions to articulate appropriate international academic benchmark standards, since this accommodates the needs of multinationals in recruiting graduates to work in business and industry worldwide. At the same time, the benefits of international benchmarking standards also carry economic incentives by providing a yardstick for national human resources that can be used to lure multinationals to invest in countries with advanced human resources. With a growing number of students choosing to study abroad, yardsticks can help in the global competition for international students (Smith, 1999). The challenge for universities is to differentiate substance from superficiality in the effort to improve and better develop the academic and administrative programs, departments and institutions, rather than just measure, and to establish appropriate international standards across nations when students' experiences are so different (Doerfel & Ruben, 2002).

Many university practitioners recommend the use of benchmarking. They find that it helps overcome resistance to change, provides a structure for external evaluation, and creates new networks of communication both within and across units, and between universities, where valuable information and experiences can be shared, providing cross-

sector learning (AACSB, 1994). Benchmarking can lead to dramatic innovations, since it provides objective measurements for baselining, goal-setting, and improvements for tracking (Ruben, 2001).

At the same time, critics caution that no list of performance benchmarks can apply to all institutions equally, since appropriate indicators can only be determined on the basis of the particular mission, size, history, culture, context, and environment of the institutions within a system. Since higher education institutions have differing missions, and operate in different environments, this limits the compatibility of the data, making it difficult to satisfy the core requirement that benchmarking partners need to share similar procedures, departmental and collegiate structures, budgets, missions, or student bodies (Barak & Kniker, 2002; Fitz-enz, 1993). Nevertheless, advocates see that benchmarking can help institutions determine the degree to which they are successful as compared to their peer group, identify the areas that need to be improved, and develop the most appropriate strategies for their particular organizational circumstances. While practices and procedures are not necessarily transferable from one institution to another, the potential value is derived from learning from the achievements of peer institutions (Bender & Schuh, 2002).

Management changes. Centralization of management in the university context has created many changes in the name of efficiency (Tierney, 1999). Key among these are the centralization of services and decision-making, combining of programs, streamlining of operations, increases in class size and academic work load, a downsized workforce, and more reliance on part-time, short-term instructors, instead of full-time, tenured professors. Underlying this change is the corporate notion that managers have all the

answers, which evolve from emulating the best for-profit corporations. Managerialism can lead to increasing administrative control and reducing supervisory role. Faculty autonomy will be diminished with the increased power given to university managers, who neither represent faculty interests nor values. With these managers becoming the primary spokespersons for the university, faculty become voiceless, and collegial participation recedes. As a result of these practices, the university landscape is becoming more bureaucratic, technocratic, utilitarian, centralized, and less democratic with respect to key decision-making. In addition, it is becoming less responsive to the central mission of the university, which was traditionally centred on the students, the faculty and the curriculum, and more focused on reporting upward (Currie, 1998).

Corporate-inspired practices. Two globalizing practices inspired by the corporate management regulatory mechanisms have been superimposed on universities. These cover governmentality and performativity (Brown & Lauder, 1996). Governmentality combines both individualization and totalization. It aims to regulate and control the university population as a product, in the interest of maximum efficiency, and to foster maximum strength for the institution. Performativity combines accountability and managerialism with performance contracts, and performance indicator reviews. Accountability relies on the accounting language to reshape the university with a business mentality, and is also embedded in financial accountability for public funds. This traditional understanding of accountability is expected to trigger disagreement against allowing globalization practices to be adopted across the board in universities. The aim of the accountancy version of accountability is to distract attention from issues of

representation, and styles of decision-making, including democratic decision-making, and therefore it overlooks the democratic foundations of universities (Currie, 1998).

As a result of these new competitors, universities are subjected to globalization-linked pressures to introduce changes to quality assurance bodies, mechanisms, and criteria for assessing the quality and the effectiveness of various types of distance education, including online programs. The new institutions require appropriate and reliable accreditation and evaluation. However, very few developing countries have developed accreditation and evaluation systems for the influx of foreign higher education programs. Those that cannot afford to build their own information system can alternatively become part of an international evaluation and accreditation network. Alternatively, they request foreign higher education institutions to abide by the same quality assurance obligations required from local institutions (Chapman & Austin, 2002).

Developing countries are encouraged to introduce quality assurance to ensure that local graduates are competitive in global markets, to help improve higher education by enhancing relevance, raising standards, ensuring quality control, and correcting deficiencies. The necessity of introducing quality assurance procedures is underlined by the pressure resulting from the rapid growth in enrollment rates, the greater financial autonomy being granted to higher education institutions under recent reforms, the increase of private, for-profit institutions, the widespread introduction of online program delivery, the new approaches to the design and the delivery of tertiary education, and the new instructional methods. These factors have forced a rethinking of the role of the government in supervising higher education. The challenge is for governments to maintain their role in ensuring that higher education corresponds to minimum standards,

despite the pressures they face to devolve higher education management responsibilities to the institutions themselves (Chapman & Austin, 2002).

The introduction of quality audits to higher education produced tighter central control and an emphasis on performance evaluation (Marceau, 1993). New forms of accountability were introduced, manifested by performance indicators at the institutional level, and performance appraisal at the individual academic level, as well as the input/output matrix (Currie, 1998; Fisher & Rubenson, 1996). The logic of the input/output matrix is embedded in a performance-based culture, where the system expects and demands more. Input/output equations, together with performance criteria, are used by public funders in order to tighten their control and justify their position when refusing to support particular areas of research. The central administration of the university increasingly considers the university as a business, judged against efficiency considerations.

Mobility. Globalization encourages the flow of students and academics travelling abroad for studying, research, and teaching. Instruments promoting globalization, such as free trade and accreditation, ensure that the growth of this flow continues to help invigorate the global market. As a result, academic degrees are becoming more similar, academic programs more widely accepted internationally. Immigration policies are becoming less constraining to encourage highly qualified and talented people to migrate and acquire residency in other countries. Universities in the North are open to recruiting the best talent worldwide, and they make it easy for foreigners to fit into their career opportunity structures.

This flow is mainly directed from the South to the large metropolitan institutions in the North, but also occurs within countries of the North (Castells, 1994). Many of the students from developing countries studying in the North choose not to go back to their countries. For example, the large majority of the students from China and India studying in the U.S. choose to remain in the U.S. once they graduate, and are employed there. This situation holds despite recent attempts to attract graduates back to China, by offering them attractive perks and working conditions (Altbach, 2003). This flow generates a substantial income for the host countries in the North, and a drain on the economies of the South. The countries of the North gain qualified professionals that they did not spend money educating, but can reap the benefits of their training and qualifications.

With the growing impact of globalization on the metropolitan universities in the North, overseas students not only acquire training in the North, but also absorb the norms and values linked to globalization. If they return home, their enthusiasm to change their universities to become more in line with the values of the academic systems in the North increases the likelihood that they inadvertently act as catalysts in promoting the culture of globalization.

Reaction of academics. Academic circles felt that this surge of entrepreneurial initiatives was transforming universities into profit centres. Senior university administrators were accused of distorting academic values by allowing corporate stakeholders, supported by the government, to dictate a corporate-driven agenda to steer university direction and instil market-driven values, thus fostering the creation of 'academic incorporated' (Mount & Belanger, 2001). Other accusations included turning education from a public right into an elitist consumer product; widening the gap of

support between arts disciplines and business and technology programs in the name of global competitiveness; shifting the research agenda from curiosity-driven discoveries to a saleable product relevant to the private sector; and creating a two-tiered university, that of the well-established research-intensive university, and another small one focused on teaching; and giving precedence to free market and wealth creation over the core academic values of autonomy and free thinking (Currie & Newson, 1998; Mount & Belanger, 2001).

Giving primacy to professional skills is further shifting the allegiance of the faculty away from the university. Successful faculty members are lured by consultancy arrangements, company directorships, royalty and patent rights, wealthy and influential clients and benefactors, generous fees from professional practice, enviable research support, popular books, successful videotapes, the international lecture circuit, and superior working facilities. Successful professors see themselves as favouring the university by their presence. They view the university as their base but hardly as their employer. Rather, they are entrepreneurs, paid a substantial retainer fee for their services. Their allegiance is not to their institution, nor to their students, but to their profession, their colleagues, and their clients. The collegial lines are weakened, and common discourse and informed communal debate are marginalized as a result. This situation is disheartening, because we risk losing much as individuals and as a nation by compressing our contacts and isolating our activities. It also defeats the purpose behind the establishment of universities, which was to avoid this isolation and fragmentation. Learning was envisioned to be richer in community than it ever could be within isolated units.

Recent higher education reforms associated with globalization underscore the need for flexible arrangements for the deployment of academic staff. University managers are creating more casual positions for academics by cutting the number of tenured positions.These arrangements are intended to be better able to respond to the changing labour market signals, and to quickly adjust to technological change. This need for flexibility calls into question the traditional appointments and careers of academics. Organizational flexibility is leading to fragmentation and more hierarchical divisions, both administratively and academically. As multiple types of academic work emerge, the privileged will be those who happen to be close to the market, the state, and the corporate sector (Buchbinder & Rajagopal, 1996; Currie, 1998; Slaughter, 1993). Recent reforms favour moving away from civil service regulations and abandoning tenure-track appointments. It is anticipated that such measures will have a negative impact on faculty salaries, and that faculty will be expected to supplement their income from private consulting (World Bank, 1994). Such ventures are seen to offer mutual benefits for both faculty members and universities. Faculty members will gain the prestige of having an academic title and an affiliation to help them in their entrepreneurial efforts, and universities will be able to hire them at a lower cost.

Cost-saving reforms, promoted on the basis of empirical estimates of educational production functions and that they will not adversely impact student performance, can be misleading. Examples of these proposed reforms include reducing teacher's salaries, increasing class size, privatizing teacher markets, and increasing teacher workloads. Such estimates of performance production functions for universities can be inaccurate because they do not consider the underlying process by which students learn, which includes

factors such as the time the teacher spends teaching, the effort the teacher puts into teaching, or the quality of the teaching method (Levin, 1980). None of these factors are considered in explaining variations in student performance in the production-function estimates, which guide the policy conclusions to make universities more effective. The policy direction advanced by such production-function estimates may be misleading in other ways. While increasing class size can reduce cost, it may work against attracting more talented and better qualified individuals to the teaching profession, since teaching larger numbers is cumbersome and less rewarding, and leaves professors less motivated, less committed to their students, less willing to learn how to do their job better, and with less time for self development such as research and conference participation. How these teachers regard themselves, how committed they feel to their students' academic success, how willing they are to learn to enhance their teaching performance, and how able they are to teach well are key to producing both basic and higher learning skills. By overlooking these factors, globalization and its agencies overlook the fundamental need for improving educational quality.

Challenges to the professoriate. The restructuring of universities puts the professoriate under increasing strain. They are required to teach larger classes, cope with lower incomes, are subject to more accountability procedures, and must become more responsive to the demands of the market and the corporate sector. By responding to these demands, academic freedom is also put on the line. The traditional understanding of academic freedom has been the right of the university professors to teach and conduct research without interference, including the right to participate in public life, to champion unpopular positions, and to criticize university administrators without jeopardizing their

employment status. Making universities more entrepreneurial and more responsive to market demands has widespread ramifications, such as having the professoriate direct more attention to external resources, at the expense of their involvement in central university affairs. Other ramifications include a reduction in academic staff, which in turn creates an increase in the burden of academic workloads for full time faculty members; offering enticements to faculty for early retirement; and the use of tenure and promotion procedures to control academics. These help to explain the growing feelings of insecurity among faculty (Buchbinder & Newson, 1990).

Large numbers of talented academics in the South search for attractive opportunities, better salaries and working conditions, and the opportunity to be at the centres of science scholarship. Academics in most developing countries cannot aspire to achieve what is considered a middle-class lifestyle in the North, nor do they have access to the necessary tools of research and scholarship, such as access to the latest knowledge and contact with the international community of scholars. At the same time, the academic environment has been eroding due to scarce resources and growing numbers of students, with the added pressure of having to acquire and offer the skills and the knowledge demanded by the global market economy. In addition, faculty have to cope with the negative pressure of favouritism in academic appointments, perks, and promotions. This outward flow to the North is incurring serious harm to academic institutions in many developing countries, as they lose their most talented academics. This pattern is particularly common in many African countries, including South Africa, Ethiopia, Ghana, and Sierra Leone (Outward Bound, 2002).

In the context of globalization, there is little if anything that universities in the South can do to change the pull factors underlying the flow of academics from South to North. However, the challenge for universities in the South is to succeed in working to diminish the push factors at home by improving the academic environment. The improvement of academic conditions at home can encourage local academics living abroad to establish contact with their native countries. They can return to their countries of origin to deliver lectures, participate in joint research projects, undertake consultancies, and accept visiting professorships. Such initiatives have succeeded in countries like China, India and South Africa (Altbach, 2003).

A small but significant migration of academics also takes place within countries of the North. Besides the attraction of good salaries and working conditions, academics in Europe are lured to the top universities in the U.S. and Canada by the prospects of being at the centre of the research activity, and having access to the latest scientific equipment. Academic migration is encouraged in the current globalized environment across the different levels of the academic system. It includes internationally famous scholars from the North attracted by high salaries at top universities, as well as academics from the South, where modest salaries are attractive to them but not to local applicants. Overall, the continuing flow of academics from developing countries to the North will help in increasing their pool of well-educated scientists and academics, thus help them maintain their leading edge in the global academic labour market. The issue of local applicability however, will continue to be questionable.

In essence, underlying the globalization rhetoric is a critique which sees the university as ill-adapted to the changing world, with its on-demand, anytime, cost-

effective, and on-line learning. Promoted instead are streamlined universities shaped by social forces of economic and technological nature, characterized by low-cost and low-overhead corporate-styled knowledge dispensers and for-profit information vendors. Universities are considered as knowledge factories, principally valued for the earning capacity of their graduates, and the wealth they contribute to society. This view overlooks the traditional role of the university as a custodian not simply of knowledge, but also of the values, traditions, and culture of the society. It misses the fact that the university not only educates and discovers, but also challenges the existing order and drives change, and that it will therefore continue to remain essential to produce educated citizens necessary for a democratic society. The university works to affirm the fundamental values, principles, and integrity of learning and reason. It not only honours the past, serves the present, and creates the future, but it does so with the aim of transforming knowledge into wisdom rather than merely saleable products in the global market. With globalization, the university is shifting from a role as a valued social institution, primarily focused on the development of human resources, to one centred on the discovery, processing and application of knowledge itself. This explains why most developing nations are moving rapidly to strengthening their systems of higher education through globalization-inspired reforms. The danger in that is that higher education institutions are becoming more visible, and much of the impetus for change is coming from external globalization forces over which the university has little control.

New Organizational Structures

The organizational models that help universities position the expanding economic initiatives do not exist in a static relationship, but instead change and evolve. These models need to be considered against a background of the dynamics at play, in addition to the implications they have for the larger university organization. There are two models that commonly emerge. The first, the failed integration pattern, is where universities attempt to integrate new missions into their core missions and existing organizational arrangements, such as departments or colleges. When these efforts fail, the new missions are maintained as separate, specialized, and frequently autonomous entities, as long as they can generate funding or serve political constituencies (Feller, 1999). Much of the infrastructure that was set up to support technology transfer fits this pattern, and since its link to the educational mission is weak, it benefits only a few faculty members, and transgresses academic traditions. It was allowed to develop because it pledged to be self-supporting and revenue-generating (Geiger, 1996).

The second model is when the organizational form moves outward from the university. As the functions occurring within the organizations grow and become more significant, they are more likely to demand non-faculty professionals to administer them. This takes place as a result of resistance in institutions and among faculty to allocate substantial amounts of energy and time to non-core functions. Professionals, who demand recognition and autonomy, often feel hampered by university rules and processes. Most universities are not at ease with the concept of compensating technology licensing officers on the basis of an incentive scheme, and as new functions become more market-oriented and at variance with core functions, or more professionalized, the university

begins to lose its grip over the activities. It thus feels a need to buffer itself through subsidiary, interdependent, and independent organizations.

The challenge for universities is to steer the interaction of these factors before they lead to their disintegration: as the institutions become less faculty-centred, and the universities find it increasingly difficult to balance applied and core fields and to harmonize different missions while maintaining their traditional role, making it very hard to define their mission in coherent terms. Most notably, the danger is in having these dynamics nurture the phenomenon of the periphery, where what had been considered as outside the core of university functions interacts with core functions, impacting them in new and unanticipated ways (Matkin, 1997).

New structures for higher education. The rapid growth of knowledge and the multiple career transitions facing graduates, together with the compression of physical distance assisted by the advances in communications technology, presents universities with increasing competition. This comes from diverse sources offering online education, lifelong learning, and continuing education. Top universities are reaching out across national borders through the internet or satellite communications, opening branches all over the world, and thus competing with national universities. It is estimated that in the United States alone, approximately 3000 institutions offer online higher education (Olsen, 2000). The rapid development of distance learning technology is making it possible for formal and informal channels of learning to accommodate the learners' educational needs, whatever, whenever, and wherever they may be.

Undergraduate education is preparing students for lifelong learning, by conveying the needed skills and competencies to succeed in the workplace. The significance of lifelong learning is tied to the growing demand for versatility in the global labour market, and with it the trend defining workers less by the particular long-term job they hold than by the knowledge they have acquired by studying. Lifelong learning allows students to perpetually build a knowledge portfolio, enabling them to stay abreast of the work terrain in which they find themselves, as they move across various types of work and non-standard employment (part-time, temporary and self-employment) (Soudien, 2002).

Corporate universities constitute another type of competitor, especially in the area of continuing education (Hallak, 2000). They are evolving in the context of globalization and advanced communication technology networks, and operate under one or more forms. They may have their own network of physical campuses, like Disney, Toyota and Motorola do. They may operate virtual universities, such as IBM and Dow Chemicals do. They may also operate through an alliance with established higher education institutions, as do Bell Atlantic, United Healthcare, and United Technologies. A few corporate universities are officially accredited.

Another type of competitor confronting traditional universities is the entrepreneur, including those who specialize in linking suppliers and consumers of educational services. These companies build, lease, and run campuses, and develop multimedia education software. They also advise on the training needs of corporate clients worldwide (Abeles, 1998). Some traditional universities are reacting in order to secure a slice of the education market, offering degree programs in partnership with established universities elsewhere, or signing partnership agreements with corporate universities (Clark, 1999).

Forms of partnership. The development of industry-university-government partnerships may take one of three forms (Ryan & Heim, 1997). They can be university-directed, where the institution views its intellectual capacity as valuable to the private sector, and makes a proactive effort to market its expertise to potential users. Besides the commercial potential resulting from technology transfer, the partnership often results in further activities, including joint research ventures, as well as ongoing training and continuing education that enable the innovation to take hold in the workplace. Partnerships can be industry-directed, and often demand-driven, where the industry partner expresses a need for a knowledge base in the university. University outreach efforts enable industry users to connect with institutional resources through technology transfer, continuing education, and extension mechanisms. Partnerships can also be government-supported university-industry relationships, which take place when the state, through its policies supporting development and industrial growth, acts as a catalyst for economic growth and technological improvement by encouraging university-industry collaboration. State sponsored research councils may require an academic/industry linkage as a pre-requisite for funding. The state reaps value in the form of new job opportunities, and/or jobs retained. The state is also driven by a concern to upgrade the skill level of its human resources, in order to achieve or maintain a competitive position in the global economy.

Differences in culture between the academic and corporate worlds make partnerships between them difficult to form and challenging to sustain. Frequently, universities fail to understand that the research involved in industrial partnership and economic development activities is more industry-driven, and is therefore more applied

than basic. The development of partnerships requires that each party understands the other's needs, wants, and expectations. University needs are geared towards providing support for students, opportunities for faculty, and institutional advancement. Faculty are eager to apply expertise and test concepts, find new consulting opportunities, and new possibilities for research. The needs of business and industry are geared towards achieving quality, specialized expertise, and assistance that is flexible, responsive and cost-effective. They demand confidentiality in these partnerships, which can potentially jeopardize the integrity of the research procedure as well as its outcome. After all, what business and industry expect is a contribution that is quantifiable and produces a clear return on investment. This is assessed in terms of the number of jobs saved or created, new products developed or businesses established, or degree of productivity enhancement (Ryan & Heim, 1997). The challenge for universities is to understand the differences in the orientation of each of these cultures and explore the possibility of convergence to sustain a successful relationship, without compromising their missions and responsibilities.

The growing ties linking university and industry are reflected in the plethora of their joint research centres, especially in the United States. In 1990, it had 1,056 university-industry research centres, with a level of spending estimated to be $4.12 billion, of which $2.9 billion was spent directly on research and development. This is more than double the $1.3 billion extended by the National Science Foundation for all academic research and development, and about one-fifth of the federal spending on science and engineering, in the same year. Furthermore, the share of industry funding for academic research and development more than doubled between 1970 and 1990, from 2.6

to 6.9 percent. These centres engage a large number of students and faculty members - in 1990 they included 16, 800 graduate students, 22,300 doctoral level researchers, and 2,000 faculty members (Cohen, Florida & Goe, 1994). They have the advantage of being able to leverage human resources, including faculty time, so they do not have to recruit on a full-time basis. Faculty members in the U.S. have expressed growing concern that in their drive towards academic entrepreneurship, American universities are becoming over-zealous in developing closer ties with industry. They feel that closer ties can have major implications for research universities, with concerns ranging from the alleged shift in university research from basic to applied, and the capacity of industry to exert influence on research agendas, policies regarding information disclosure and publication, and the level of internal communication taking place within research centres (Florida & Cohen, 1999; Kodama & Branscomb, 1999).

Promoting university – industry collaboration. The realities of the global economy, with the explosion of knowledge and rapid proliferation of technological advances, combined with increasing competition in the global marketplace, unpredictable demands and forces, and accelerating change, put the onus on corporations to access and absorb new knowledge quickly if they are to survive. Not only does the need for information enhance the prospects for growth in partnerships between universities, business, and industry, but it makes them inevitable. The challenge for universities is to ensure that these relationships are nourishing to all parties, and do not dominate or detract from their broader missions and responsibilities (Lynton & Elman, 1987; Matkin, 1997; Ryan & Heim, 1997).

University-industry research centres are introducing changes in university personnel by adding research scientists. These scientists mainly work on sponsored research, which is not located within graduate education. They consider themselves a distinct group, and some universities have even established career paths for them. This means that their goals diverge from those of both faculty and students, and this may create aberrations when universities make decisions impacting on the tradeoffs between enhancing prominence and funding. As the interests of research scientists are better represented, the prominence of the university becomes subjected to more damage (Florida and Cohen, 1999).

Changes in the orientation of the academic and public research culture, from being based on the research and training interests of professional staff, to being open to more entrepreneurial activity, raise the issue of potential conflict of interest and normative conflict between the expectations and standards of academia and those of private enterprise. Academics who participate in commercial activities recognize that these activities need to be kept separate from their traditional roles. Yet the more academic scientists are involved in exploiting intellectual property, the more they need to restrict the spread of detailed information about their work. Scientists are increasingly reluctant to publish their work fully and freely because of commercial pressures, which can increase to the point where collaboration, dissemination, and peer review are compromised (Packer & Webster, 1996).

Export of institutions. Different forms of multinational higher education initiatives have emerged in the global education market, invigorated by contemporary global trends. Many databases, electronic journals, e-books, textbooks and other knowledge products

are owned by profit-making ventures. Many multinational corporations, academic institutions and other profit-making organizations largely based in the industrialized North have invested in developing this global education market, whose set-ups range from twinning arrangements linking academic institutions or programs in one country to counterparts in another, and setting branch campuses in other countries, to the use of the internet and other distance education arrangements for program delivery. The powerful exporting academic system in the North dominates the academic models, curricula, and programs of the importing institutions in the periphery, who are in most cases no more than receptors of academic innovations evolving from the centre.

Some top American universities are establishing branches in popular professional fields. For example, the University of Chicago's business school has a campus in Spain. Other U.S.-sponsored universities have been established in many countries. In the Middle East, one example is Cornell's medical school campus in Qatar. These universities commonly originate through local initiatives with strong links to universities in the U.S., are supervised by the U.S. partners, and accredited in the U.S. The language of instruction is English, and the curriculum U.S.-based. The hosting institution may be a business corporation with no links to education, or an educational institution. Some of these arrangements are set up in response to an unmet demand in the region, and programs are often of low quality, offering poor supervision or inadequate communication between the providers and the hosts. Some foreign programs are franchised by local institutions. The foreign institution lends its name and curriculum, and extends limited supervision and quality control to a local academic institution or a business firm. The new institution is entitled to grant a degree of the foreign institution.

These franchise set-ups were subject to abuse and criticism. Foreign students pay hefty fees, thinking they are getting a standard British degree, but in reality what they are receiving is not usually up to the level of education provided in the U.K. The British press has published many articles accusing the less prestigious U.K. institutions involved in overseas programs of tarnishing the reputation of British higher education (Packer & Webster, 1996).

Twinning programs commonly link one institution in the South with a partner in the North, with the Northern partner providing the curriculum and orientation. Academic degrees are jointly awarded. Twinning has the advantage of helping institutions in the South in developing new curricula which are approved by the foreign university. However with a few exceptions, the main goal for stakeholders in the North is to generate profit. Institutions in the South that are attracted to multinational initiatives are also interested in making money, as they seek to exploit a growing and unmet demand for access to higher education, in addition to providing programs that are new to the local academic scene. The challenge for local reputable universities is to cope with the issue of inequality in institutional arrangements when they deal with established higher education institutions in the North. This requires weeding out mediocre institutions in the North whose only goal is profit-making.

Chapter 5: The Need for Higher Education Reform in Jordan in the Context of Globalization: Realities and Challenges

The Development of the Higher Education System in Jordan

Higher education in Jordan dates back to 1951, with the initiation of a one-year post-secondary teacher training class. The University of Jordan was established in 1962, and has since undergone a rapid expansion in response to high social demand and a government policy to invest in human capital. Today, Jordan has more than 65 higher education institutions, which include public and private universities and community colleges.

Jordanians have traditionally been in high demand in the regional labour market, most often as skilled and professional workers, as a result of their levels of education. However, employment opportunities for Jordanians abroad have witnessed a slump as a result of several factors, including the negative repercussions of the influx of its returnees with Iraq's invasion of Kuwait in 1990-1991, its vulnerable geo-political position, and the economic difficulties facing the region, as well as the implications of Saudi Arabia and the Gulf States nationalizing their labour forces.

Faced with this situation, Jordan has chosen to capitalize on the maturity of its education system, ensuring that it maintains its lead in the region in both education in general, and higher education in particular, especially in the area of information technology. Jordan has committed itself to enhancing the quality and economic relevance of its programs to bring them in line with the demands of the global market. It aims to introduce more sophisticated courses and modes of delivery; and to ensure that it maintains its status as a centre of excellence by setting up quality post-graduate

programs. Its objective is to help make higher education a significant export activity, to attract students from the region, and establish satellite universities abroad, in response to the demand from Jordan's neighbouring nascent higher education systems. The government of Jordan has expressed its strong commitment at all levels and sectors, including education, to promote the knowledge economy. The official vision of Jordan as the information technology hub of the region underscores the priority given to this development and to the key role of education.

Jordan is trying to acquire a competitive niche in the knowledge economy, with the help of the World Bank. It is the view of both Jordan and the World Bank that the speed and the effectiveness which will determine Jordan's ability to make this transition will either be facilitated or impeded by the economic relevance of its higher education system, aided by the introduction of information and communication technology (ICT). Accordingly, Jordan's educational strategy for the knowledge economy follows the Ministry of Education's E-Learning Strategic Framework. This constitutes a comprehensive strategy for incorporating ICT in the learning process, thereby involving the part of the reform that aims to prepare skilled labour for the knowledge economy. Jordan's strategy is further tied to key institutional reforms, which cover issues such as governance, financing mechanisms, equity, educational quality, research, and the provision of affordable access to lifelong learning opportunities.

Context of Higher Education Reform in Jordan

Studying higher education reform requires understanding its context. Jordan's public policy gives full backing to reform initiatives, given that human capital is Jordan's

key natural resource, and skilled individuals with higher education tend to achieve greater success in the local market, producing higher income per capita and higher tax revenues. They are also sought after in the global labour market, and send home higher remittances, making Jordan's economy more dynamic, helping to reduce Jordan's debt burdens, and increasing its prospects in a competitive global market. At the same time, Jordan requires a strong research capacity in order to compete in the global economy, along with good governance and a developed infrastructure. All of these require highly educated people. Taken together, these factors provide a powerful justification to give attention to higher education reforms, in the context of alleviating poverty and achieving economic development. Policy makers in education face some key challenges impacting the prospects of implementing higher education reforms. Most important of these are the population growth rate, unemployment, illiteracy and water shortages, besides the problems associated with higher education including admission, fees, reforms, and accreditations.

Population growth and unemployment. Jordan's economic and political planners must ensure that the growth rate of the economy remains well above the population growth rate in order to secure enough resources for better health and education. Jordan's population of 5.3 million is growing at a rate of 2.8 percent per year, and is expected to reach 7.2 million by 2020. Expanding higher education has been shown to postpone marriage, leads to child spacing, and limits the number of children.

At the same time, the average rate of unemployment has reached 13.7 percent. While recent policy reform initiatives have been geared to better respond to the demands of the labour market, the strategies to fight double-digit unemployment have registered

negligible progress thus far. In an effort to meet the needs of the local labour market, the Civil Service Bureau has issued an advisory bulletin on demand in the public sector for various areas of study in universities. This included three categories - in demand, saturated, and stagnant. It also includes the number of vacancies and rate of employment, compared to the number of job applicants, with the intention of raising public awareness among students as well as higher education policy makers (Al-Abbadi, 2003b).

Jordan's high population growth rate is also endangering its efforts to combat illiteracy. Jordan is currently working to lower the illiteracy rate to five percent by the year 2010, and zero by 2020, to enhance participation in education and higher education, and ultimately register progress for its human capital development.

Most critically, Jordan's high population growth is threatening the consumption of its inadequate water resources. Water resources are currently stretched to the maximum, with Jordan rated among the top ten countries on water deficit. This threat also looms large on other nascent infrastructure projects. Besides being highly taxing on the meagre public budget, Jordan's high population growth is also endangering vital development plans. These include key infrastructure projects such as the regional gas pipeline, to access a cheap source of energy, as well as the planned US $800 million canal linking the Red Sea to the Dead Sea. Scientists warn that the Dead Sea has diminished three meters over the past three years alone, as a result of environmental degradation, and its surface area is two thirds of what is was in the early 1960s, as a result of the diversion of the Jordan River for irrigation purposes. It is expected that with the current rate of evaporation, the Dead Sea will disappear in about 50 years. In a rare demonstration of unity of purpose, Jordan, the Palestinian Authority, and Israel have agreed to save the

Dead Sea by constructing a canal to channel water from the Red Sea to it. With water pumped from the Red Sea to the Dead Sea, countries relying on the Jordan River for irrigation can continue to do so without threatening the existence of the Dead Sea.

Challenges Confronting Higher Education

A number of key issues have been repeatedly identified as challenges confronting the higher education system in Jordan. Foremost among these is an escalating demand for higher education, concomitant with a cutback in public funding. Other issues include program quality, relevance to economic needs, financing mechanisms, equity, governance, autonomy, accountability, and planning.

The rapid expansion of primary and secondary enrolments, coupled with an increased demand for skilled labour, has added to an increased rate of return for university graduates, compared to secondary school graduates. However, this expansion has not been matched by commensurate funding increases. As more was being demanded of higher education institutions, the government's ability to pay for it was diminishing, yet enrollment continued growing. Public funding to universities was cut by 50 percent between 1995 and 1999, and the divergence between resources and enrolments is expected to continue (Gharaybeh, 2001). Although the public universities in Jordan charge fees at a rate of 27 percent cost recovery, and despite the expansion of the private sector to relieve some of the burden on the government, enrollment still outpaces funding growth, and expenditures per student are dropping. As a result, concerns are voiced over the declining quality of both the inputs and outputs of higher education, which in turn impacts the competitiveness levels of the graduates, compared to other graduates from

top-ranking universities (Gharaybeh, 2001). The quality of programs offered by community colleges was often found to be out of sync with the needs of the labour market. Resources were not up to date, which was a concern for students and instructors. With Arabic as the language of instruction, most of the teaching material is in Arabic, so in spite of the proficiency of students in the English language, they are unable to benefit from resources written in English. This situation does not apply to universities, where technical subjects are taught in English, which allows universities to recruit professors from developed countries and benefit from up to date resources, through exchange or special programs.

Admission to higher education institutions is linked to achieving very high grades in the General Secondary School Certificate Examination. Fifty percent of secondary school students qualify for university, which generates fierce competition among the students to achieve the highest grades possible, especially for the more lucrative professions. Public universities select the highest scoring students in the General Secondary School Certificate Examination. In addition, special consideration is given to geographic distribution, to avoid discriminating against students from less-privileged regions. Further intensifying this competition is the quota reserved for children of army and security forces, children of Ministry of Education employees, and applicants from countries with which Jordan maintains cultural relations (Khasawneh, 2001; Ma'ani, 2002). Although students within this quota must satisfy the minimum admission requirements, it still limits available places for the remaining applicants. Thus, while the average grade required to be admitted into medicine is about 85 percent, the actual score tops 94 percent. This situation has been instrumental in creating unprofessional practices,

including disregarding curricular material unlikely to be included in the examination. In addition, the retrenchment in instructional and research programs and the growing demand has resulted in an erosion of the quality of instruction as well as the research and training capacities (Ma'ani, 2002).

Accreditation policies leave a very narrow margin for community college graduates to access university. The high enrollment demand from students of average and below-average academic standing coincided with a time when community colleges have had to cut down on costly vocational and technical training courses. At the same time, the highly competitive system of university admission inadvertently sends a message to potential employers that community college students rate lower than university students. Considering the lower standards of faculty and facilities compared to those of the universities, community college students share a grim outlook with respect to their employment prospects. The principal beneficiaries of this aggregate situation have been the private universities, who have lured potential community college candidates, thus contributing to the dip in community college enrollment levels. The government decision to transfer teacher training to universities has also contributed to declining community college enrollment (Al-Hisban, 2004). However, some private universities have been singled out by public university officials for poor quality, especially with respect to faculty qualifications, and availability of equipment and supplies. As private universities are for-profit organizations, critics also express concerns of compromised quality, due to the possibility of inflated enrolment by admitting sub-standard applicants (Ma'ani, 2002).

The method of instruction in higher education institutions is considered dated, as courses are generally loaded with material, but lack skills development and research. In

the arts and behavioural sciences, lecturing is the norm, and emphasis is on the acquisition of theoretical knowledge (Al-Sharei, 2004). While the situation is better in scientific and technical specializations, the facilities and laboratories require upgrading. Technical support staff supervise laboratory and practical work in community colleges, which is inappropriate considering that theory and practice need to be integrated, and learning by doing enhanced (Durra, 2001; Khasawneh, 2001).

Undergraduate students are expected to fulfill the requirements of a heavy course load, completing 18 credit hours in four-year programs, and 20 credit hours in five- and six-year programs. This does not leave the student enough time to pursue independent study, work on projects, or participate in extra-curricular activities. It gears coursework towards knowledge cramming, rather than skills development, and encourages students to rely on their professors for knowledge, rather than equipping them with independent research skills. Employers report that graduates come with a wealth of theoretical knowledge, but a dearth of skills needed to use, manipulate, and articulate information, compared to graduates of Western universities (Khasawneh, 2001; Ma'ani, 2002; Mahafzeh, 2001).

Although Jordan was a pioneer among Arab countries in introducing the credit hour system, weaknesses are manifested as a result of ineffective student advising, permission to repeat courses an indefinite number of times, and overlooking the importance of fulfilling prerequisite courses. Academic specializations are separated into traditional departmental niches, discouraging the initiating of interdepartmental, multidisciplinary programs. Other problem areas include the lack of modern information technology systems, insufficient attention given to the relevance and quality of curricula

and the teaching performance of faculty, and no mechanism to assess the learning effect of courses and monitor responsiveness to social and economic changes.

Most universities offer similar areas of study, with similar course content, and occasionally even similar textbooks (Ma'ani, 2002). They are only differentiated by location, proficiency of staff, and standard of students. Public universities have lost their capacity to excel in programs, having stretched themselves by developing a diverse range of undergraduate and graduate programs without giving enough attention to the limitation of their professional and financial capabilities (Zreik, 2001).

Community colleges in Jordan have not evolved into community-based institutions. They did not back initiatives in areas such as adult education programs, the provision of short skills-upgrading programs, or in-service training programs. While they have contributed to providing English language and computer skills courses, so did the public universities, who considered offering these courses as a lucrative income-generating outlet (World Bank, 1996).

Economic relevance of higher education institutions. The divergence between the skills required in the workplace and those acquired from university is growing. In a country like Jordan, where small firms dominate the economy, it is difficult to project future demand for graduates. The system puts a great deal of emphasis on public employment, feeding unrealistic job expectations (Mahafzeh, 2001). Graduates are equipped with discipline-specialized skills rather than being prepared for general employment, flexible capabilities, and critical and analytical cognitive skills. The mismatch between university training and the needs of the labour market is partly

reflected in the unemployment rate among its graduates, which reached 28.9 percent among females and 18 percent among males in 2003.

This also applies to programs offered by the community colleges, which were found to be poorly integrated with the needs of the economy. Until very recently, the community college system did not produce graduates with mid-level technical skills. Curricula were irrelevant to the needs of the economy, and their academic programs too theoretical. Studies were information-based as opposed to competency-based. As a result, graduates were short on employable skills, and employers commonly reported that community college programs were weak when compared to those offered by universities, and also deficient with respect to employment skills, work-related concepts, and teamwork.

Graduate study, research and development. With a literacy rate of 89.7 percent, a secondary school enrollment of 18 percent, and a post-secondary enrollment rate of 17.5 percent (Statistical Yearbook, 2003), Jordan is ahead of many other countries in the Middle East with respect to human capital, but it still falls behind its regional peers with respect to the number of Jordanians involved in research and development.

Universities are major contributors to research and development in Jordan. Together, the public and private universities constitute an essential part of the infrastructure available for both academia and industry, which includes a total of 5000 academic staff, 3100 of them in public universities and 1900 in private ones ("Meeting of MPs," 2003). In addition to the state-funded research conducted in public universities, the government supports research in the sciences through two principal centres, the Higher Council of Science and Technology (HCST) and the National Centre for Agriculture

Research and Technology Transfer. However, the research and development (R&D) centres and facilities in Jordan fail to meet the needs of both the public and private sectors.

Human capital represents the principal component of the R&D infrastructure. This brings to the fore the vital role of the government, not only in ensuring that adequate education is provided, but that 'world class scientists and engineers are produced, to enable Jordan succeed in the technology-based world of tomorrow' (Ministry of Planning, 2003, p.2). According to the OECD Science and Technology Indicators, the number of research scientists per 1000 working force is 3 in Jordan, as opposed to 8 in Kuwait, 6 in Egypt, and 7 in Turkey. Spending on R&D in Jordan does not exceed US $25 million, or 0.36 percent of its GDP, which represents about one third of the international standard of GDP for developing countries (Global Competitiveness Report, 2002-2003). Furthermore, almost all this expenditure is state-funded. State support is channelled to public universities as well as to state-run research centres. A sum of US $4.5 million is distributed annually among the public universities to cover research, conferences, and periodicals.

The government of Jordan has been working on a number of measures to improve its innovation track record. Foremost among these is development of ICT capacity. In addition, a number of steps were taken to ratify R&D legislation in order to align it with international standards, and develop an environment conducive to innovation. Financing R&D in the private sector is being encouraged through policies promoting private sector innovation. A levy for research on public shareholding firms requires them to invest a minimum of one percent of their annual net profits to support their scientific research and

human resource development. Where this amount or its remaining balance is not exhausted within a period of three years, it is deposited in a fund, to be created for this purpose. The Ministry of Industry and Trade oversees the monitoring and implementation process of the levy. In addition, the Higher Council for Science and Technology offers direct grants from its Industrial Research Fund. Other research facilities are available to industry, but these are largely confined to companies in the potash and phosphate sector as well as the pharmaceutical industry. Taken all together, however, the R&D centres and facilities in Jordan fail to meet the needs of the public and the private sectors.

Despite the existence of incentives and a conducive legislature, private sector investment on R&D continues to be minimal, with Jordan ranked 68th out of 80 in R&D spending. Such limited investment reflects the companies' lack of interest in incorporating new technology. Accordingly, it is not surprising that innovation does not play a key role in generating revenue for Jordanian firms. The industry's lack of interest in R&D is further reflected in the significant surplus sustained by the Scientific Research Fund budget (Global Competitiveness Report, 2002-2003). Venture capital, which constitutes a vital source of funding for the formation and expansion of small innovative firms, is barely present in the Jordanian economy. Only three private firms are working in this area, with limited resources and tight budgets. Commercial banks consider R&D projects a high risk, and as a result have no strategies aimed at financing them.

A recent awakening of interest among policy makers with respect to research was articulated in the framework of the need for higher education policy reform advanced in September 2002. Official rhetoric underscores the prime need for targeted, commercial research, and draws a causal link between research and Jordan's economic growth prospects,

based on its ability to produce high value-added products and services. The Ministry of Planning considers research a key enabler for moving Jordan through the three stages of economic development, starting from the resource-based, or factor-driven, economy; proceeding to the middle stage of an investment-driven economy; and finally reaching to the innovation-driven, knowledge-based economy (Ministry of Planning, 2003). As a low-income country, Jordan is still in the process of moving from a factor-driven economy, where economic growth is largely determined by the utilization of primary factors of production, namely land, labour, and raw materials, to an investment-driven economy. In this framework, for Jordan to acquire a global competitive niche it needs to develop efficiency in producing international standard products and services with the help of imported technologies, accessed through licensing, joint ventures, and foreign investment; in tandem with an increase in university-industry investment in R&D to develop these technologies. With this approach, the Ministry of Planning underscores the need to assess the current status of Jordan's R&D on the basis of its infrastructure, financing, and research output (Ministry of Planning, 2003).

The Ministry also believes that innovative research and development projects in Jordan depress the production of patents, due to a number of factors. Faculty in public universities conduct research for reasons connected to their professional advancement, rather than for initiating research programs tackling Jordan's social and economic problems, due to the lack of incentives for the latter. In addition, universities in Jordan misinterpret their role in the knowledge economy. While the majority emphasize traditional teaching and research, their mission statements do not incorporate the concept of commercialization, which hinders having joint research projects with industry. Not

surprisingly, direct university spin-offs rarely emerge, a situation which calls for a policy integrating the concept of commercialization. Finally, the links between academia and small and medium enterprise projects are characteristically weak, due to a mismatch between their expectations, particularly with respect to funding, tasks, and results. Some recent initiatives have been made through conferences, seminars and joint councils, to encourage communication between them and enhance their awareness of mutual problems.

The Ministry of Planning emphasizes that the high value-added sections of the supply chain, which are based on R&D, will determine Jordan's prospects for long term economic growth. It therefore calls for much higher levels of investment in R&D, in addition to reconsidering the distribution of public R&D funds with the intention of providing industry with the needed technology platforms covering the vast range of emerging technologies required.

Defining Features of the Higher Education System

Jordan's growing demand for higher education over the past two decades has been propelled by many factors, including demographic growth, and the increasing number of students completing secondary education and qualifying to register for tertiary education, with aspirations for a higher quality of life. Education beyond the basic levels reduces the probability of being poor to well below the national average, and enhances job opportunities and earning power.

Jordan has witnessed a mushrooming of diverse higher education institutions over the past decade. Today Jordan has 21 universities, of which 8 are public and 13 private.

More than 20 percent of the 20 to 24 year old age group is enrolled in higher education, and 67 percent of the students are enrolled in public universities. The government's licensing of private universities has provided a cost-effective response to the escalating demand, which coincided with the reduced public sector growth (Badran, 2001). Private universities grew from 1,300 students in 1991 to 50,000 in 2004.

Education has also been instrumental in promoting female participation in the labour force. Today illiteracy among females is 15.2 percent, compared to 5.4 percent among males, with 16.6 percent of females holding a post-secondary degree. This improvement of educational opportunities for women has been instrumental in prolonging their educational pursuits and postponing marriage. Among the other features of higher education in Jordan are those which concern governance, internal and external efficiency, financing, and program quality.

Governance, management practices and policy-making. The Ministry of Higher Education was established in 1985, with a mandate to control the process of random pursuit of specializations, steering these to accommodate the needs of Jordan. It constitutes the regulatory body for all public community colleges. Public universities are governed by the law of higher education, the law of Jordanian universities (which articulates the major objectives, responsibilities, governing bodies, and university councils) and the specific law for each university.

The defining attribute of the present system is one of centralization, where bureaucracy prevails (Mahmoud, 2004). Healthy competition is stifled with overarching concerns of ensuring equality and uniformity, which in turn constrains initiative, confines the scope of action, limits flexibility, and does not reward quality performance. The

Higher Education Council was originally meant to be an autonomous buffer between the government and the university system, by assessing needs, monitoring quality, and tracking demand, but today it combines both regulatory and financing functions. Since its establishment in 1982, the Council has been a key player in higher education. Foremost among its responsibilities has been handling the major concerns of community colleges and universities. The Council is responsible for the establishment of private universities, which includes endorsing the fields of study and areas of specialization, and setting admission criteria. It approves the acceptance of donations, gifts, and grants, reviews annual budgets, and endorses cultural and technical cooperation agreements with other national, regional, and international counterparts. In addition, it issues regulations regarding licensing and accreditation. The Council is housed by the Ministry of Higher Education, chaired by the Minister, and depends on the Ministry for technical support. While this setup is heavily staffed with government representatives, it does not guarantee effective government control of higher education.

The autonomy of universities exists only by virtue of being spelled out by the law, but in reality is absent. The government policies regulate key aspects of higher education, both public and private. However, admission policies are tied to government configurations which were drawn up with the objective of limiting variation in both inputs and outputs. The end result is a highly controlled higher education system, designed for a centrally planned economy, yet several discrepancies exist.

Public universities enjoy a margin of freedom in areas that would be inconceivable in more autonomous systems. They are not required to be accredited, nor are their undergraduate programs subject to review. They do not have to secure

government endorsements in order to set up new programs, unless they entail establishing a new academic structure. In addition, public universities are permitted to incur operating deficits and initiate new capital projects without prior government approval. University presidents are often appointed on the basis of vague criteria, and they in turn appoint vice-presidents and deans without specifying the criteria underlying these appointments. Faculty members are subject to the laws of the Civil Service Bureau, so their salaries are not linked to performance incentives, and once appointed, contract termination becomes very difficult. Despite of the fact that the Jordanian universities' regulations are in line with internationally endorsed procedures, promoting a faculty member is not subject to the member's performance ranking, and as a result promotion does not encourage faculty members to excel. The Council of Deans constitutes the principal decision-making body regarding university affairs, and the president of the university nominates and appoints all deans and vice-presidents without consulting members of the faculty.

Poor governance, bureaucratic management practices, and centralized policy planning are also a feature of community colleges and private universities. Private universities and community colleges are considered corporations of private shareholders, and are therefore affiliated with the Ministry of Industry and Labour. Boards of trustees and administrative supervisory councils are responsible for developing policies and planning, in line with the laws and regulations. Private universities are governed by a provisional law, which requires a similar governing structure to that of public universities, except that the highest governing authority of a private university is its board of trustees. The current Private Universities Law states that the board of trustees be composed of 15 members appointed by the Higher Education Council, at least one third

of which must be PhD holders, with the remaining two thirds having the necessary expertise and holding at least a BA degree. In addition, the current law prohibits nominating the head of the board of trustees as president of the university, and with the exception of the university president, does not allow combining membership in the board of trustees with that of the Higher Education Council ("22,000 places," 2003).

Private universities are weakly regulated. Although the Ministry of Higher Education regulates both private universities and community colleges, the quality control criteria are limited. The legal structure for the private institutions fails to strike a balance between government regulations, which threaten to suffocate private initiatives, and permissive policies. These place the proprietary interests of private institutions ahead of the educational role that they are intended to play. State regulations accrediting private institutions are confined to ratios such as student to faculty, student to area, and maximum number of registered students, and are found to be wanting with respect to effective supervision, and incentives to guarantee minimum quality (Eisemon, 1992; Eisemon & Holm-Nielsen, 1995; Geiger, 1986; Levy, 1991; Ma'ani, 2002).

Often with enrolments of fewer than 200 students, many community colleges are too small to function efficiently. In 1997, all the public community colleges were grouped together under the umbrella of Al-Balqa' University (BAU). BAU was also assigned the responsibility of supervising the academic and technical matters of private community colleges. To date, BAU lacks the required institutional capacity to execute the needed community college reforms (Khasawneh, 2001).

Internal and external efficiency. Many internal efficiency indicators for public universities are positive, including high retention levels to graduation, student to faculty

ratios, and staff qualifications. University administrators explain the high retention rates by Jordanian families' desire to see their sons and daughters hold a university degree, not to mention the social status that they earn from one (Durra, 2001). Negative internal indicators include the low priority given to science and technology programs, the dated specializations available in the social and behavioural sciences, the lack of teacher training in new areas, and dated teaching methods, which primarily depend on lecturing, with no attention given to developing critical and analytical thinking skills or writing and communication skills (Al-Sharei, 2004; Durra, 2001; Mahmoud, 2004; Zabalawy, 2004).

External efficiency indicators are reflected by the limited, low standard of research produced, as well as the absence of an effective system of accountability and performance appraisal. Another manifestation is the growing unemployment of graduates, which is often interpreted as a reflection of a divergence between the programs of study and the demands of the labour market (Al-Sharei, 2004). Community college graduates remain unemployed for a longer period compared to university graduates, and also earn significantly less (Al-Hisban, 2004).

Blaming higher education alone for graduate unemployment is inaccurate. Underlying the apparent imbalance between the output of higher education institutions and the demands of the labour market are a number of factors, foremost among them the macro-economic and trade policies, the general performance of the economy, and the prevailing conditions of the labour market. A survey of labour, unemployment, and income demonstrated that unemployment was uniform among people with different educational qualifications. The unemployment rate among graduates of primary,

preparatory, and secondary schools, and university graduates at the B.A. level, averaged 15 percent (Shakhatra, 1995).

Funding and financing mechanisms. Jordan's higher education is dependent upon public financing for both its capital and recurrent expenditures (World Bank, 1994; Ziderman and Albrecht, 1995). JD 52.5 million were allocated to universities in 2003, which includes JD 6 million channelled from the Socio-Economic Transformation Plan to support the advancement of information and communication technology in public universities, as well as JD 7 million to support community colleges (Al-Abbadi, 2004a). Supplementary sources such as tuition fees cover about 27 percent of the real costs per student, 20 percent of the universities' capital budgets, as well as 28.7 percent of the recurrent budget. Public funding does not subsidize private universities (Al-Abbadi, 2003b).

As is the case in most developing countries, allocations to higher education institutions in Jordan are negotiated with the government, but are not transparently determined. Funding sources for public universities are not stable, resulting in fluctuations in both their annual budgets and deficits. The funds transferred are not based on objective institutional characteristics, such as the number of students enrolled or the quality of programs. Individual allocations are usually based on those of the previous year. They may benefit from across-the board incremental increases, but more frequently, increases are subject to factors bearing no relationship to the activities of the institution. As a mechanism for allocating higher education resources, negotiated funding provides no incentives for efficiency. The government diverts a fixed percentage of revenue to its higher education institutions, and universities are funded on the basis of revenue

generated from a stamp tax, with the ratio of allocations varying by university. In many cases, this has resulted in deficits, partly from an institution's inability to honour contractual commitments, forcing it to borrow funds to settle its debt, and magnifying its problems. Funds for recurrent costs are shared according to a 1987 formula, which sets the ratio of allocations for each public university, the amount varying annually, based on the availability of resources earmarked to support them.

The current budget allocation system for public universities does not convey any clear direction regarding optimal ways of expending public funds. Missing is the link needed to resolve governance issues, in concert with a funding mechanism that reinforces government incentives. Criteria for allocating government subsidies to public universities are neither clearly spelled out, nor independent of real or perceived political influences (Ma'ani, 2002). In addition, the current system seems to reward the university administration for incurring debt. With capital costs and recurrent expenditures being presented as separate budget items, underfunding results in capital projects being financed through deficits, whereas the recurrent expenditures, including maintenance of facilities and equipment, are postponed. The government typically must respond to demands requesting supplemental deficit support, often for facilities that should have been postponed subject to funding availability, or that should not have been lavishly designed with insufficient consideration given to actual space needs or construction costs (World Bank, 2002).

Uncertainty with respect to budget allocation precludes annual institutional budgeting, while university budgeting practices provide few incentives for institutional innovation, controlling costs, strengthening programs, quality enhancement or long-term

academic planning. This does not enable higher education institutions to develop a strategic planning course. There is no requirement to have mechanisms in place in order to ensure that the courses offered provide students with the skills needed by employers (Ma'ani, 2002). In addition, the responsiveness of higher education institutions to the labour market is constrained by lack of autonomy to re-deploy resources internally, by changing academic structures.

As is commonly the case in developing countries, the beneficiaries of public subsidies for higher education are the wealthiest 20 percent of the population, while less than 10 percent of subsidies benefit the poorest 20 percent of the population (World Bank, 2002; Ziderman & Albrecht, 1995). A higher percentage of wealthy students qualify for admission to the university system, because their families can afford to send them to better private schools. The need for improving the quality of secondary education is therefore key to enhancing access for all students at the tertiary level, along with affordability for low-income students.

Private higher education is financed from private funds. World Bank figures estimate that approximately JD 10 million is spent on private universities; and JD 6 million on private colleges. However, these figures cannot be taken as indicators of the Jordanian funding capacity, since they include the funds expended by both Jordanian nationals as well as foreign students, and at least 25,329 Jordanian students pursue studies outside Jordan (Al-Abbadi, 2003d).

Program quality. Jordanian universities are geared towards promoting scientific methodology, independent thinking, and personal initiative, along with the pursuit of academic research. However, there has been a decline in the quality of programs over the

past decade. Universities have compromised the quality of their performance by trying to perform well in everything, instead of focusing on one area to excel in. Teaching faculty have not been retrained, and private universities have not raised their standards. Since their establishment in 1989, private universities have never rejected a single applicant on the basis of low grades, and are currently requesting the right to raise the number of students admitted (Khasawneh, 2004). The Ministry of Higher Education is emphasizing the need for universities to introduce quality assurance concepts, and has begun conducting an academic assessment for each university, which will be put on a web site.

International performance indicators. International performance indicators have gradually been moving to the centre stage of the need for education reform in Jordan, based on the realization that while both quality and quantity of education matter in the global economy, economic growth and competitive advantage in this knowledge-based economy places equal if not higher importance on the quality of human capital, and the acquisition of specific skills thought necessary for individuals to participate effectively in it (Carnoy, 1999; Ma'ani, 2002).

Interest in national accreditation has been sporadic, and its course disjointed. The first reference to accreditation in Jordanian law was in 1989, but this became inactive a decade later, following the annulment of the Ministry of Higher Education, and the establishment of the Higher Education Council as well as a Higher Accreditation Council. A steady revival in higher education accreditation has been commensurate with Jordan's commitment to liberalization, and the resulting influx of private and foreign universities. Jordan developed laws and systems articulating the state's commitment to

accreditation following the WTO's declaration that education constitutes a major share in global investment and development (Al Tal, 2004).

To establish international indicators, Jordan is being drawn into a single comparative field with other countries. Data is conceived to provide information that sheds light on the system's progress in realizing specific educational outcomes, and highlights features of the system that are connected with favourable outcomes. The purpose is to measure education's current effectiveness from the perspective of the global market needs, and to assist policy makers in modifying their course to forecast future performance based on the same perspective.

The new emphasis on measuring and assessing outcomes across countries has been promoted by agencies like the World Bank and OECD as part of the reform process. This explains why Jordan has recently started paying more attention to how well its students are doing compared to those in other countries. Underlying this is a globalized view of education performance and efficiency as an outcome, which reflects a quantitative view of progress. It sees that better education can be measured, and translates directly into higher economic and social productivity. With more intensive economic competition between countries, the urgency of improving productivity is translated by promoting international comparisons on standardized tests of student knowledge. These tests are promoted on the basis that they work to increase national effectiveness, since international comparisons provide a benchmark for educators in setting national learning goals. They also allow Jordan to compare the effectiveness of its national curricula in developing skills required by the global labour market, such as problem-solving, higher-order thinking skills, and computer skills, to standards in other countries.

Benchmarking attempts demonstrated that students in Jordan were not internationally competitive in skills considered important for the global economy, including ICT, science and mathematics. Other skills found to be deficient included problem-solving, teamwork, computers, critical thinking, analytical, communication, and independent learning skills. Further attempts comparing Jordan's performance to others included indicators of non-cognitive educational outcomes, and have started at the school level. Based on globalization-inspired benchmarks, these indicators are intended to help in meeting the needs of a neo-liberal marketized approach to education, through better outcomes and at lower costs. Non-cognitive indicators include decision-making, multitasking, flexibility, adaptability, the ability to work in teams, and participate in and integrate into society. These skills are difficult to quantify and standardize. Study and research are needed in order to develop a comprehensive system of certification on a country-wide level in Jordan. Failure to do so may render Jordan's nascent certification attempt inefficient in the global academic market.

The wide media acclaim to the recent success of a number of universities in international computer tests lends support to the efforts of policy makers who promote Jordan's potential to turn into a regional and international success in the IT sector. Hoping to attract more outside investors, policy makers draw attention to the investments Jordan is making in e-learning through its education reform initiative. They link this to the steady increase in employment in the IT sector, which has grown from 2,000 in 1999 to 10,000 in 2003, as well as to the capabilities of local companies that meet international standards with respect to applications and programs. Policy makers also draw attention to Jordan's political stability and human resources. Bringing the recent education reform

initiatives to the fore, and emphasizing the focus on producing quality graduates, are intended to assist Jordan in acquiring a competitive advantage through its human resources.

I believe that international performance benchmarks should be viewed as instruments serving to facilitate the shaping of policy agendas and priorities, serving the needs of globalization in meeting requirements of efficiency and profitability, and accommodating the needs of business and industry. The measurement procedure is also intended to make those who supervise benchmarking procedures more aware of the need for quality control. With globalization, performance is seen as the outcome, and quantitative measurement becomes the means of communication.

Economic Restructuring and Technology

Exploring the relationship between globalization and higher education draws attention to the interrelated issues of how governments manage change, and what role higher education and training policies can play in this process. With globalization, governments have had to adjust to economic restructuring. Jordan's adjustment was via the knowledge economy route, characterized by the use of advanced level ICT and development of high level technical skills to support higher value-added production. This choice was based on the government's view of higher education as key to economic growth, and in anticipation and support of future economic change occurring in the context of globalization. Jordan's development strategy, based on export-led growth, lent support to other parallel routes to reduce its dependency on raw material export for the majority of its foreign earnings. These new initiatives included tourism, agro-processing

industries and the establishment of an industrial free trade zone in Aqaba, and were intended to help Jordan attract foreign direct investment to assist in its development and meet its debt repayments. Jordan's export performance has witnessed an improvement as a result of its trade liberalization measures, including its accession to the World Trade Organization, signing an Association Agreement with the European Union, a free trade pact with the U.S., and reaffirming its long-standing membership in the Arab Free Trade Area. Through these and other accords of preferential trade access, Jordan has succeeded in improving its balance of payments. However, investors have expressed the need for immediate solutions within a long-term strategic framework to several pressing issues, foremost among which is the dearth of skilled labour. In addition, the issue of sustainability continues to be a challenge that only export diversification can solve. The government has also introduced a series of structural adjustment programs, under which state-owned companies were privatized and state utilities streamlined. The need for reforming the education system was also introduced to help facilitate this structural economic transformation. However, it is important to note that even prior to these recent efforts, the education system in Jordan had high enrollment levels. Acting on the realization that global labour markets are shifting in favour of jobs requiring greater skills, the needs promoted for higher education reform in Jordan emphasize equipping students with these basic skills, in addition to training.

Recent government policy reforms have targeted the institutionalization of intellectual property rights (Abu Khashabeh & Al-Edwan, 2003), as well as the privatization of state-owned institutions. Jordan has given a great deal of attention to intellectual property, introducing reforms to the relevant legislature, and establishing the

King Abdullah Centre for Intellectual Property. The privatization program is now in its sixth year, and was intended to stimulate the national economy. Seventy-five percent of the revenue from privatization was spent swapping or buying parts of national debts to France, Britain and Spain, and JD 63.6 million were use to settle the debts of Royal Jordanian Airlines ("75% of privatisation proceeds," 2003). The labour market is still considered problematic, and little improvement was anticipated for 2003. This is linked to the inability of the system to develop quickly enough to provide employment opportunities for the 50,000 students who graduate from university every year, only 5,000 of which are absorbed by the public sector. In a lecture addressed to students at Philadelphia University, the president of the Civil Service Bureau emphasized the need to change widespread misconceptions regarding public sector postings, especially the belief that it is the government's duty to provide jobs for its citizens. The rate of unemployment among youth from 20 to 24 years of age has reached 28.9 percent, almost double the overall unemployment rate of 15.3 percent. Experts warn that such a high rate of unemployment among youth can be socially destabilizing, with bright young people emigrating in search of better opportunities elsewhere (Kardoosh, 2003b).

The past few years have witnessed an increased recognition of the need to evolve economic policy from a reactive position to a proactive one, initiating policies and programs with a clear growth orientation. In 2001, the government endorsed a comprehensive integrated socioeconomic plan, targeting a significant improvement in the living standard of Jordanians, coupled with a growing awareness of the potential of developing the ICT sector as a tool for economic development, employment generation, and technology acquisition. A parallel growth in awareness has been taking place in

education, as a result of mounting pressure to reform educational policies. This was partly induced by the global ICT revolution, as well as the government's decision to make its education system more attuned to the demands of labour market, which required the integration of ICT and introduction of education reforms in areas including governance, decentralization, privatization, financing, curricula, and scientific research and development.

A group of high-tech corporations has launched the Jordan Education Initiative Project, which aims to transform 100 public schools into 'Discovery Schools' with model facilities, where technology is integrated into teaching and learning. The lessons learned from these schools regarding ways in which ICT benefits pupils will then be generalized to the 3000 public schools in Jordan. E-learning constitutes an important component of the Ministry's five-year strategy, which aims to connect 2,700 schools via the intranet. ("King briefs participants," 2003). Jordan's Minister of ICT reiterated the importance of the Jordan Education Initiative, and also presented the work plan currently in process for the e-highway, to provide Jordan's universities with broadband and fibre optic connectivity ("King sponsors Jordanian forum," 2003).

Jordan signed a five-year strategic agreement with Microsoft in October 2003, to accelerate the development of the information technology sector by pushing forward e-government and e-learning strategies (Sawalha, 2003a). This will open the door to several Microsoft investments in the Kingdom, and assist Jordan in completing its strategic projects. It will help Jordan promote the development of intellectual property, and allow citizens to obtain government services with the click of a mouse. Microsoft will supply advanced training to 1,000 engineers, set up and fully equip electronic libraries for 5,000

children in rural and remote areas, disclose source codes as part of technology transfer, and establish IT academies. With this agreement, Jordan becomes one of the first beneficiaries of Microsoft's 'Partners in Learning' program, a global initiative that includes the distribution of software packages at free or greatly discounted rates for schools. Three projects have been identified to inaugurate this partnership. One will involve the country's airports, setting up electronic gate systems. The second will provide infrastructure for e-transactions at the e-government operations centre. The third involves setting up an enterprise project management division at the Ministry of Planning.

The Arab Academy for Microsoft Technologies was opened in 2002 as a regional centre of excellence, in response to the need to match the demands of the labour market with the supply from the educational system. The Academy has launched a new post-graduate Professional Diploma Program, tailored to bridge the gap between university education and the rapidly evolving IT market. The Academy does not seek to compete with universities, but rather to complement them, as it is expected that the skills of the 10,000 university graduates in IT-related fields over the coming three years will not meet market demands, partly due to the rapid developments in technology (Sawalha, 2003b).

Economic experts believe that inadequate support and lack of attention to entrepreneurship and innovative human resources are key factors holding back Jordan's development. The available skills for carrying out basic agrarian and commercial activities are at variance with those required in modern service industries and manufacturing. But this picture has been changing gradually, as a result of the efforts of government agencies, and the Higher Council for Science and Technology and its associated institutions. Corresponding government efforts have been directed to extend

development efforts beyond Greater Amman, as the expansion of services was considered a means to overcome the dividing lines separating regions in the Kingdom on the basis of development.

The government is sparing no effort to promote Jordan to the outside world and attract investment to the country. Furthermore, Jordan's diplomatic missions have been promoting investment among expatriates as well as non-nationals, and the King has initiated a process of rewarding the best-performing embassies in this regard. With reference to Jordan's initiatives to sustain fiscal adjustment efforts, such as the privatization of public service sectors including electricity, and the recent raise in price of oil derivatives, the IMF commended the government for being committed to 'prudent macroeconomic policies and far reaching structural reforms' ("IMF commends," 2004).

A five percent growth rate says a great deal about Jordan's ability to survive the hostile ramifications of both the crumbling peace efforts between the Israelis and the Palestinians, as well as the devastating implications of the war in Iraq. However, its continued survival is largely subject to the sustainability of external assistance. The Jordanian economy still manifests continued dependence on the inflows of foreign aid, and public debt has been on the rise. As things stand today, Jordan has one of the highest ratios of public indebtedness in the Middle Eastern and North African region. For now, there is strong evidence that external aid will increase substantially. If this support does not go beyond a short-term aid package, the escalating pressure on the budget and on Jordan's foreign exchange reserves would threaten to destabilize an already fragile situation (Kardoosh, 2003a).

Academic Views on Reform

Critics did not question the basis of the proposed reforms; rather, the issues they raised revolved around what was missing in them. Thus academics saw that the ideas and vision promoted under the umbrella of the need for reform have missed a number of the challenges that face higher education. Foremost among them is placing as much emphasis on raising quality as expanding provision through privatization, especially given that the official rhetoric considers higher education as the principal propeller of economic and social development, and that human resources constitutes the only investment Jordan has with which to compete against those countries in the region rich in natural resources (Massaedeh, 2004). In the context of linking higher education to economic development, academics have underlined the need for specialized universities, with each university having a clearly defined role. They feel that this situation is further aggravated by the current deficit in the number of professors specialized in applied science and technology, and draw attention to the lack of universities exploiting the raw materials available locally and turning them into value-added products. They expressed serious concern over the weak standard of scientific research, as well as the standard of Masters theses, linking this weakness to a number of factors. Foremost among these are the dearth of resources in libraries, documentation centres and labs, due to lack of public funding for research and development, limited exposure of students to research methodology and academic writing skills, a general feeling of discouragement among the teaching staff as a result of their intellectually uninspiring environment, and an insufficient number of outstanding research staff to supervise the theses submitted to them (Al-Khayat, 2003; Massaedeh,

2004). They draw attention to the need for universities to offer them a conducive framework to continuously pursue their studies and research, even after they are granted professorship. They also highlight the absence of a clear national policy for scientific research, which alienates the research conducted from the needs of national development. The administrative system further stultifies research initiatives by being loaded with bureaucracy. Other factors responsible for holding back research initiatives include the limited opportunities they have to participate in international conferences, and the delays involved in publishing which discourage professors unless they seek a promotion. Other factors are related the admission of large numbers of students to post-graduate programs, which far exceed the capacity of the staff to teach and supervise, lowering the standard of post-graduate studies. The negative repercussions of such factors are further aggravated by their role in promoting brain drain (Al-Khayat, 2003).

The needs advanced for reform require universities to introduce ICT in all curricula and focus on English language instruction. Yet the bureaucratic selection process for channelling students into areas of study such as ICT defeats the aim of reforms with respect to creating and nurturing excellence, since it is not based primarily on their choice, and as a result most of the students selected to study ICT have no idea about what it means or what studying it will entail ("Researchers and academics," 2003; Zabalawy, 2004). Focusing on ICT overlooks the need for critical thinking and higher order thinking skills, and will only lead to an oversupply of ICT graduates, disproportionate to the demands of local industry and the national recruitment capacity; a situation which does not help ease the current high unemployment rate in Jordan.

Raising fees and adopting measures such as offering student loans and grants cannot deliver on promises of equal opportunity for the less financially able. Equal opportunity is necessary if Jordan is to realize its official aim behind the need for reform, in making the country a model of democracy and development in every field, including education, by investing in Jordanians. With the reforms proposed, opportunities will continue to be confined to those who are able to pay the high tuition fees in public and private universities, since only a minimal number of students are able to get scholarships. As a result, the majority of Jordanians will continue to find higher education unreachable ("House of representatives," 2004). Not only does this situation make bridging the gap between rich and poor very difficult, but investment becomes confined to the wealthy, enhancing their employment prospects for high-ranking positions. This imbalance nurtures the driving forces for conflict, lack of security and unsettlement, which are harmful to the nation's investment conditions and development prospects (Ukour, 2004).

The Ministry's Proposed Way Forward

The Ministry of Higher Education launched the need for reform at the *Vision Forum for Higher Education.* A newly articulated mission for higher education, together with a number of options for reform, was proposed. The mission clearly underscored the importance of establishing quality, emphasizing education's interconnectedness to economic and social development. The options outlined by the Ministry were based on a number of cornerstones, including Jordan's commitment at all levels and across all sectors to transform its higher education system in order to meet the challenges of the knowledge economy. In addition, they included the official vision of Jordan as the IT hub

of the region, and Jordan's Accelerated Social and Development Plan, which underscore the key role that must be assigned to education as the shift in the economy, from resource- to knowledge-based, develops. The recommendations were incorporated into a comprehensive plan for human resource development, and incorporated into Jordan's Higher Education Draft Strategy (Appendix I).

Recommendations for the Higher Education Strategy

Some of the recommendations advanced by the Ministry of Higher Education at the Forum included making enrolment levels contingent on university capacity and subject to student competition, by reforming admission policies on the basis of merit and equity. A National University Admission Test (NUAT) was proposed to replace the present General Secondary School Examination. University fees would be restructured for full cost recovery, while direct government support for needy students would be extended through a scholarship fund. State financial support to the universities would be phased out, and accountability imposed. Incentives would be introduced to reward universities for complying with accreditation standards and achieving institutional and research excellence. There would also be incentives with respect to the standard of graduates, their employability, and their success in the workplace. ICT would be made an integral part of teaching, learning, research, and managing universities, and as a result, universities would speed up broadband availability and enhance the availability of computers for students and staff. The Higher Education Council (HEC) would be required to review all university programs within one year, prior to endorsement, in order to avoid repetition and ensure excellence in higher education programs, and all university

programs would be evaluated both internally and externally, via an independent higher education quality assurance council. Quality assurance compliance would be rewarded with financial incentives, and re-accreditation made contingent on compliance with the quality assurance requirements. A ranking system for universities would be established, with the results made public.

Amendments would be made to laws, with the aim of supporting the higher education reform. These reformed codes and regulations for state universities would be responsible for ensuring university autonomy; having the annual budgets externally audited, with public reports; replacing tenure with contracts for faculty; and introducing a stringent, transparent, merit-based policy for faculty and staff appointments. They would aid in setting up search committees for hiring high-ranking appointments, making the ratio of administrative staff conform to international standards, and linking promotions to performance. Legal codes would be introduced in order to establish the National University Admission Test and the Higher Education Quality Assurance Council. The new laws would also encourage the establishment of non-profit-making tertiary institutions, granting them incentives and preference over their profit-making counterparts.

The Role of the Major International Assistance Donors

To date, the World Bank has been the only major donor involved in the design of comprehensive higher education reform in Jordan. The Government of Jordan adopted a diagnostic report prepared by the World Bank in 1996 on higher education in Jordan as the analytical framework for the development of its higher education sector. This report

essentially felt that higher education was dominated by a public system, which required improvement, by having both the public and private sectors co-exist in a market-disciplined framework, whereby a transparent and universal accreditation system for both is instrumental. Taking into consideration the demographic pressures and economic demands requiring education to grow, the report saw that this required financing by the private sector in the framework of increased efficiency and enhanced equity.

The Government of Jordan, together with the World Bank team, put together a ten-year vision for higher education reform, based on the diagnostic report, with the desire to see higher education develop along a number of benchmarks. These included the achievement of financial sustainability, the assurance of equity, especially respecting access for disadvantaged groups, and conformity to transparent standards of quality assurance applying equally to public and private institutions. This vision developed into the Higher Education Strategy Note, which constituted the first building block of the reform process. The reform requires the education system to produce a particular calibre of graduates. Those on the local level are more competitive and more responsive to the demands of the private sector, as well as the competitive global market. This has constituted the rationale for the World Bank's assistance, through the Higher Education Development Project launched in 1999, and conceived in 2000. Key concerns revolve around the quality of learning and its relevance to market needs, financial constraints, governance and management, and community colleges. The reforms support the role of higher education at both college and university in many ways. These include offering relevant, multi-disciplinary programs; developing goal-oriented, practical research attuned to the needs of development plans and demands of the job market; emphasizing

the importance of financial efficiency and sustainability; introducing transparent funding formulas to govern annual budget allocations; achieving equity in admissions policies; and linking the scale of university admissions to quality considerations. The Project is intended to help Jordan achieve efficiency for its higher education sector by following a multi-pronged approach, helping to establish a level playing field for public and private institutions, ensuring transparency, quality assurance of private education; establishing an accreditation system which follows identical criteria for both private and public institutions; and achieving equity.

Government Initiation of the Reform Process

A number of parallel developments have been taking place in sync with the World Bank's Higher Education Development Project to initiate higher education reforms in Jordan. These were mainly manifested in areas such as governance, private universities, ICT connectivity, research and quality assurance, accreditation, partnerships, student assistance, and tuition fees.

Governance reforms. A key development was undertaken by the state establishing higher education as a priority for Jordan, and requesting a number of immediate actions to enhance the quality, relevance and efficiency of the sector. These included introducing legislative reforms to encourage a greater role for the private sector, tackling the issue of financing, introducing quality assurance and accreditation measures, granting special attention to gifted students and encouraging scientific research and development, and addressing the issue of admission and transfer between specializations ("Legislative reforms", 2003).

In 2003, the Ministry of Higher Education prepared a draft Higher Education Strategy to the Higher Education Council for discussion with the Higher Education Council (Appendix I). The Strategy translates the state's directions into actions. Once the Higher Education Council grants clearance to it, the Ministry will hold discussions with the World Bank to amend the Higher Education Development Project, with the view of steering its action plans for the realization of reforms included in the Strategy.

Reforming governance in higher education has begun to be reflected in the area of legislative reforms. Several changes in higher education have taken place since 2000. These include the establishment of the Ministry of Higher Education and Scientific Research in September 2001. A new law entrusted the Higher Education Council with drawing up the policy for higher education and approving the creation of institutions, programs, and areas of specialization. It also supported the role of the Higher Education Accreditation Council in establishing criteria and procedures for the accreditation of higher education institutions, and for monitoring their performance. Statute 7 concerning the membership of the Higher Education Council has expanded and diversified its membership to include seven more members, four of whom represent the private sector in the areas of production and services, the presidents of four private and eight public universities, the Minister of Higher education, the Secretary General of the Ministry of Higher Education, and the Director of the Council for accrediting Higher Education Institutions. Membership in the Higher Education Council has been limited to two years, instead of four, to give more people the chance to participate.

Other legislative reforms concerning the establishment of private universities allow the Cabinet to grant licenses to private universities linked to international

universities in order to extend their practice in Jordan. These licenses would be granted on the basis of an agreement with the investor, indicating the governing conditions binding the university, and detailing its activities and its responsibilities.

The Ministry is planning to increase the number of private universities, with 45 applications under study. Some of the conditions required for approval are a minimum of JD 5 million of capital allocated, JD 2 million for an institute, three percent of the annual budget earmarked for research, and two percent for sending students to study for their PhD abroad. The value of land must not exceed 40 percent of the capital, and its size must be at least 120 *dunums*, more if the number of students exceeds 4,000, and a maximum of 8,000 students. The size of the land for a post-graduate university or institute has to exceed 60 *dunums*, more if the number of students exceeds 2,000 (Al-Abbadi, 2003c).

The Higher Education Council has lowered the minimum scores for admission into private universities from 55 to 50 percent, a move intended to offer further opportunities for late bloomers to attend university in Jordan, instead of earning a degree abroad. This is also expected to benefit Jordan, by keeping large sums of money in the country that might otherwise be transferred elsewhere for students to earn these degrees ("King sponsors," 2003).

National broadband connectivity network. Jordan's realization that its prospects of joining the global economy were subject to its ability to use ICT was behind its national broadband connectivity network project. Launched in 1999, the project was intended to help in transforming Jordan into an information-based economy and is expected to be completed in 2006. It aims to offer nationals, rich and poor, opportunities

for lifelong learning through community access centres to help in developing their knowledge and enhance their participation in the development process and democratic life. The project supports the national e-strategy for modernizing education for the information economy, and aims to raise the number of internet users from a modest 19 per 1000 people today to 210 per 1000 by 2006 (Al-Abbadi, 2004b). Work on the project began in 2003, and the high-speed fibre broadband connectivity network for public universities and scientific research, which will connect 1.5 million students in Jordan's 8 public universities, is expected to be completed by the end of 2004. The second component of this project will connect the 3,127 public schools in Jordan, as well as 14 other public education institutions including 70 community access centres and 23 community colleges linked to the Ministry of Education. Work on the second component is expected to be completed in 2007, at a cost of JD 45 million.

The Ministry of Communications and ICT has reiterated that e-connectivity will connect Jordan with the rest of the world, and will help to build its research and development capacity, as was the case in the United States and Europe, where building educational e-networks had a marked impact on developing research in universities and schools. Connectivity aims to foster more creative, critical thinking and collaborative capacities in students and adult learners. Basic training is being given to teachers to incorporate e-learning into the traditional systems. While there is no legal requirement for the Ministry to offer the same services to private universities, it is a future possibility.

Research, quality assurance, and the private sector. In the framework of the need for higher education reform, the Ministry of Higher Education developed a policy to support scientific research and make it responsive to the needs of the labour market. The

nascent policy is based on linking scientific research and technological development with national development plans and the needs of the community, strengthening cooperation with the private sector, and helping higher education institutions coordinate their efforts in scientific research and technological development. Further developments include the engagement of the private sector in the policy-making process, and the formation of autonomous bodies within the framework of current institutions to carry out quality assurance through qualitative evaluation based on international standards ("IMF chief upbeat," 2003). In the context of the need for reform, private universities will be required to allocate three per cent of their annual budgets for research, training, and conferences, and two per cent for PhD scholarships ("Application date," 2004). In 2003, the Higher Education Council decided to grant three annual awards of JD 3000 each for outstanding research work in the areas of basic sciences, economics, management, law, religious studies, behavioural and social sciences, languages, and literature.

The Ministry has also been coordinating a plan with universities to organize and standardize scientific publications. Each university has been invited to issue an internationally refereed journal, specializing in a particular field of its choice. Specialized journals would allow researchers and professors from other universities to contribute.

The Ministry has assigned the mission of quality assurance and control in higher education to the Hussein Fund for Creativity and Excellence ("Meeting of MPs," 2003). The Fund has JD 5 million as capital, and is registered as a non-profit organization for developing and supporting creativity and excellence, and for backing Jordanian potential and capacities in the various technological fields (Al-Abbadi, 2003a). International consultants and experts in educational development are currently assisting the Fund in

developing a plan for the nascent agency, with the view of responding to the needs of modernization, and the evolving needs of the labour market. The Fund had initiated the second of two phases of self-evaluation aimed at enhancing the quality of higher education. The first phase involved the assessment of computer instruction in eight public and private universities, in cooperation with the U.K.-based Quality Assurance Agency (QAA). Six of these universities scored above the minimum level required by international standards, earning them the most prestigious awards in Jordan for academic achievement. The second phase covers eleven public and private universities, and involves self-assessment of their management programs. The QAA assessed the business administration program in seven public and private universities in Jordan, to determine the degree each met international standards. It also assessed the performance of eight universities' computer science programs. Six of these achieved highly favourable results based on international standards (Al-Abbadi, 2003a).

Accreditation. The Higher Education Accreditation Council has compiled the necessary information in order to establish a database on teaching staff in the public and private universities, as well as on student affairs in the private universities, and the licensed and accredited fields of specialization. It has finalized the instructions for the general accreditation of university colleges, post-graduate departments, and distance education programs.

The Arab Open University (AOU), Amman branch is expecting to be accredited by the British Open University (BOU) before the end of the 2003-2004 academic year. The AOU plans to structure its new curricula to follow that of the BOU, and plans to

allow students to study over the internet. Headquartered in Kuwait, in 2002, AOU opened branches in Jordan, Lebanon, Egypt, Syria, Saudi Arabia, and Bahrain.

Partnerships. A German-Jordanian university will open in 2005-2006. It will have four practical programs in the areas of engineering and management. These programs were selected to respond to the needs of the labour market and the industrial sector. The idea was brought forward by the King in his meetings with officials during his visit to Germany in 2003. The planned university is also expected to offer a number of vocational training courses, including electronics, ICT, tourism, and hotel services ("German-Jordanian university," 2004).

Tuition fees. Current reforms advanced by the Higher Education Council aim to standardize the tuition fees in public universities by prescribing a range that they should fit into. This would be calculated at approximately 15 percent of the actual cost of each specialization ("Higher education council," 2004). The idea behind this is to enable universities to channel funds for updating buildings and technology.

Student assistance fund. The Cabinet endorsed the creation of a fund to offer assistance to public university students. Ten percent of the public funds for universities, equivalent to JD 3 million, were allocated for the Student Assistance Fund, and will be administered by the King Abdullah II Fund for Development. Scholarships will be given to distinguished students from underprivileged backgrounds to help them pursue their undergraduate and post-graduate education. Scholarships include both fellowships and student loans, to be repaid by the student without interest within 2 years after graduation. 309 students were selected as recipients, out of 4,930 applicants.

Higher Education Reforms and Globalization in Jordan

The potential effects of globalization on higher education reform in Jordan are diverse and far-reaching. Developing a coherent view of the impact of globalization requires understanding the impact of the free-market ideology and the objective realities which have been associated with globalization. As is the case in most developing countries, Jordan's response to globalization has been inspired by the free market ideology, and dominated by finance-driven reforms, in the interest of improving the quality of its labour force. These reforms were advanced by the World Bank and include decentralization, autonomy, educational measurement standards and benchmarking, focusing on particular skills, improving the management of financial resources, and improving faculty recruitment and hiring procedures. Jordan is also a signatory to international trade liberalization, which includes higher education. This makes Jordan open to transnational movements of education, which can undermine the authority of the state as sole provider of higher education, and leave the academic system open to a market whose main concern is for students to be ready for the job once they earn their degree. In this scenario, all parts of the university perform and are assessed on the basis of how well they provide knowledge and qualified labour to the multinational corporate economy, and how well the administration manages and maintains the institution, through recruitment, fundraising, and crisis management. The research faculty produces knowledge deemed useful based on the amount of grant money, commercial applications, or critical acclaim it gets from academic circles, enhancing the institution's prestige. Gifted students are highly valued, along with those who receive good grades and good job offers. The influence of globalization is further reflected in the need to focus on

particular skills in higher education programs, which respond to the growing interdependence of labour markets worldwide, and the new dynamics of trade and investments led by the multinational corporations and transnational networks of firms.

Another manifestation of the impact of economic globalization in the higher education reforms promoted in Jordan is the need to institute educational measurement according to international ranking standards, or benchmarking. This is linked to a globalized view of education and efficiency, based on a quantitative view of progress, with the idea that better education can be measured, and translates directly into higher economic productivity for Jordan. With economic competition between countries intensifying in the context of the global economy, the notion of promoting inter- and intra-national comparisons through standardized rankings is linked to the urgent demand of improving productivity, as it enables educational institutions in Jordan to compete on a global level in the interest of achieving academic excellence and attracting students worldwide.

In the context of Jordan, globalization can be seen as being responsible for the state investing in its people and determining in tandem its' overall economic strategy. The state has been promoting local investment abroad, through its diplomatic and commercial links, as it realizes that for its national economy to prosper, production need not take place at home. Accordingly it plans to focus principally on ICT, and scientific research and development. Nowhere is the impact of globalization more apparent in the context of education reform in Jordan as in its association with ICT. The introduction of computers and the internet to higher education institutions is seen as a way to improve the quality of teaching and learning, and in accessing information and linking researchers both

nationally and globally, an optimal medium that enables higher education institutions respond to the needs of the knowledge and global economies. Information technology can play a vital role in higher education and training in Jordan in many ways. Computers introduce innovative ways of processing and storing information, impact the speed of transferring information, and are instrumental in accessing information and research worldwide. In the context of reforms, attention was more focused on technical concerns such as installing broadband network, equipment, and software, as opposed to the support system, including training needs for staff beyond the introduction of basic computer skills, the impact on methods of instruction and course content, and the implications of total integration of information technology as a learning system. Furthermore, while public announcements emphasize that the explicit costs of the infrastructural work are being attended to, no emphasis is given to the implicit costs of items such as computer specialists, maintenance personnel, and education software, which can simplify the issues involved and limit the benefits from IT once in operation.

Two further manifestations of globalization are expected to evolve from information technology, once it is in place and operational. One is the profusion of distance education options through on-line universities. No mention is made, in the context of reform, on how well-prepared local universities are to face the challenge of competing with these institutions. On-line universities have an advantage over national universities on several counts. They outscore national universities with their investment capacities, and can promise local students international degrees. The costs incurred to students and their families are minimal, since there are no displacement expenses. However, there is a concern over quality assurance mechanisms to ensure that the public

interest is protected, and that the education meets minimum standards (Khawas, 2002). In addition, there is the support given by non-national, on-line universities to globalization, by distancing the public sector from its ability to control higher education. The second manifestation is revealed through the extensive possibilities of using ICT in lifelong learning, making it instrumental to the core needs of the knowledge and global economies, which require workers to continuously broaden their knowledge base, and to upgrade their work-related skills.

Higher education reforms in Jordan emphasize the need to acquire key attributes including flexibility, adaptability, and resourcefulness. With globalization, jobs are being continuously redefined, and increasing competition between firms makes them acutely aware of the need for efficiency, forcing them to cut costs to a minimum and achieve maximum productivity. Globalization promotes solutions such as reorganizing work around decentralized management, work differentiation and customized products. This makes sub-contracting and hiring part-timers much easier, given that the bulk of work can be broken down into specific tasks, while the core of the work can be carried out through teamwork. Workers must be equipped with skills that enable them to adapt to these evolving demands.

When considering the economic and political vulnerabilities of the situation in Jordan, it becomes clear that the state is increasingly dependent on its ability to create the conditions for economic and social development in order to achieve legitimacy. In the context of the new global economy, these conditions increasingly depend on the way the state organizes the education system. With knowledge being the most valued commodity in the global economy, Jordan has realized the need to invest more funds in education.

This explains the strong drive of the government, with the assistance of the World Bank, to reform higher education. Under the proposed reforms, the public sector in Jordan will continue to play a key role in regulating higher education, including setting standards, deciding on how best to allocate resources, initiating and guiding reforms. The possibility of faltering in the delivery of high quality education would cause Jordan to fall off the global knowledge economy bandwagon, but equally importantly, it would weaken the state by putting its legitimacy on the line, and weakening its key stabilizing role in the Middle East. The free market ideology behind globalization, which favours the devolution of the role of the state with respect to higher education, seems to have been waived by the financing agency in the case of Jordan, at least for the time being. This was probably due to Jordan's vulnerable economic and political conditions, and the challenges it confronts for surviving, let alone succeeding, in the global knowledge economy.

While the higher education reforms advanced are needed to respond to the issues and concerns identified, these reforms tend to be based on the financial imperatives of the global and knowledge economy, as opposed to pedagogical concerns. Whereas improving the performance of the higher education system is an important policy concern for governments and donors alike, this often has ambiguous implications, and can be subject to contradictory interpretations. It is not unlikely that the reforms have both evolved from, and are intended to accommodate a skewed picture, which overlooks the need for a more coherent focus on educational improvement, instead of cost-cutting, where the goals of higher education improvements run the risk of being compromised in favour of the finance-driven priorities of globalization. Adopting cost-cutting measures may

antagonize the academics, the group most central to the success of the system, by working against their interests. What seems like promising solutions from a finance-driven perspective can be potentially hazardous, since they overlook the need to find a new balance of government-university-student needs, and serve their individual interests as key constituent groups at the same time (Chapman & Austin, 2002).

Bearing in mind that the needs promoted for higher education reforms and the supporting diagnosis provide another example of how globalization's financial imperatives can be couched in educational terms, I try to draw attention to what is involved in the process of higher education policy reform, and the various impacts of globalization, in particular the need for broader pedagogical inputs, other than the mechanistic, and economic input-output quantitative formulas which have been advocated in the context of the need for higher education reform. In this study, I attempt to identify the incentives of each of the stakeholders involved. Together with inside knowledge and experience, these conceptual tools should support attempts to improve the various aspects of higher education in the most effective ways. Most importantly, this framework requires not losing sight of the realities and needs of globalization, since Jordan has officially opted to follow that route. By providing insight into the relationship between globalization and higher education policy reforms, this study aims to help work with globalization rather than against it, and invest every effort to benefit from its opportunities.

Implications of the Reforms

This chapter offers one way of understanding the implications of the higher education reforms advanced, based on my social constructivist paradigm. These policy

implications are based on my view that higher education reforms advanced by the World Bank should not be seen in terms of knowledge constructions, nor as objective truisms, but as formed deliberately according to neo-liberal inspired methodological rules and criteria to promote globalization. I emphasize the need to question the economistic prescription formulas advised by the World Bank under the umbrella of reform, as with respect to the following:

Expanding provision for access and equity. The narrow economic focus behind the higher education reforms calling for equity, supported by the World Bank, is reflected in the emphasis given to expanding the system with minimum cost to the government, partly by introducing higher fees and partly by encouraging private provision. World Bank economists recognize the significance of distributive justice and group all its aspects under the term equity. But their principal concern in funding higher education is confined to how efficiently higher education makes use of scarce resources to produce cognitive outcomes which would enhance productivity. Thus, a production-function model is superimposed on education, and a cost-benefit analysis is used to compare benefits with expenses, making the student beneficiaries bear the burden of the cost. To counteract this issue, the World Bank advises on ensuring access and equity, by establishing funds for needy students, offering grants and loan schemes.

Proof of adequacy of such measures is not strong, and these schemes are often fraught with severe administrative inefficiency, a fact that the World Bank concedes (World Bank, 1995). Examples of workable loan schemes in developing countries are rare at best. The detrimental effect on inequity cannot be rubbed away by safety nets such as loan schemes, when the student's household is made to bear the brunt of higher fees.

Furthermore, reliance on loan schemes will have a deterrent effect on the graduates, considering the uncertain labour markets which they face in Jordan as well as other countries of the South. This is expected to be a greater deterrent for females than males. Furthermore, from a financial standpoint, reliance on loan schemes fails to tackle the deeper problem of the acute resource scarcity for higher education. In my view, this scarcity can be softened by transferring resources to higher education from other sources, such as military spending.

In addition, the production-function solution advanced with respect to the establishment of student funds does not tackle deeper problems, such as ensuring equity by getting rid of the subordinate literacies for the majority, which are built into the stratified educational system. The curriculum and examination systems perpetuate unequal access through the type of literacy they provide. Taken from its narrow economic focus, literacy is conceived to be a unitary skill of reading and writing, which by itself can empower people, whereas literacies need to be viewed by education reformers as discourses and competencies applied to different tasks. Students are initiated into these discourses based on their socio-economic and cultural status.

Literacies or discourses can be loosely categorized under four epistemic types- the literacies of formal academic knowledge (with the mastery of written texts), technical (procedural knowledge in areas of practical action), humanist (the literacies of constructing positive self- and cultural knowledge), and public (the ability to participate and contribute significantly to public life). These literacies are practiced along a continuum that ranges from basic, to dominant, to critical, to powerful. The education system indoctrinates these literacies in students along lines deeply stratified by social

class, gender and ethnicity. Education therefore places the student on a particular level in the education hierarchy. Some are initiated by their education and their social background into the content and techniques of the dominant literacy in each type, which explains their continuance in high positions. Others are denied this initiation and are given less adequate, under-resourced and neglected educational channels that extend subordinate literacies. These students are penalized as being of inferior worth and are given lower status in society. At the same time, the reforms advanced do not focus on helping teachers acquire and utilize the best pedagogical and high-tech approaches to improve the educational experience to give equal opportunity to students with less-privileged backgrounds.

In essence, the focus of the advanced reforms on job-related skills defeats the official rhetoric of ensuring equity and helping Jordan acquire a competitive edge in the knowledge-based economy. Confining education to a subordinate literacy level does not help the majority of students develop their cognitive ability beyond the level of procedural knowledge for practical action. If the majority of graduates will stop mid-course, how can Jordan maximize its human capital to enhance its research capacity to international standards and contribute knowledge to gain an edge in the knowledge-based economy?

Linking universities with industry. The official rhetoric promoting reforms focuses on the need to link educational policies to the needs of employers in order to improve the responsiveness of provision to an employer's needs, and to encourage the efficient allocation of resources. This reform has a number of potential drawbacks. For example, translating the employer's perceptions of skills needs into changes in education

provision takes a long time. These notions need to be backed by the use of surveys and interviews with experts, and only then can the findings be used to inform providers as to what changes are deemed necessary. This procedure needs to be followed by developing a curriculum, which in turn needs to be validated by the appropriate institutions. By the time this procedure is completed, the changes that the employers require may have changed, and the skills identified no longer needed. A second drawback is that an employer's needs may be based on immediate production requirements. This can result in replicating existing skills, and is apt to do little to raise skill levels or forecast skills required in the future (Powell, 2003). Education needs to be based on a comprehensive scores of options.

In my view, higher education in Jordan should be based on an eclectic approach, combining core knowledge with the state's input regarding the sectors it views as strategic for the nation's development. This approach can still benefit from a market-driven approach, through consultancy work and joint undertakings of research and development projects with private and public firms. Higher education reforms need to be revisited periodically regarding the extent of their support for human resource development and economic restructuring. This study underscores that maintaining a focus confined to work-related skills fails to develop the potential of graduates to be well-rounded citizens. It expands the spread of similar skills, but does not work on enriching the personal quality of life and the broader strengths of society. At the same time, given the limitations of orienting education to the changing perceptions of employers' needs, it is equally wrong to orient higher education to the needs of anticipated structural economic changes, since these too are likely to change as a result of unforeseen

circumstances. Furthermore, it is almost impossible to base education on forecasts of the country's economy, especially for a small, politically vulnerable country like Jordan, due to the volatile situation in the region, its dependence on external assistance, and its meager natural resources.

This study cautions against taking quick decisions which give too much attention to practical education and skills training at the university level, lest this trend overtake other equally important core academic concerns under the powerful influence of globalization. It proposes that one solution would be to offer practical and work-related skills training by a broader base of providers, not only technical and vocational colleges. This study sees that diversifying this provision carries many benefits. It alleviates the burden currently shouldered by higher education institutions in responding to the skill-based needs of the knowledge economy. It allows the universities to better focus on their traditional mission, which is developing well-rounded individuals. It raises the competency level on a national scale by reaching out to a broader base of students. It responds simultaneously to the changing needs of global labour markets as well as to those of the various education and training components of Jordan's human resource development. Finally, it helps in paving the way for a more human-based planned shift towards higher value-added production.

To succeed in achieving excellence in the framework of global labour markets, universities in Jordan must face the challenge of managing the interaction between science, technology, economy, behavioral sciences, and professional schools. The cross-fertilization between different specializations, through flexible programs that encourage students to think, find information, be open to innovations in technology and

management, and reprogram themselves, is a key pedagogic requirement of the knowledge economy.

Introducing information communication technology for economic development. ICT is officially promoted as key in helping Jordan's information sector contribute more to the gross domestic product than other sectors such as agriculture and industry. ICT is also considered essential in assisting Jordan expand its markets, reduce costs, create jobs, and attract new companies, diversifying its domestic economy, reducing its urban-rural economic divide, and helping its firms to become more globally competitive. It is therefore given primary importance in making Jordan more attractive to international investors.

This study sees that ICT holds great promise for improving both access to and quality of higher education in Jordan. Computer-assisted teaching can improve course quality and provide more flexibility and choice for students in developing a course schedule. Students will still require intense, personal attention from a live teacher. The need for professional development is a pre-requisite especially with the changing role of the instructor. The instructor will no longer be a lecturer providing standard information to a passive class, and will become a coach, mentor, and learning adviser to each student. New technology will enable teachers to personalize the courses based on the different educational needs, capacity, and interests of their students. Monitoring will also be continuous, with the emphasis on capacities and skills, as well as the retention of information. This pattern of teaching however does not necessarily promise a reduction in costs, but it holds promise to a significant improvement in quality. Courses may be designed and taught off campus by established scholars in the field, enriching the student

experience and permitting the local instructor to allocate less time to lecturing to the class and more time to teaching and counseling individual members. ICT can also allow enrichment of the curriculum in universities in Jordan. Virtual 'visiting' lecturers; improved ongoing evaluation; virtual visits to museums, historic sites, factories, and other places in the world; access to symposia; discussions with practitioners, leaders, and mentors in different fields. Learners of all age groups can overcome the dearth of up to-date books and resources available in Jordan. They can browse electronically through the top libraries of the world, by accessing CD-ROMs to access to performances, archives, data banks; multimedia visualization; simulations of medical case studies and scientific experiments; business decisions; and environment constraints. Such extensive access to information will enhance the prospects of research in Jordan. Researchers can retrieve and exchange data and technical drawings, and even converse with their colleagues across the globe. At the same time, e-communication can also inhibit free exchange since information on the net is in the public domain.

Furthermore, ICT can expand educational opportunities in Jordan beyond the institutional confines of the university. It can extend distance learning to any equipped location through teleconferencing. Educational networks can be extended to accommodate the needs of the business community, as companies create interactive training centres connected to public and private higher education institutions. Continuing Education centres can televise interactive seminars for any group of employees seeking professional upgrading, periodic training, and professional recertification.

The provision of knowledge through ICT comes at a hefty cost, and in the absence of local development, it will enhance dependency on global sources of

knowledge in the North. While Jordan has been giving ICT a high profile over the past three years, as a starter in the field, the focus has been more on gaining access than building substance, by buying other countries' information, and generating very little of its own. While this import strategy is needed in the short-term, Jordan must develop a plan for autonomous development of IT down the road, to avoid becoming a permanent purchaser. The Ministry of Education launched its e-learning strategy, as part of the national strategy known as the Education Reform for the Knowledge Economy (ERfKE) in July 2003, fully aware of the importance of incorporating ICT in education. ERfKE is a U.S. $380 million, five-year plan for building 200 model fully-connected schools, installing 100,000 computers in classrooms across Jordan, connecting all schools with a broadband-fiber network by 2007, training all teachers and administrators in IT skills by 2005, redesigning all curricula and having them digitized by 2007. To date, more than 1650 schools are equipped with PCs, networking and basic peripherals, in more than 1724 labs (Ministry of Education, 2004).

Jordan is lagging behind with respect to building the connection between information and development. This study draws attention to the notion that receiving information does not warrant receiving development. Without producing information, Jordan cannot succeed in building an information society, one which makes development in its own image, reflecting its history, tradition, culture, and ways of doing business. This requires building a domestic innovation system, a system of adopting and developing technology for local needs.

This study emphasizes the need to build a process of endogenous ICT development as a prerequisite for universities in Jordan to benefit from effective

technology transfer. Current efforts to digitize higher education require universities to incorporate advanced ICT processes and products that cannot be generated locally. It should be noted, however, that building a process of endogenous ICT development that can receive, adapt, support and use the know-how being transferred is a prerequisite for universities in Jordan to benefit from effective ICT technology transfer.

Engaging in trade liberalization. Jordan's signature to the GATS agreement has been hailed by officials as a leap forward in admitting Jordan into the global fold. GATS has been promoted in Jordan as an economic agreement, its purpose being to advance and expand free trade for economic reasons. This study cautions that with international trade agreements, the likelihood is that the globalization-linked trade agenda will gradually dominate the state agenda. In the meantime, even though calls for higher education reform place domestic challenges in the forefront, education policy issues are increasingly being framed in terms of economic and trade benefits. The risk is that if this trend is allowed to take hold, other key objectives and rationales for higher education might be overshadowed, including social, cultural and scientific development and the role of higher education in enhancing democracy and citizenship can be curtailed. As a result, Jordan might not be able to outgrow its limited niche in the global scene, and develop into a strong, well-rounded player.

Universities need to give careful consideration to the impact of international trade liberalization agreements on non-profit internationalization activities in Jordan. They need to carry out studies on how far a purely commercial approach overshadows or possibly jeopardizes the current and potential academic internationalization strategies linking Jordan with other countries and institutions, as many of these strategies can be at

stake. They include participation in regional and international development or technical assistance programs which lead to mutual benefits for all parties and have spin-off effects for research, curriculum development and teaching. Will these programs have more or less significance with increased pressure for free trade? Will the revenue generated from commercial education activities be used to subsidize internationalization activities? What might happen to student exchange, internships, and other forms of academic mobility programs that do not have a revenue generation or profit motive? How can internationalization and trade activities complement each other? Will bilateral relationships and multilateral networks among institutions be shaped by trade opportunities at the expense of research, curriculum development and other academic initiatives? Resources for the implementation and sustainability of the international dimension of teaching, research and service must be earmarked.

At the same time, careful consideration must be given to the implications of GATS on higher education with respect to mobility, since it facilitates the mobility of its professionals to meet the global demand for skilled labour force. Not only are higher education and continuous education expected to respond to the needs of the labour market by providing relevant programs to meet the needs of the market economy, but the sector itself is likely to be impacted by the mobility of its faculty and researchers, which is manifested in the increasing advertisements for recruitment circulating in the international media. Since many faculty members favour moving to countries offering better pay and more favorable working conditions, it is important for education leaders to be aware of the fact that while this mobility results in growing remits to Jordan, it will at the same time accentuate the brain drain phenomenon for the country.

With the role of education considered a primary vehicle for cultural indoctrination and assimilation, it is important to consider the impact of free trade agreements on the indigenous culture and traditions. Concerns should be raised with respect to homogenization as a result of the growing cross-border supply of higher education and adult education, the influence of ICT, and the increasing mobility and migration of people. I believe that while this wave will create a fusion of cultures in favor of McDonaldization, which can threaten the local culture, it is at the same time creating new opportunities which need to be explored, contributing to new cultural exchanges and enriching local culture.

Adopting international performance standards. Universities in Jordan are realizing that in order to be admitted to the academic global market, they need to establish track records on international performance tests. Nevertheless, universities need to be aware that international comparative testing is fraught with a number of pitfalls. International indicators are often ill-adapted to national needs. Other problems are connected with quantitative analysis, comparability and simplification. The very nature of quantitative performance indicators assumes a commonality of structures, processes and priorities as a basis of the system. Putting indicators under the direction of statisticians will decontextualize Jordan's national system, recontextualizing it into global comparative frameworks through performance standardization. As a result, meaning will become less nuanced, less reflective of the human-based landscape of education and its underlying process. It will undergo loss as elements of the national system are stripped from the setting in Jordan, since local differentiation is seen at odds with the global homogenizing imperative. Quantitative indicators alone are insufficient for analyzing

multiple integrated factors impacting educational performance. In my view, tests of skill evaluation can be indicatory at best, for comparing the performance of the education system of Jordan to that of other countries. Without an understanding of Jordan's curricular objectives, the success of the system cannot be evaluated, making it impossible for the international indicators to impact on the quality of education in Jordan.

Other pitfalls concern the reliability of the data upon which the international indicators are based. The analysis of comparability carries the risk of being based on incomplete, dated, and unreliable data supplied by countries participating in the global standardization organizations. Aggregations are not always reliable because of changes in definitions and research methodology. Thus instead of helping to correct unfounded facts, international indicators can lend legitimacy to preconceived notions of educational performance and related problems (Henry, Lingard, Rizvi & Taylor, 2001).

This study highlights the importance of building awareness of the links between the management, measurement and comparison of performance - of individuals, systems, and nations – linked to globalization and education reform initiatives. The indicators used must do more than assess the quality, equity and efficiency of the education system, which endorse an economistic view of education - that education is best viewed as an investment to help foster economic growth. Context-specific indicators must be found, which stress issues such as the importance of supporting a predominant public stake in financing university education, and giving attention to the human and cultural-based processes of teaching and learning. It is essential to view social capital in terms beyond the interest of national and global economies. Furthermore, the effectiveness of the education system should not only be evaluated in terms of returns on investments made,

or individual and labour market outcomes of education. Developing home-grown indicators for testing competencies needs to be made in conjunction with international standards, yet link the assessment of the effectiveness of the educational system in Jordan to the social, ethical and cultural dimensions of education, in addition to the economic one, which is behind the direction of the proposed reforms.

At the same time, international quality assurance needs to be adapted to steer imported higher education towards local development. Imported higher education must not be assessed as only a commodity offered under the economic growth model, but in terms of its potential contribution to the national development agenda of Jordan. This is where international quality assurance will have to deal with the tension between market imperatives, which make the export of higher education a profitable venture, and social imperatives, relating to national and community needs, which the market on its own does not accommodate. Responding to the market alternative at the expense of the social alternative overlooks the fact that the goals of higher education are multiple, complex and interrelated.

The imported transnational programs raise another challenge with respect to quality assurance. International quality assurance must be used to make sure that the quality of the programs imported matches the standard of the ones offered in the exporting country. This may include judging the processes and modes of delivery, the supporting services, and the program content, particularly where program recognition is needed for further study in the exporting country. The extent to which course content is the same raises the concern of cultural domination. The challenge is to use international quality assurance to allow for the bridging of cultural contexts without the reductive

impact of cultural homogenization. A deliberation process can be set up between local education authorities and program specialists to discuss possibilities such as requiring the exporting party to include references to local examples, and content from the local culture.

It is also important to be aware of how the results of international comparative testing are employed, in the context of globalization, beyond making them available to analysts in ministries or international agencies. Results can be used as leverage for the Ministry to maintain regulatory power over the universities when distributing grants. They can also be used to point fingers, and justify reductions in public spending on education, rather than for providing more resources or technical assistance, in favor of mobilizing more private resources by raising tuition fees.

In my view, global notions of efficiency and measurement can have a positive impact on educational output, provided they pass through national filters in Jordan. Their specific purpose must be university improvement, even if this requires investing more resources, as is generally the case in Jordan. However, the distinctions between this type of measurement for raising efficiency, and the use of testing to develop national policies for resource use (with the intention of decreasing per student public resources available for education) are subtle. They are mainly rooted in how the state interprets the role of measurement in conditioning educational change. I believe that in the absence of support systems to help universities learn how to improve teaching and learning, it is doubtful that international tests will lead to efforts that will create improvement. The main obstacles to improvement will continue to be lack of knowledge as to what constitutes better classroom practice, and the materials needed to implement such practice. For

testing to have a significant effect on student performance in Jordan, it needs to be part of a systematic effort to assist teaching staff and administrators to improve the teaching and learning experience, and not to focus on one area to reflect general student performance.

Chapter 6: Recommendations and Conclusions

This study was based on the assumption that globalization is behind the initiative for higher education reform in Jordan. It answers the need for in-depth research on the impact of globalization on higher education in Jordan. So far there are think pieces on the impact of globalization on the local culture, the economy, politics, and human resource development, but no research specifically exploring the connection between globalization and the need for higher education reforms advanced by the government and supported by the World Bank.

My view of globalization is linked to economic factors inspired by the neo-liberal market ideology and the way in which these factors affect cultural institutions such as education. This study considers that, compared to the political and cultural aspects of globalization, economic globalization has been the most effective in dominating the policy agenda of Western nation states in their effort to position themselves favorably and gain a competitive edge in the global market (Currie, 1998). Universities are affected by circumstances beyond the campus and across national borders as a result of globalization.

The changes stemming from globalization are of such magnitude that they are impacting higher education systems almost everywhere. In this study, I developed an understanding of the dynamics of change involved in Jordan's higher education reform initiatives in the context of globalization. By targeting the particular case of Jordan, I used the case study to enhance an understanding of this general concern. I referred to the impact of globalization on higher education in countries of the North and South, which

highlighted that corresponding parallels existed in the higher education reforms advanced in Jordan by the Ministry and the World Bank.

Having made the point above that there is a deficit in higher education policy-based research, I recommend that priority be given to this area. I am hoping that this study will lead the way for others to do similar research, and that as a result globalizing agencies such as the World Bank will be forced to consider local research in their policy-based research.

I aim to expand the ongoing debate surrounding higher education in the context of globalization. And most importantly for Jordan, I aim to help develop a more coherent, multi-linear view of the dynamics underlying the higher education reforms advanced. These insights, when added to local experience and inside knowledge, should help create a space for possibility to play a role in steering reform to serve the best interests of Jordan. I hope that this study will aid in the development of a balanced approach that moves pedagogical concerns to the fore, without losing sight of the socioeconomic realities of globalization.

Several research questions formed the basis of my study. I aimed to examine how and why globalization impacts higher education policy reforms in Jordan, and the implications of these reforms. As seen through a magnifying glass, I identified the forces responsible for initiating the restructuring of higher education, to help gauge the scope and dimensions of the changes advanced under the banner of reform.

This study demonstrates that the global forces of change spearheaded by the World Bank are driving Jordan's reform initiative. Its direction, as is the case in many other countries, is moving towards academic capitalism, underscoring the benefits of

higher education for national economic activity, giving preference to market activities on the part of institutions. I have made the case that leading agencies of globalization, such as the World Bank, are behind creating a path for national higher education policies to converge through a process of reform. In this path, there is only one world, with countries at different points on the continuum of reform leading to modernization. The reform touches key areas such as access, finance, curricula, research, autonomy for faculty and institutions, governance, and information technology connectivity. Countries in the North and South are converging in similar ways, although not necessarily to the same extent, since globalization is a system-wide force to which countries develop their particular responses. In the case of Jordan, the higher education policy reforms were proposed by the World Bank, in its capacity as the only major development agency assisting Jordan in designing them. At the same time, the reform process has gone through a number of phases with the participation of a centralized partnership involving the Ministries of Higher Education, Planning, and Education, as well as higher education institutions, the business sector, and the Economic Consultative Council.

Since Jordan is working closely with a leading international development agency promoting globalization, it is necessary to scrutinize the global trends influencing its national higher education on the financial and intellectual levels. Monitoring global trends should also help to give insight into the World Bank's role and current thinking. The World Bank plays an influential role in shaping the policy agendas of education in Jordan as well as other developing countries, its role being not only financial but also intellectual. This is the result of its growing financial involvement in the education sector, attuned to its role as advocate of global markets. The Bank sees finance as a means to

leverage reforms in higher education (Sadlak & Hufner, 2002), and as the largest source of external source of funds among aid agencies, sees its main role as providing advice designed to help governments develop their own education policies suitable for the circumstances of their own countries (World Bank, 1995). The Bank has a strong command of professional expertise in project preparation and negotiations with local governments. Its growing share of policy-related research in education is made possible by its staff specialists in economics, education and human resource development, and by its consultants and contract researchers. It has an extensive capacity to conduct, commission, summarize and communicate studies. Such power of information becomes accentuated when it is exercised in countries with a weak research base such as Jordan. Furthermore, when the Bank commissions studies from a weakly developed national base, it has a say in how this base tackles the issues addressed, the research methodology and the framework for analysis (Lauglo, 1996). In Jordan, as is the case with donor-dependent countries in the South, the World Bank is frequently a source of policy-relevant knowledge – not only for its international research and project experience, but also for information that the Bank collects about the country itself. The Bank masters techniques of analysis in which government officials lack expertise. Thus in view of the Bank's commanding power of information and its strong culture promoting globalization, it is important to carefully study what the World Bank has to say about education policy.

I believe that the university has a key role to play in developing this process of globalization, by helping develop Jordan's own perspective of reform. It must facilitate developing an understanding of the local objectives and goals of universities, based on an empirically informed foundation and an analytical framework for interpreting the

situation of higher education in Jordan. Developing this understanding requires the university to be involved in an informed participatory planning process as responsible agents in the preparation of donor-assisted projects in higher education. This would help identify the challenges and potential benefits linked to globalization. Strategies can then be devised to change and improve higher education, and work in new ways to support it. Developing this understanding is an important step that would encourage both the globalizers and the globalized to engage in authentic dialogue, where rational argument is based on evidence and shared values. My view is that such dialogue is needed to open the lines of communication between both parties, in order for them to learn from each other, identify convictions which are rigid, and accept other meanings.

Central to this process is a core requirement. Universities need to focus on the development of their research capacity to inform policy, and at the same time enhance their contribution to international scholarship through theories, ideas and innovations, thereby establishing a niche in the academic global scene. Here I caution against following the reform rhetoric, linked to globalization, which justifies research only on the basis of future commercial value or quantifiable economic gain. In my view, this position misses the larger point. We as humans need to know, we are driven to explore, and no knowledge is without benefit or usefulness. Our human species is distinguished by its perception, and by its ability to acquire and use knowledge. Knowledge is indivisible because our experience is indivisible, because we are whole persons before we become economists or biologists. This makes every bit of knowledge, and every insight contribute perspective to the whole picture. We need insight in addition to data. That is what research provides: insight, experience, perspective, understanding, and occasionally a

new view of ourselves, glimpses of the beauty of the larger order, a broader understanding, a sense of linkage to things beyond ourselves and to reality beyond our immediate surroundings. That in my opinion should be the underlying motive for universities to emphasize the need for research, in the framework of reform, although policy makers may argue against the financial efficiency of such work, given the many other pressing social needs in Jordan. In my view, rhetoric on research should go beyond promises of economic benefit through technological development. Emphasis should principally be on the human benefit and social gains that education brings about, such as the steady growth of knowledge and with it our growing ability to conquer disease, and address the needs and ills of society. Focus should not only be on economic gains in the global knowledge economy. Research needs to be viewed as the systematic searching of everything around us and within us. We cannot be certain, without the test of time, which research will be of enduring significance. We need a range of viewpoints, breadth of insight, a variety of working hypotheses. In essence, the university needs to emphasize the potential of research in empowering the human intellect, an intellectual calling which drives us to the ultimate enrichment of the human spirit. This enrichment comes from our ability to explain our realm of experience in its entirety.

While my principal recommendation focuses on the research deficit, the implications of this requirement are vast and interrelated. Pedagogically these implications first strike at the school system. While there is focus on computer-based learning, effort is still lacking with respect to developing critical thinking skills among students and teachers. Teachers are teaching to pass the exam and not to develop independent thinkers equipped with critical thinking skills. The skills acquired by

students in public schools to pass through the *Tawjihi*, the secondary school examination to be admitted to university, are principally based on memorization. The teaching of critical thinking skills is confined to a few elite schools, whose students generally pursue higher education in the West. Many of these graduates choose not to go back to their home country, which does not help improve the situation at home, and feeds the brain drain phenomenon. While some students perform very well in the Western system, the majority who join local universities are equipped with memorization skills. This issue is not an impossible one to resolve. Schools are required to focus more on sciences, mathematics, and English language skills. The deficit of critical skills among students and their teachers does not help them develop into independent thinkers and in turn does not help them acquire research skills. Introducing change in the education system requires a visionary leader who is well-versed in education, has a vision, champions goals, articulates objectives, recognizes emerging needs, seizes new opportunities, and develops new niches. While this requirement is satisfied with the current Minister, two core challenges need to be addressed. First, lack of university research to support the vision of the Minister. Second, lack of a support base of educationalists to help shape the vision and the mission of education, and work on testing, refining, and sharpening it by engaging in active debates, and promoting understanding by teaming up with stakeholders both inside and outside the Ministry of Education. As things stand today, support to the leader comes from the Monarch, but then stumbles as it hits the broad base of bureaucrats. The scattered attempts to provide professional development for bureaucrats to enhance their management capacity will make little if any difference in upgrading the educational outcome, as bureaucrats tend to be set in their ways, and reject

change, which creates a conflict of interest with those in education. They propagate a climate that rejects questioning orthodoxy and experimenting with new approaches. While they fervently voice their commitment to the wellbeing of the institution and its members, their notion of success is linked to sustaining bureaucratic barriers, maintaining administrative layers, and promoting an atmosphere of secrecy. Responsibility for developing education needs to be assigned to education leaders, so professional development needs to be directed to them to help them introduce change.

Professional development is also urgently needed to help faculty upgrade teaching and research methods at universities. Developing research at both the undergraduate and graduate levels requires good teachers as well as recent publications and up to-date educational resources. At the same time, developing research requires universities to nurture a culture of publishing by acknowledging publishers and offering them incentives for publishing in promotion and tenure decisions. Another basic requirement for raising the standard of higher education to international level, is the hiring of qualified faculty and staff. Strict measures banning favoritism need to be implemented and transparent objective criteria for hiring has to be operational and legally enforced.

In what follows, I present a number of overall conclusions:

Overall Conclusions

1. Globalization has triggered many interconnected pressures on government and higher education leaders in Jordan to develop new structures and modes of operation.

Any attempt to comprehend this reform campaign and formulate appropriate responses must recognize the impact of globalization pressures on higher education.

2. The campaign advancing the need for higher education reforms promotes these changes as being nationally inspired and responding to the needs of economic development to promote national acceptance. They do not acknowledge the multiple players behind reform and the drive for technical fixes to the problems of development.

3. The official rhetoric presents globalization as a powerful force that must be sought after, since it enhances Jordan's economic performance, hence its development. One of the main solutions prescribed is to strengthen human resources to satisfy the needs of the labour market. The nature of the issues that higher education institutions may face has not been something that has been considered. Adopting the prescribed reform formulas therefore runs the risk of creating ineffective educational policies, since they are well-aligned with the larger economic initiatives that government and international donors support.

4. Because there is no local research and analysis to challenge the reform formulas that are being prescribed, these reforms are going through.

5. The pursuit of specific institutional goals, which may seem noble and necessary in the context of reform, can produce unplanned and unwanted results. For example, diminishing public funding is advanced on the basis that it leads to better managed, financially efficient, and responsive institutions. In fact, reducing government support and the accompanying financial constraints may jeopardize institutional quality by flooding the local market with mediocre educational providers. It will also further diminish the prospects of providing faculty members much-needed training to undertake

new teaching methods, develop quality research, redesign curriculum, and carry out the entrepreneurial roles required of them. Furthermore, diminishing public funding will curtail prospects for enhancing quality with the mounting pressures to increase access. Absorbing a larger number of students and offering greater inclusiveness requires the allocation of resources that might otherwise be spent on improving quality. Increased access results in more heterogeneous classes with a broader range of student abilities, which may be taxing on faculty due to the greater demands it places on them.

6. The absence of a strong local base of research published in Arabic, underscores the need to focus on the use of English since it has become the international language for research. Focus on English is necessary to enhance the ability of scholars and students to compete and participate fully in the international intellectual community, whether by publishing in established journals or by participating in international forums. Emphasis on English should not be at the expense of the Arabic language, since it is a source of national pride.

7. There is no consciousness that comes out of the reform campaign conveying an informed communal understanding of local objectives and goals of higher education.

Recommendations

Considering the dynamics of the higher education reforms in Jordan, I am proposing, in addition, a number of other recommendations which I consider necessary to inform a new perspective of higher education development in Jordan. These recommendations rely on the assumption that – as previously discussed – the proposed reforms are embedded in an economistic framework and have social and pedagogical consequences.

They are intended to help fine-tune local needs with external policy demands and constraints, and in this way contribute to the increased democratization of higher education policy development.

In sum, higher education reforms should:

1. Improve the quality of school education

The university in Jordan does not play an active role with respect to education reform. It is recommended that it becomes involved in improving the quality of school education in ways that complement its responsibilities for teaching and research. To proceed in this direction, universities need to start by developing a pool of talented future teachers and faculty members trained in education by improving the teacher-training programs offered at the faculty of education. They also need to conduct research on topics of interest and service to school teachers, administrators, and those in public policy positions, such as effective teaching, the cognitive process, the causes of school failure and success, effective educational management. Universities also need to reach out to schools by offering specialized continuing education programs for teachers to update teaching skills, particularly during the summer, in science, mathematics, humanities, and English, in addition to communication, critical thinking and leadership skills. They also need to conduct tutoring and mentoring programs, and provide guest lectures and special day-long programs of workshops and hands-on experiments in different subjects to excite students' interest and develop creativity. Developing such programs in every university will have a significant long-term impact on the school system.

2. *Strengthen the Policy-Based Research Capacity*

The voice of local researchers, when it exists, is often weak. Much of the policy-related research directing higher education reform has been sponsored by the World Bank, and therefore tends to be couched in economic terms. However adopting an economic systems approach can overlook key aspects, such as the actual processes and unintended outcomes of innovation, and sensitivity to context. It is therefore recommended that the research capacity be strengthened. Strengthening the local research capacity is particularly important for a donor-dependent country like Jordan. At the practical level it will serve as a guide when developing knowledge bases which local and foreign consultants will use in the design and evaluation stages of projects funded by external aid. Throughout it will allow for a more focused analysis and discussion which will hopefully lead to a more cohesive approach to higher education development. Furthermore, it will help in strengthening the degree of leverage that the local voice will exercise in relation to the global.

3. *Give Emphasis to Scientific Research*

Jordan is intent on adopting a global information-based economy. Nothing is more critical to this than the need to develop both basic and applied research. A combination of several policies is required, which together with an improvement in the quality of higher education should help universities in Jordan compete for resources in the global market.

Some of these policies include the development of a high caliber of academic personnel through systematic training in centres of excellence in advanced countries. Reform policy promoting utility in scientific research needs to embrace both the theoretical and the practical understanding. It further needs to focus on studying Jordan's

natural resources, such as solar energy and water de-salinalisation, and ways to turn these into an industry. Established academics, especially Jordanian expatriates, need to be recruited from elsewhere and offered comparable professional support and working conditions. Jordan can start this process by participating in UNDP temporary repatriation program. Linkages need to be created with centres of excellence through the temporary hiring of foreign faculty members in strategic fields of research. Creating adjunct professorship positions should make use of the knowledge and experience existing in both the private and public sectors. Joint research centres and training programs need to be established as part of a broader program of institution building, between local and multinational firms and national universities, with the support of international assistance organizations. Specialized organizations that are part of the university system can also help in integrating universities into the global scientific and technological networks and the local economic structure, through information centres, international exchange programs, bureaus of technology transfer, and university-enterprise networks.

It is further recommended that universities link up with international research communities, and draw research and development agreements to enable their researchers to participate in consortiums for research activities and make use of the funds available outside Jordan. At the same time, more effort is needed to attract multinational corporations to invest in Jordan, since they are regarded as a vital source for technology transfer. Success in undertaking these initiatives will hopefully reverse the harmful effects of the brain drain phenomenon, and attract national talent back to Jordan.

4. *Develop an understanding of the objectives and goals of universities*

Universities need to develop an understanding of their role, perspectives, and alliances for the growth and strength of the higher education system. Developing this understanding is necessary for the strategic planning and establishment of effective working relationships with business, industry and government, as well as developing minimum quality standards based on local knowledge and expertise as to which factors increase student learning. Most importantly, in a donor-dependent country like Jordan, developing a common understanding of the local objectives and goals of universities should help higher education institutions benefit from international support, as they chart and negotiate their own solutions within the framework of international development collaboration strategies.

5. *Determine the Skills Developed in Educational Programs*

The official view advanced for the need of higher education reform is premised on the development of an educational system geared to produce modern, technologically literate young people, which provides graduates with the work-related skills needed to navigate their way through the new global order. Education is more than job-related skills training. Such training alone is insufficient for nurturing and reproducing qualities of discernment, criticality, empathy, care and the fundamental need for community which makes us human beings. Its purpose is more focused on work-preparedness, and less so on producing critical citizens with a commitment to civic responsibility. This type of education nurtures the virtues of a single-minded self-sufficiency, independence and individualization, at the expense of community and civic duty.

It is therefore recommended that a broader view of skills and education be developed to neutralize the potential consequences envisioned. Students need to be provided with the necessary literacy to be able to interpret their own environments, to position themselves within the context of the world, and to make well-considered judgments. They need skills to enhance their interpretive and analytical capacity, foster their curiosity, creativity and critical thinking, resolve conflicts, and practice effective citizenship, as well as being ready to assume professional responsibilities. At the same time, the state needs to play a stewardship role in networking between the different education providers which fall beyond the realm of government regulation, with the view of including skills which will develop informed responsible humane citizens, able to live and work in Jordan and elsewhere.

6. Foster a Culture of Innovation

The research and development links between academia and small- and medium-sized enterprise projects are weak in Jordan. It is therefore recommended that universities and businesses develop a culture of innovation, and encourage research and development applications with the intention of creating a more competitive economy. Industry, research centres, and universities need to create networks to promote cooperation at the research and development stage, as well as the initial production stage.

Fostering a culture of innovation requires the adjustment of course content and teaching methods at all levels, continuous training of academic staff in research methodology and instructional methods, and orienting towards both creativity and innovation. The government needs to provide incentives including financial awards and tax breaks for outstanding research work in science and the humanities.

7. Bring Lifelong Learning to the Fore

Higher education generally stops with the achievement of a graduate, or possibly post-graduate, degree. The concept of lifelong learning is lacking. With the state intent on the achievement of a knowledge-based economy, it is recommended that lifelong learning policies be developed. These policies are needed to institutionalize the workplace as a source of learning. They are particularly important for training staff to help them deal with organizational changes, new technology, and modern working practices, for displaced workers to upgrade their work skills, and for young people to learn job-related skills when entering the workplace for the first time.

Putting this position into action, however, requires a number of measures. It is recommended that the state supports the sectors it views as strategic, and facilitate training for the pockets of society who find it hard to access the labour market. The government also needs to offer employers financial incentives such as tax breaks to train employees. At the same time, it is recommended that a levy system be imposed to encourage the commitment of employers in Jordan towards education and training. Technical colleges also need to strengthen links between training policy and structural economic changes by acting as a liaison between education and training providers. Such coordination needs to be advised by research as well as the input of the public and private sectors. A training fund should be established to allow companies to apply for grants to fund innovative projects in order to ensure that resources are targeted to the areas identified.

Suggestions for Further Research

There are many areas of policy reform and globalization that still need research, and my thesis could not cover every one of them. However, one of the key areas which requires further development is the ongoing research on the impact of issues in Jordan linked to globalization - such as diminishing public funding, privatization, expanding provision, linking university with industry, focusing on ICT, and emphasizing practical research and a skills-based education. How are these issues developing, reconfiguring and diversifying, in the context of their dynamics, paradoxes, contradictions, and implications? This additional research will contribute to a clearer understanding of patterns linked to globalization, since globalization is essentially leading a process of rethinking the social, cultural, and economic roles of higher education and their configuration in national systems.

Appendix 1: Draft Strategy for the Higher Education and Scientific Research Sector

From	**Mona Taji**
Re	**My translation to English of the Draft Strategy (below)**
On	**Sept. 22, 2003**

Draft Strategy for the Higher Education and Scientific Research Sector

(To be submitted by the Ministry of Higher Education for clearance to the Higher Education Council in September, 2003)

Overall Aims

1. Develop qualified human resources, specialized in various fields of knowledge that respond to the needs of society.
2. Provide the necessary academic, psychological and social environment for enhancing creativity, developing excellence and nurturing talents.
3. Lending the necessary encouragement and support for scientific research, and raising its standard, especially with respect to the practical, scientific research geared to the service and development of society.
4. Establishing a strong organizational link between the private and public sector on the one hand, and higher education institutions on the other in order to benefit from the qualified human capacities in these institutions in developing these sectors through consultancies as well as through practical scientific research.
5. Improve the quality and the efficiency of higher education with respect to accommodating the needs of society, through establishing criteria and standards for accreditation and quality assurance, that comply with international standards, and that apply to all the higher education institutions.
6. Being up to date with respect to Information and Communication Technology (ICT) and employing it in both the management and the academic programs, particularly with respect to curricular content, in addition to methods of instruction and appraisal.

The necessary procedures and policies for providing a conducive environment for raising the standard as well as the quality of the higher education and scientific research sectors

1. Expanding the role of the private sector in drawing the future of higher education, by increasing its participation in the Higher Education Council, and facilitating its role in expanding the provision of equal opportunities of quality education for both Jordanian as well as overseas students.
2. Looking into the issue of financing public universities with the intention of securing the necessary resources by continuing to restructure university fees, establishing a fund for needy students financed by multiple sources besides the government. Introducing the concepts of quality control and assurance in the various components and stages of higher education, by establishing an independent institution for applying the international criteria.
3. Reconsidering the policies of admission into universities with the aim of the achieving the closest match between the preferences indicated by students regarding the desired areas of study and the areas of specialization that are available, by reviewing the methods being followed by schools for accepting students, and by facilitating the transfer from one area of specialization to another within the same school.
4. Introducing the necessary mechanisms intended to nurture and care for students who have a potential for excellence and creativity, and encourage scientific research and development (R&D).

Policies:

First: Admission policies

1. Endorsing the average grades that students achieve in the Secondary School Examination Certificate or the equivalent, as the principal basis for admission.

2. The admission is determined on a competitive basis through the Coordinating Committee for Standardized Acceptance in Public Universities, with consideration given to some of the students' social and geographical circumstances.
3. The Higher Education Council determines annually the number of students to be granted admission in the various schools/ programmes/fields of specialization in public and private universities in addition to colleges, based on its capacity on the one hand, and the needs of the labour market on the other, within a framework that guarantees quality.
4. The Higher Education Council decides to admit students to schools or departments in a way that achieves the closest match between the student's preferences and the areas of study available.
5. Allowing students to transfer from one field of specialization to another within their university, in order to offer them a chance to specialize in an area in which they excel, given that the transfer procedure takes place in compliance with the relevant rules and conditions established by the universities, and provided that the academic standing of students is also taken into consideration.
6. Reconsidering the basis of student admission in both the school of physical education and the school of arts, with the intention of making sure that the admission process selects students who have the right talent as well as a promising potential capacity.
7. Gradually cutting down the number of students admitted to programmes and fields of specialization that have reached saturation.

Second: Academic programs

1. Reviewing the plans and the academic programs followed in universities, with the view of upgrading them once every four years.
2. Working towards the establishment of centres of excellence in particular fields of specialization in every university, and reviewing the feasibility of maintaining

fields of specialization that do not possess the requisite basis needed to sustain quality among their graduates.

3. Establishing centres for enhancing the performance of faculty staff, teaching in both public and private universities.

Third: Information Communication Technology (ICT)

1. The continuous upgrading of the general computer education curricula, based on the expanding knowledge in this area among secondary school students, to be carried out in coordination between both the Ministry of Education and that of Higher Education and Scientific Research.
2. The use of ICT in all programmes, with respect to content, methods of training methods and appraisal techniques.
3. Upgrading the capacity of the teaching faculty members with respect to using technology in teaching.
4. Providing the necessary equipment and the infrastructure for the teaching faculty members of staff as well as the students to be able to use technology in teaching and learning. Access to be made available especially for students in the evening, in community centres or schools.
5. Using ICT in distance education, and encouraging universities to cooperate in this regard.
6. Building a Management Information System (MIS) for decision-making, and for the administration of the university, that covers the following systems:
    - Student data
    - Accounting
    - Administration
    - Human resource development and salaries
    - Asset management and warehouses.

Fourth: Funding

1. Continuing the restructuring of scholastic fees on the basis of the average income for citizens in Jordan on the one hand, and the cost of study in each field of specialization or academic program.
2. Establishing funds for needy students, and allocating annually a percentage of government support, that is subject to an increment every year, that reaches 100 per cent in ten years, thus having the state provide complete coverage of these funds.
3. Encouraging funding as well as other community institutions to establish funds to assist needy students.
4. Continuing the supplementary government support to furnish the new universities with the necessary equipment in addition to completing the infrastructural work.
5. Designating part of the supplementary government support to fund particular areas of study, and centres of excellence in universities, on a competitive basis.
6. Distributing the annual government funds to the public universities, on the basis of the percentage of students admitted in each university.
7. Marketing the higher education services available in Jordan, so as to attract external students, and working to expand the various programmes, in addition to facilitating the registration procedures of external students required for their university admission as well as their residency.

Fifth: Accreditation and quality assurance

1. Establishing an independent agency for undertaking appraisal, quality assurance and benchmarking of public and private universities, based on internationally compatible standards.
2. Establishing an independent agency for accreditation to replace the current Accreditation Council.
3. Establish accreditation and quality assurance offices in the universities.

Sixth: Creativity and scientific research

1. Establish a Higher Council for Scientific Research in the Ministry of Higher Education and Scientific Research, that includes representatives for the higher education institutions, the private sector, the Higher Council of Science and Technology, in addition to other organizations concerned with scientific research, and works to accomplish the following:
   - Integrating the scientific-related initiatives and the scientific research in higher education institutions as well as other institutions.
   - Establish a special fund to finance the scientific research in the Ministry of Higher Education and Scientific Research.
   - Directing researchers towards the scientific research that is of most benefit in responding to the needs of society.
   - Extending support to the serious researchers and giving them incentives in appreciation of their effort.
   - Strengthening the relationship between the public and the private institutions specialized in scientific research, in the interest of their research effort.
   - Encouraging the publishing of outcomes of scientific research, and pooling effort in issuing international refereed scientific journals.
   - Establishing a comprehensive database covering scientific research, researchers, theses and projects required for graduation that is accessible to public use.
   - Providing the necessary funding for scientific research.
2. Expanding the post-graduate programmes and urging the exceptional students to join them.
3. Develop the research capacity and extend the opportunities necessary for acquiring the needed experience.
4. Establish Centres of excellence in each university in the particular field in which it excels.
5. Develop an effective institutional and technical partnership linking universities with the various development, production, and service sectors.
6. Achieving optimal usage of the resources, the facilities, and the equipment available in universities in support of scientific research and enhancing cooperation between the various production sectors.

7. Reviewing the legislations that are related to the following:

(a) Correcting the company laws in order to allocate one per cent of the annual profits generated by companies, and to transfer it to the scientific research fund.

(b) Issuing rules and regulations that apply equally to public and private universities, regarding the basis of granting promotion to members of the teaching staff, as well as sabbaticals and fellowships.

Appendix 2: Data Gathering Schedule

Date	Task / Notes	Event	Data gathered
Jan.-June, 2002	Attended courses on globalization education and social change, to stimulate and expand interest in this area Undertook broad literature review on globalization and higher education Contacted World Bank, Middle East information desk for resources	Started my program at McGill	World Bank. (1994). Higher education: The lessons of experience. World Bank. (1995) Claiming the future: Choosing prosperity in the Middle East and North Africa; World Bank task force on higher education and society. (2000). Higher education in developing countries; Précis: Partnership for education in Jordan, 2000; Early childhood development; Primary education, secondary education, May 29, 2002.
June-Oct, 2002	Ongoing literature review on higher education and globalization Simultaneous data collection and analysis Started to collect my first documents. Attempted to get background material on the status of higher education reforms. Seeking documents was crucial, since they are the only means of studying the reform scene in Jordan. Need to keep an open mind in the process of discovering useful documents. Need to be open to any possibility that can lead to serendipitous discovery	First field visit to Amman, Jordan Ongoing process of building bridges and renewing others with officials at the Ministry of Education (MoE)	

	Attempted to find documents that offer historical understanding and can be obtained in a relatively reasonable manner Data collection and analysis, an ongoing process Started fieldwork in Amman, Jordan in June, 2002: on-site investigation by observing what was going on in the educational scene in Jordan, by monitoring the media, visiting and talking informally to staff at the Ministry of Education (MoE). Some of the key meetings at the MoE included: a) Meeting with Directors, Office of the Minister, July 1, Aug. 29, Sept. 1 b) Meeting with Minister, July 15 c) Meeting with liaison officer for foreign assistance projects, Aug. 20, 22, 28, Sept. 25		a) World Bank Higher Education Development study, 1996; Report on the education system in Jordan, Aug. 1998; Educational development in Jordan and its most prominent outlooks, Oct. 1999 b) E-Learning: A strategic framework, 2001; Jordan e-government: Launching e-government in Jordan, 2000; MoE computerization projects: Assessment of existing ICT capacity, 2001; Background information on education for the European Investment Bank Appraisal; Mission for schools construction project in Jordan c) Loan agreement for first human resources development sector investment, August 18, 1989; Project appraisal document for a proposed loan of US$5 million for a training and employment support project, April 21, 1998; Staff appraisal report, second human resources development sector investment project, March 3, 1995; The human resources development sector investment loans (HRDSIL I & II) Memorandum of understanding, June 28-July 8, 1996; Aide memoire on Second Human Resources Development Sector Investment loan, April 5-11, 2002; Proposed third human resources development sector loan aide memoire, June 17, 2002; Third human resources development sector investment loan: Component 2: Project preparation document, Aug. 23, 2002
	Attended sub-group preparatory meeting, Aug. 23	Attended sub-group preparatory meeting, Forum on the Future of Education, Aug. 23	World Bank human resources development sector investment loan III project document

	Meeting with a faculty member at the Hashemite University, former Director, Directorate of Education, MoE, Aug. 23 Meeting with Director of social and donor-funded projects, Ministry of Planning (MoP), Aug. 23 Meeting the Director of the higher education development project, NCHRD, Sept. 2, 23		Preparatory document for the World Bank third Human resources development sector, loan: Component 3, Aug. 2002 MoP: Human resource development: The route to manufacturing the future, 2002. Education reform in Jordan: An analytical overview, 1996; Cost efficiency of education spending, June 15, 2002; Human resources development strategy in Jordan, 1998.
	Attended Forum, Sept. 15-16	Attended Forum on the future of education in Jordan, Sept.15-16	MoE: Towards a vision for a new education system, 2002; MoE: 'e-learning' a strategic framework, 2001; Launching e-government in Jordan, 2000; Vision forum for the future of education: Proceedings and recommendations for national initiatives, 2002; Proposed framework for future action: Final statement of the Vision Forum for the future of higher education in Jordan, 2002; Strategy reform plan for Jordan's higher education, 2002; Tertiary education in Jordan: A vision for the future, 2002; Technical and vocational education and training, 2002; Vocational Training Corporation Strategies for the preparation and development of human resources, 2002; OECD: Education for the knowledge economy, 2002; JICA: Action in the Japanese education system to create the e-society; LANDFALL Consultants, Towards an experimental culture in education, 2002; World Bank report: Constructing knowledge societies: new challenges for tertiary education, 2002; World Bank strategic approaches to science and technology in development, 2002; World Bank lifelong learning in the global knowledge economy: Challenges for developing countries, 2002
	Meeting with chief librarian, NCHRD, Sept. 23 Meeting with chief librarian, Shoman Cultural Foundation, to browse through their resources, and resource officer, Shoman Cultural Centre, Head Office, to check on their latest publications		Reference to documents on www.nchrd.gov.jo

	Attended press conference, Sept. 21 Meeting with director, Global development learning network centre, Univ. of Jordan, Sept. 18.	Attended press conference on the status and future plans for education in Jordan, by Minister of Education, Sept.21. Attended a session of a distance learning course, organized by the World Bank Institute on macroeconomic management for financial stability and poverty reduction in the Middle East	
Oct. 2002-May, 2003	Back to Montreal Ongoing literature review on higher education and globalization Attended course on qualitative research in spring, followed by a quantitative research course in winter Reviewed the purpose of my study and noted that I needed to look out for project documents and policy papers on higher education Ongoing data collection and data analysis in Montreal In collecting data, I needed to list the things I wanted to ask, observe, look for. I needed to try to find documents that verify my hypothesis Contact with the World Bank, Middle East information desk Developed knowledge in qualitative methodology, methods, and paradigms	Attended the 2nd Education Graduate Society Conference, "Directing the winds of change: Educational perspectives on globalization" McGill, Nov. 8-9. Attended McGill colloquium in honor of Principal Bernard Shapiro on "The evolving university", Nov. 20. Corresponded with World Bank, Middle East information desk for latest publications	World Bank, EDI Development policy case studies, Haddad, W.(1994). The dynamics of education policymaking; Case studies of Burkina Faso, Jordan, Peru, and Thailand; Shaban, A., Abu-Ghaida, D., Al-Naimat, A. (2001). Poverty alleviation in Jordan: Lessons for the future, 2001

	Started to work on developing a conceptual framework for my study Started to work on the chapter on higher education reforms in the context of globalization		
May 1, 2003-August, 2004	Second field visit to Jordan Ongoing literature review on higher education and globalization. Data collection on Jordan based on what I found in the literature regarding globalization-links to reform in higher education and my observation during my previous field visit to Amman Ongoing data collection activity. I compared the first set of data with the second as I collected it, to let me know the data I need to collect. My key sources included MoE, NCHRD, Shoman Cultural Foundation, Shoman library and documentation centre Getting hold of MoE and World Bank documents and material was crucial since they are grounded in the key 2 issues, reform and globalization, which my inquiry is working toward; reviewed documents with the aim of understanding the communication of meaning between the World Bank as agency promoting globalization, and higher education policy makers in Jordan as the globalized party. World Bank documents were primary resources, since the WB recounts first-	Corresponded with World Bank, Middle East information desk	Project appraisal document on a proposed loan in the amount of US$34.7 million to the Hashemite Kingdom of Jordan for a higher education development project, Dec. 22, 1999; Feb. 1, 2000; Project information document: Jordan higher education development, July 29, 1998; Project information document: Jordan higher education development project, Jan. 24, 2000; World Bank, ESP discussion paper series, Reforming higher education systems: Some lessons to guide policy implementation, April, 1995; Education in the Middle East and North Africa: A strategy towards learning for development, April, 1999.

	hand connection and experience with issues-linked to globalization in the literature. Media monitoring ongoing Insight: while the media is useful in monitoring developments in higher education and in context. But as for coverage of reforms, since it is addressed to the general to the general public, it serves to promote the need for reform Worked on my chapter on higher education reforms in the context of globalization in Jordan Attended lecture by Minister of Higher Education on higher education in Jordan: present and future, June 2, 2003 Meetings with the Director of the higher education development project, NCHRD, June 15, July, 30, Sept., 15, Nov. 30, 2003, Feb. 20, 2004, April 20, June 13, 2004 Meeting with Chief librarian, NCHRD Resource Centre, June, 15, Sept. 15, 2003, June 11, 2004 Shoman Cultural Foundation, Shoman library and documentation centre, July 1, 2004 Attended conference on Jordan's Intellectual Property Rights (JIPA) week, Aug. 11-15, 2003 Attended a lecture by Minister of	Attended lecture by Minister of Higher Education on higher education in Jordan: present and future, June 2, 2003 Translated from Arabic the Draft higher education strategy Attended conference on Jordan's Intellectual Property Rights (JIPA) week, Aug. 11-15, 2003 Attended a lecture by Minister of education on the status of education in Jordan, Oct.15.	Education in Jordan; A brief account, Dec. 1996; Loan agreement; Higher education development project, June 8, 2000; Progress report; Higher education development project, Sept. 30, 2002 University education in Jordan: current status and aspirations, 2001

	education on the status of education in Jordan, Oct.15, 2003 Meeting with director, and head of resource centre, Dept. of Statistics, Nov. 30, 2003, June 30, 2004 Review of WB documents and the Ministry's higher education reform documents. I compared the reform advanced in Jordan with a similar set of reforms linked to globalization in literature Attended 'The first conference on scientific research in Jordan', Oct. 25-26, 2003 Attended JIPA's Academia workshops on intellectual property, Jan.8 and 15 and March 29, 2004 Data collection and analysis ongoing since there is always another event to be monitored or document to look for Attended lecture on the policy of open university in Jordan by President of Arab Open University (AOU) Attended lecture on accreditation of higher education institutions in Jordan, by the head of the accreditation division in the MoHE	Attended 'The first conference on scientific research in Jordan', Oct. 25-26, 2003 Attended JIPA's Academia workshops on intellectual property, Jan.8 and 15 and March 29, 2004 Attended seminar by current and former Minister of Education, and Higher Education, and Presidents of Jordan Univ. and Philadelphia Univ. on higher education: status and ambitions, April 12, 2004. Attended lecture on the policy of open university in Jordan by President of Arab Open University (AOU) Attended lecture on accreditation of higher education institutions in Jordan, by the head of the	Annual statistical report on higher education report on higher education, 1999-2000; Jordan in figures, 2001; Jordan in figures, 2002; Statistics on Jordanian students in the institutions of higher education abroad, 1999-2000

	Analyzed and wrote up my findings Ongoing editing, refining	accreditation division in the MoHE	
Sept.,2004	Final fine-tuning to submit thesis		

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