Technical Education in Jordan: Overview, Swot Analysis, and Recommendations for Improvement as Special Case

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ABSTRACT

The low enrolment in technical education at community colleges compared to that in four and five-year university programmes are the main threat facing the educational system in Jordan. The enrolment rate in community colleges was about 11% in 2005, while, it was 89% in general four and five-year university programmes. 75% of those enrolled in four and five-year university programmes were in humanities and science programmes. One of the main reasons for a low level of enrolment in technical education programmes is the public attitude towards technical education as dead-end applied education with low income and less prestigious position. This paper presents an overview of community colleges education and discusses the challenges facing technical education in Jordanian community colleges. An analysis was performed to determine strengths, weaknesses, opportunities, and threats (SWOT) of this type of education in Jordan. As a result of this study, a general guideline for action plan to improve technical education in Jordan was recommended.

Keywords: Strengths, Weaknesses, Opportunities, (SWOT), Technical Education.

INTRODUCTION

Jordan is one of the smallest and less affluent economies in the Middle East with close to 15% of the population living below the poverty line. Jordan does not have many natural resources, so she depends on a highly-skilled workforce in an effort to improve its economy. For the last three decades, Jordan invested a lot in the education sector in order to be able to produce qualified workforce. Jordan spends 6.4% of GDP and 13.5% of total government expenditures on education, which is higher than the average for countries with similar population and income levels. The needs for technicians who have the capability to industrial activities are one of the most important categories of work-force in Jordan.

In Jordan, enrolment rates at each level of education are consistent with other countries at similar income levels, but population growth and socio-economic pressures are placing high demand for further expansion and improvement of infrastructure, programmes and services. Jordan is doing well on its way to achieving the Millennium Development Goals in terms of primary completion rates and the elimination of gender disparities in education. In 2004, UNESCO reports indicated that Jordan provides equal learning opportunities for males and females. These reports ranked Jordan 18th out of 94 countries.

It is clear that additional and continuous improvement in the quality of education will be essential to support overall national economic development aspirations, employment creation, stimulation of economic diversification, income generation and reduction of poverty through increased regional and global competitiveness. To enable and support economic growth, the local labor market requires a supply of well skilled and highly motivated graduates; currently there are far too many youth and young adults who can not meet the demands of the workforce or the entry requirements for higher education institutions. Jordan has a total of 32 universities as of 2010: ten public universities and, nineteen private universities, and two regional universities. In addition, six universities are working in Jordan
under agreements with different public universities. The University of Jordan was the first established in 1962. A public university is established by a decision of the cabinet and endorsed by a royal decree. Private higher education started in Jordan in 1989. Establishing a private university requires a decision from the Board of Higher Education. As for community colleges, there are 50 community colleges: 18 follow Al-Balqa’ Applied University, 4 military colleges, 5 follow Ministry of Health, 2 follow the United Nations Relief and Works Agency (UNRWA) for Palestinian Refugees, and 21 private colleges.

During the last few decades, community colleges in Jordan were the main source of highly specialized labour. These community colleges were established many years before universities were established. At this stage, most of the community colleges were established to prepare school teachers. In 1962, Jordan University was established to be the first university in Jordan. In Jordan, more than 192,000 students were studying enrolled in 29 Jordanian universities in 2005, 75% of whom are taking courses in the Social Sciences and Humanities. While approximately 24,000 students (11.1%) are studying in 52 community colleges, many of those graduates as technicians (Ministry of Higher Education, Annual Report, 2006). In 2009, the number of first-year students enrolled in different Jordanian universities was 54,721 students while the number of first-year students enrolled in community colleges is 14,104 (20.5%) (Ministry of Higher Education, Annual Statistics Report, 2010).

Students who wish to pursue their profession in vocational education join a community college after successfully completing high school. Vocational higher education is available in Jordan in a number of specialties, such as administration and finance, agriculture, applied fine arts, applied sciences, engineering disciplines, hotel management, information management and libraries, para-medical subjects, sharia and Islamic civilization, educational, and languages. In Jordan, the community colleges were established using systems similar to those used in the United States.

The two-year programmes are the most common in the Jordanian community colleges. At the end of these programmes, successful students will receive a diploma certified by the Ministry of Higher Education. Limited number of community college graduates who passed the comprehensive exam may be enrolled four and five year educational programmes at the universities to peruse studies towards the Bachelor degree. This kind of perusing study is governed by regulations issued by The Ministry of Higher Education.

Technical education in community colleges is necessary cover the shortage in skilled labour in local and regional markets. However, in the last few years, many experts in Jordan have began to look to the community colleges programmes to produce semi-skilled labour (Al-Alawneh, and Alhawasin, 2005).

Research Objectives

The main objectives of this study were to:

1. Present an overview on technical education at Jordanian community colleges.
2. Evaluate the extent to which the current situation of Jordanian community colleges aligns with what was planned for, considering many indicators. This will be achieved through strengths, weaknesses, opportunities, and threats (SWOT) analysis of current conditions.
3. Recommend a general guideline that can be used as base for the community colleges transformation plan. This plan will have the capability to resolve the weaknesses and threats facing technical education, in addition to improve the quality of it products.

SWOT Analysis

SWOT analysis for technical education in community colleges was performed to assess its external and internal weaknesses and strengths, opportunities, and threats. This analysis will help in developing strategic plans to enhance the quality of these programmes’ graduates. When correctly applied, it is possible for community colleges to get an overall picture of its present situation in relation to its community, other colleges, and the industries its students will enter.

The SWOT analysis covered all of the following areas. Each of these areas can be a source of strengths, weaknesses, opportunities or threats:

**Internal environment**

1. Instructors, trainers, and other employees.
2. Learning environment
3. Current and potential students
4. Assigned and actual annual budgets
External environment

1. Employability of graduates
2. Students local communities and parents.
3. Other colleges and universities in the surrounding areas.
4. Quality of high schools graduates.
5. Demographics data.
6. Funding sources

Many Jordanian experts in education were indicating that during the last twenty years, the technical education did not sufficiently respond to changes took place in Jordan in different aspects and at different levels. As a result, many weakness and threats appeared throughout the years. Meanwhile, strengths and opportunities still exist in the offered programmes. The following section summarizes strengths, opportunities, weakness, and threats of technical programmes offered at Jordanian community colleges.

Strengths and Opportunities

Based on the performed surveys, the main strengths present in technical programmes are:

- High-skilled/high-wage graduates
- Reasonable tuition fee charged from students. Community colleges dropout many of education expenses and reduce its period by 50% or more.
- Well trained and dedicated instructors and trainers in some of the offered programmes.
- Possibility of perusing studies toward bachelor degree, with possibility of transferring courses in some programmes;
- High qualified graduates from some of the offered programmes,
- Bachelor programmes offered in some of the Community colleges. These programmes open the doors to students in similar technical education programmes to pursue their education toward Bachelor degree.
- Local and regional markets need more technicians than professionals. Community colleges are the main contributors to the workforce preparation activities. Community colleges improve its graduates socioeconomic status and income, in addition to improve education outcomes.
- Continuous education and training can be promoted through technical education in community colleges.
- Meeting the needs of low-income workers and those turned to unemployed for a reason or another.

Weaknesses

- The quality of teaching and unfocused education in many of the offered programmes is poor. Many of technical education programmes in community colleges shifted towards classical academic programmes offers at other Jordanian universities. This caused failure of some of these programmes in filling the gap in many major occupations, since the programmes designed their curriculum to obtain a higher education degree, and to graduate highly qualified workers.
- Selection criteria for enrolment in technical programmes are poor. The minimum required GPA to attend community colleges are either open to everyone pass the high school general exam or requires much less GPA than four and five-year colleges and universities
- Comprehensive exit examinations does not cover all learning aspects the students learned;
- Needs for remedial courses, such English and mathematics, in some programmes.
- Unemployment rate is high among graduates of some programmes offered by community colleges.
- Technical education in Community colleges do not consider new trends in the labour market.
- Many high schools graduates and their parents believe 4 or 5-year degree graduates will have better and more promising future.
- 4 or 5-year degree graduates will be paid more in the long term.
- 4 or 5-year degree graduates have higher Socioeconomic status (SES)

THREATS

As part of this analysis the threats or challenges facing community colleges education in Jordan should be defined. The main challenges are:
• Low enrolment in technical education at community colleges compared to that in four and five-year universities programmes. This mainly caused by low number of students and their parents interested in these programmes.
• Admission policies do not offer equal opportunities to all applicants.
• Weak or absence of quality assurance system in education programmes at community colleges.
• Weak scientific research and development environment.
• Insufficient funds to community colleges to establish high quality programmes and cover expenses of low income students who can not offer paying the college fees.
• Poor college environments to build the students characters and reinforce loyalty and democratic practices.
• In most cases, the education in community colleges is not open to a higher level of education.
• Uncertainty in remaining the economy strong enough to generate sufficient employment for those graduating from community colleges.

Despite the above mentioned weakness and threats, technical programmes are considered crucial for social and economic security of Jordan and its people.

RECOMMENDATIONS FOR IMPROVEMENT

The National Strategy for community colleges should be revised and campaign to support the reform process. The education in community colleges should be pillar of the national technical education strategy, which emerged from overall system movement towards, the National Agenda and eventual compliance with targets for access, equity, social and economic inclusion, relevance, and ultimately quality, as measured by a variety of system approved standards for performance and assessed by competencies, results, and achievements which can be achieved through:

• Bridging the gap between technical education and the market needs, and keep the doors open for technical education graduates to pursue their higher education.
• Design the technical educational programmes as a lifelong learning process.
• Transform the Community colleges to produce labour market relevant skills, by aligning the community colleges with the needs of a changing labour market in an emerging knowledge economy. So the technical programmes should be redesign in a way that it will be responsive to the economy by keeping eyes open on market needs, and respond accordingly. This can be achieved through:

i. Mapping the relationship between vocational education and the labour market.
ii. Implementation of mechanisms for more systematic longer term tracer studies to provide ongoing information on links to the labour market should be implemented.
iii. Developing policy component by drawing on the best international experience, trends in the region and specificities of the Jordanian context;
iv. Run a series of pilot initiatives to test various institutional options for reform;
v. Create institutional linkages to employers, other training providers, and other Vocational Education and Training (VET) reform initiatives; and
vi. Form linkages with other Technical and Vocational Education and Training (TVET) work in Jordan (i.e. Vocational high schools, and the Vocational Training Corporation).

vii. Identify key policy directions with respect to the transformation of the community colleges education system to meet the requirements of what had been identified as the knowledge economy.
viii. Technical and technology education need to revise specializations in community colleges and gear them towards technical education.
ix. Reduction and refocus of the vocational education programs to maximize the emphasis on relevant skill and competencies through curriculum renewal supported by targeted initiatives in teacher training and equipment and resources deployment
x. Improve the involvement of stakeholders in design and implement of technical education programmes.
xi. Development and implementation of an integrated information management system to incorporate current and future specific information systems and provide the basis for modeling policy options and supporting policy decision making, implementation and assessment.
• Evaluate the possibility of offering online degree.
• The community colleges should produce high calibre graduates, who have the capability to compete in the local and regional labour markets.
• Necessary remedial courses should be recommended for each programme. English and mathematics courses might be necessary for different programmes. Moreover, the right resources and services to support individual student learning needs should be available.
• The learning process should concentrate on outcomes-based learning process more than input-focused one. The process in the technical education programmes should be centered on learner, and the learning outcomes should achieved through different approaches including lecturing, laboratory and workshops activities, and practical training.
• Support for the central place of the learner in outcome-based education through review and further renewal of programme structure and curriculum scope, sequence and content, diversification of core and supplemental learning resources, teaching methodologies and assessment strategies, and new or renewed programmes in career, physical education and health, and others areas that fulfill the needs for holistic education for all students.
• Evolution off a publicity campaign to encourage enrolment in community colleges. This campaign should cover all Jordanian high schools. In this Campaign, the role played by students’ parents should be considered.
• Ensure the financial and academic autonomy of community colleges through governance and administration.
• Develop admission standards that achieve fairness and equal opportunity among applicants.
• Accreditation and quality assurance to develop a quality assurance system and apply it to all institutions and programmes of higher education should be considered.
• Improve of colleges' environment to build the students characters and reinforce loyalty and democratic practices. This can be achieved through learning environment initiatives that provide additional general and dedicated facilities (schools and extensions), for student enrolment and appropriate programme delivery and that will ensure universal connectivity and expanded ICT resources for learning.
• Information on available vacant jobs, the current business climate, and demographic changes should be used to assess existing and new technical education programmes.
• Cost-efficiency measures should be considered in running technical education programmes.
• Review of current structure, processes of Al Balqa’ University with respect to central directorate roles and functions, and develop, and implement new ones, and consider development of specialized well-equipped regional community colleges that will replace smaller colleges and programmes that are outmoded, under-equipped and under-resourced
• Implementation of mentoring and evaluation system. Make continuous assessment and reflection on actions a habitual practice; Keep performance standards at the forefront of activities;
• Replacing classical view of the instructor as a provider of the information by facilitation of the learning process.
• It is important to recognize achievement and reward excellence among instructors and other educators.
• Implement continuous training of instructors and leaders. Training programmes should be designed and implemented for both new and in-service instructors; Instructor training programmes should be broad based programmes and specialized vocational courses.
• Encourage scientific research to improve the research environment, encourage research teams from varied specializations, and support excelling graduate students in various higher education institutions.
• Using technology in the education process.
• Continuous education should be incorporated in technical education programmes.
• Encourage Public-Private Partnership in a way to build an appropriately skilled, demand-driven workforce that meets the needs of the private sector. An example of Public-Private Partnership brings together: Al-Huson University College (AHUC); Consolidated Contractors Company and the Morganti Group Inc.(CCC/MORGANTI). The Partnership enhances CCC/MORGANTI’s labour force needs from Jordan and in the Region. CCC/MORGANTI needs more pipe fabrication supervisors on large construction sites. Meanwhile Al-Huson University College (HUC) working on increasing the number of jobs available to the college graduates. In this capacity, CCC/MORGANTI and Al-Huson University College (AHUC), introduced employer-specific training programmes. The first batch of graduates from this programme were 18, most of them appointed in the Consolidated Contractor Company with a starting salary of more than 1,500 US$ which is considered to be of high wages ranks.
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