

A Proposed Program for Developing Career Transition Units to facilitate the Transition of Technical Education Students into the Labor Market in Egypt

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Abstract

The main objective of this study is to develop a proposed unit for facilitating the transition to the labor market. This unit aims to develop skills relevant to the labor market for graduates of specialized education programs from faculties of specialized education. The importance of this research stems from the necessity of establishing and developing such units within educational institutions and funding bodies, and providing appropriate support for their establishment and development to enhance various aspects of development. The study reveals that the most important factors for the success of the transition to the labor market are consistent training and skills enhancement for students through training courses and educational seminars. It also identifies that the most significant challenge facing students during the transition process is the increasing need for practical application of the skills they acquire.

Keywords: A proposed program; units that facilitate the transition; labor market.

Introduction

Young people represent a tremendous source of vitality. Countries strive to effectively harness this energy by boosting production and development rates. This endeavor aims to overcome the challenges of unemployment and poverty, which are among the most significant threats to national security. To achieve this, governments collaborate with the private sector to develop plans and implement programs designed to prepare young people for the labor market, equipping them with the necessary skills demanded by the market, and thus bridging the gap between labor market demands and the needs of graduates. Hence the need to implement this process, numerous specialized units have been established within universities and institutes to follow up with graduates, emphasizing practical and applied aspects, reviewing curricula, and aligning them with the realities of the workplace and development requirements, while continuously improving them. The Arab world is characterized by its wealth of human resources, particularly its high youth population compared to other major regions of the world. If this force is properly utilized by developing their capabilities and competencies and equipping them with modern skills and knowledge, they can be transformed from a burden into a productive force.

However, graduates in the Arab world face significant challenges, most notably unemployment. This phenomenon stems from several factors, including the declining role of the state in employment, the inability of the private sector to create new job opportunities, and the mismatch between education and training outputs and the skills required by the labor market. Furthermore, there is a lack of interest in self-employment and establishing small businesses due to insufficient guidance, funding, and necessary skills. Some Arab countries have begun addressing these issues by reviewing and developing their education and training systems in general, focusing on vocational training, supporting the small business sector, and activating the private sector's role in this process.

Nevertheless, industry and trade in the Arab world face significant challenges in the face of global economic changes, particularly with the liberalization of markets and increased competition. Given these challenges, it becomes essential to focus on strengthening the local economy and achieving self-reliance to ensure stability and sustainable growth.

The mismatch between graduates' skills and labor market demands, coupled with the large number of new entrants into the labor market, has made it extremely difficult for many young people to find employment. The unemployment rate in the Middle East and North Africa region is considered the highest compared to any other region in the world (Beecherman et al., 2014).

Many Arab countries, with support from the European Training Foundation, have begun focusing on education and training indicators and establishing labor market information observatories. However, the absence of specific indicators for labor market requirements has led to difficulties in data collection and comparison between different countries, making it challenging to analyze statistical data related to education, training, and labor market demands.

Young people need high-quality education and training to develop their abilities and skills, enabling them to contribute effectively to the labor market amidst rapid technological advancements. Yet, current generations of young people have received a traditional education that does not meet the needs of the modern labor market. Countries are making significant efforts to create new job opportunities, managing to generate more than three million new jobs annually. Nevertheless, unemployment rates remain high, especially among young people, exceeding 25%. Surprisingly, unemployment rates among the illiterate are the lowest in many Arab countries, while these rates are higher among graduates of secondary and university education. This phenomenon points to a mismatch between educational outputs and labor market needs, in addition to the impact of certain restrictive attitudes towards women's employment.

Some Arab countries have begun reviewing and developing their education and training systems to improve their outcomes and better align them with labor market needs. Interest in the transition to the labor market has grown in recent years due to technological advancements and the rise of globalization, which have significantly impacted the business environment and the competitive landscape for local, regional, and international organizations. This focus has intensified because of its role in the overall growth of the national economy, as well as the expansion and financial resources of educational institutions. With the accelerating pace of change in the business environment, this transition is considered one of the most important options for educational institutions to adapt to the demands of competition and change (Puerto et al., 2022).

This is due to the significant increase in youth unemployment, which in the Middle East and North Africa is more than double that of South Asia. According to a World Bank analysis, those with limited education and those with higher qualifications constitute a smaller share of the unemployed in most countries of the region. Most of the unemployed either lack sufficient skills or have only a secondary education, indicating a lack of appreciation for their skills within the economic community. Even for highly educated workers, the analysis revealed that the private sector undervalues their education compared to the public sector (Economic Council for Development and Reconstruction in Khartoum 2022).

Furthermore, specialized education in Egypt is a key tool for achieving comprehensive development. Its various forms aim to produce qualified graduates who are directly integrated into the job market. Graduates of specialized colleges can work in diverse fields, such as teaching, technology specialists, interior design and art, or in press and media institutions. Job opportunities depend on the student's chosen specialization, such as art education, educational technology, home economics, educational media, and music education. The quality education system aims to develop the technical skills of students in the fields of quality education, in line with the state's direction to encourage and develop quality, technical, and vocational education and training, and to expand all types of skills-based education according to quality standards (Egyptian Foundation for Quality and Development, 2020).

The establishment of these units is intended to achieve greater integration between the objectives of training activities, the realities of the labor market, and the employment needs of establishments. It also aims to promote effective recruitment of workers in the private sector and to assist young job seekers. Indeed, some countries have established employment services units called employment centers to serve as a link and coordination mechanism between graduates of their training programs and other young job seekers, and private sector establishments with staffing needs. These centers contribute effectively to providing a productive workforce, helping private sector establishments achieve their workforce localization

policies gradually and systematically, and providing job opportunities for qualified young people through continuous communication and coordination with private sector officials. They also contribute to the qualification and preparation of young people wishing to work in the private sector by enabling them to complete training programs designed according to the needs of private establishments (Ragui Assaad, 2017). In light of global trends towards focusing on the knowledge economy, deepening the culture of self-employment and reducing the constraints of traditional employment, the importance of entrepreneurship projects and activities becomes paramount in supporting the economy and increasing competitiveness both locally and internationally (Idris, 2016). It is a source of competitive advantage, a fundamental pillar and driving force for economic and social development, an avenue for creating economic efficiency and innovation, and one of the most important incubators for providing job opportunities for students. It also represents a key contributor to the growth of the gross domestic product, improving the economic situation of the individual, promoting self-employment, and generating a spirit of initiative and competition among young people (Yarkin, D., Yesil, Y., 2016). To create an entrepreneurial society within effective ecosystems that encourage and support entrepreneurial culture, it's essential to understand that entrepreneurship isn't just about starting businesses; it's a way of thinking and behaving that can be applied in various contexts. In this framework, a stronger entrepreneurial culture must be established, and entrepreneurial mindsets must be developed so that students are able to think positively and look forward to opportunities for work and implementation. They must also have the self-confidence to achieve their goals and use their skills to build a better society, both economically and socially. Building an entrepreneurial society involves everyone, and university education plays a crucial role in fostering positive attitudes toward entrepreneurship (Al-Sukkari et al., 2014).

In the face of economic competition, learning entrepreneurship has become an urgent necessity to keep pace with the constant and changing needs of the labor market. Entrepreneurship education has begun to be integrated into school curricula and educational programs within the framework of an entrepreneurship education philosophy and policy at various educational levels in many countries worldwide. Currently, the field of entrepreneurship is widespread across diverse educational systems, both traditional and online, in most universities globally. Many factors have contributed to the increased interest in entrepreneurship and project development, including the economic recession experienced by many countries in recent years, rising unemployment rates, and the unprecedented volatility in global markets since World War II (Shehata, 2013). This requires that the role of university education extend to include job creation through the design of curricula and specializations that graduate students capable of taking the initiative to create job opportunities in the market, transferring and localizing technology, skills, and knowledge by

connecting with local and global institutions and research centers, and incubating innovative projects and transforming them into products for community development through business incubators and technology incubators (European Commission, 2008). In light of a genuine partnership with stakeholders from the public and private sectors and graduates, universities can benefit from and interact with different segments of the local community, foremost among them graduates, who represent a huge investment capital when the university improves its communication with them using a customer-centric approach (Ahmed & Ibrahim, 2014). One of the contemporary trends for improving and developing quality education is to focus on the qualification and development aspects, through documentation. The relationship between the educational institution, represented by the university, the faculties of special education with its various departments, and the economic unit (workshop, factory, etc.), and considering the university as a productive educational unit, and working to create a kind of integration between theory and practice, and analyzing the current and future needs of the labor market, including new professions that are compatible with the emerging conditions in the work and production environment, and encouraging students of special education to train in work sites, so that this becomes a means of continuing education efficiently, so that its effect is reflected when practicing work after graduation (Abyssinianm 2016).

Based on this philosophy and approach, many countries around the world have initiated policies to promote entrepreneurship and foster an entrepreneurial culture. The past period has witnessed a significant increase in progress in this direction, with policymakers implementing a wide range of measures to disseminate and solidify an entrepreneurial culture within university education. Among the most prominent of these measures are the development of plans, policies, educational programs, and curricula designed to instill a culture of entrepreneurship and embed the spirit of initiative at the heart of educational policy, curricula, and practical applications (Vegard, J., Tuva, Sc., & Tommy, C, 2012).

In addition to providing infrastructure and support mechanisms to promote and develop entrepreneurship, countries also encourage competitive scientific and applied research that benefits their communities, nurture innovation and technology incubators that support and fund entrepreneurial projects and provide them with technical assistance, and collaborate with relevant and beneficiary sectors through partnerships. Examples of such countries include the United States and Japan.

The United States has developed its educational and training policies to support and develop entrepreneurship. In 2004, it issued the National Content Standards for Entrepreneurship Education, also known as the National CEE Standard (4). It also holds an annual Entrepreneurship Week, which aims to motivate students to engage in entrepreneurial activities and events, such as simulation exercises,

business plan competitions, and various entrepreneurship workshops. Furthermore, it offers educational and training programs for the next generation of entrepreneurs. At the university level, universities and colleges offer modern, advanced, diverse, and integrated entrepreneurship programs as a core component of their curricula and training programs.

In Egypt, the policy of economic reform and reconstruction began in 1974 following the October War of 1973, ending the era of public sector dominance. Reform focused on key areas, including reviving entrepreneurship and encouraging the establishment and development of small businesses. Over the years, the concept of entrepreneurship and initiative, along with related activities and incentives for entrepreneurship to contribute directly to economic prosperity, has evolved. Ministerial Decree No. 283 of 2014 established units to facilitate the transition to the labor market. Article 3 of the decree defined the responsibilities and tasks of these units, which include: studying and enhancing the provision of diverse services that facilitate students' transition to the labor market, and studying the impact of various initiatives, experiences, and projects that promote students' transition to the labor market (Hattab, H., 2013).

Japan has targeted education programs, linking education to production and Japanese values, and enshrining the principles of excellence and distinction. The capabilities and excellence Japan has achieved in its education system today are perhaps due to the major reforms implemented at various stages of its history. Among the most important of these reforms was the initiative of former Prime Minister Yasuhiro Nakasone, who in 1984 decided to establish a National Council for Educational Reform and non-school educational organizations, along with a number of specialists. After serious studies and research, the Council proposed changes to the goals of education and the structure of the educational system. The Ministry established an Office for Lifelong Learning within the Ministry and is working to create secondary colleges that implement a value-based system. The Ministry is also working on improvement and reform by establishing new types of institutions to keep pace with the development of scientific research. Furthermore, it seeks to improve student assistance programs that offer educational research projects designed to meet societal needs (Izad Suzuki, 1990). The Japanese education system is decentralized. The Ministry of Education's role is limited to coordination and setting long-term general policies. Responsibility for school budgets, curricula, college technology, and supervision lies with local education boards. Regarding curriculum content, each school develops its own syllabus, based on the curriculum prepared and published by the Ministry of Education. Local education boards then select textbooks from among these ministry-prepared books. The curriculum emphasizes elective reading and independent study, and examination questions are typically designed to assess students' abilities and highlight their innovation, creativity, and unconventional thinking (Al-Mufarraj et al., 2017).

Study Problem

There is a growing sense in Egypt of the urgent need to develop units that facilitate the transition to the labor market. The importance of this topic stems from the education system, despite several challenges, including a gap between labor market demands and the skills of graduates, a misalignment between educational goals and economic development objectives, a lack of scientific criteria for selecting professions that match students' abilities, a weak connection between specialized education and the labor market, a lack of planning and coordination between specialized education and the labor market, and limited participation from factories and companies (Al-Sayed, 2015). The National Strategy for Science, Technology and Innovation 2030 indicated Egypt's low ranking in the Innovation Index, where it reached 99th place out of 143 countries (STI-EGY2030, 2015). The Egyptian National Competitiveness Council report also indicated that the Egyptian education system has failed to prepare students to be competitive graduates in the knowledge-based economy. Egypt's overall ranking declined significantly between 2004/2005 and 2016/2017. After ranking in the second third of countries in 2004/2005, ahead of countries like Turkey and Indonesia, its position dropped to the bottom third, overtaken by these countries (Egyptian National Competitiveness Council, 2017).

One study revealed that entrepreneurship is extremely low, both in terms of entrepreneurial activities and the percentage of entrepreneurs among the total adult population in Egypt (those aged 18-64, which includes university graduates who are vulnerable to unemployment after graduation due to Egypt's prevailing economic and social conditions). The curricula of specialized education often focus on the type of studies presented to students in a purely theoretical manner, sometimes lacking practical application. This has created a gap between theory and practice, and between theoretical and practical aspects, naturally with a strong emphasis on education, as graduates are primarily qualified to work in the field of teaching. Education and employment are deeply intertwined with the social and political context, and educational institutions must be empowered to address the problems and challenges that the labor market presents to young graduates. The misalignment of specialized and vocational education programs with the nature of jobs in the labor market has led to an increase in the unemployment rate rather than a decrease. (Hence, it became clear that there are no executive programs suitable for quality education in particular, which define the tasks and responsibilities of training and preparing the graduate for the labor market in light of the units facilitating the transition to the labor market in a practical way.)

Based on the above, the research problem can be formulated in the following question:

How can a proposed program be developed to establish and enhance transition units for students in specialized education in Egypt, in accordance with mechanisms supporting entrepreneurship in the field of manual and technical skills, and in light of labor market demands?

Study Objectives

The main objective of this study is to develop a proposed transition unit for the labor market to enhance the skills of graduates from specialized education faculties. The importance of this research is evident in the necessity of establishing and developing transition units within educational institutions and funding bodies, and providing appropriate support for their establishment and development to improve various aspects of development.

- 1- To identify the mechanisms of transition units in specialized education in light of entrepreneurship support mechanisms.

Study Importance

The importance of this study stems from the significance of facilitating the transition to the labor market. Research on this topic remains limited and confined to a few international experiences. We anticipate that this study will offer a novel perspective, adapting it to the field of quality education for discussion. The study's importance arises from the following:

- ❖ Facilitating the transition to the labor market is a primary driver of individuals' latent potential and capabilities. It influences student behavior and fosters high productivity by enabling them to choose effective methods, approaches, and strategies to meet the demands of the labor market.
- ❖ This research can benefit some by identifying the fundamental steps for diagnosing the culture of educational institutions, as well as those institutions striving to effect change among their graduates. One of the most important characteristics of our time is the ability to diagnose and evaluate the current situation to identify and reinforce strengths and address weaknesses.
- ❖ This study opens the door for further research on this topic.

Study Scope

- ❖ A proposed unit to facilitate the transition to the labor market at the Faculty of Specific Education.
- ❖ Some mechanisms for supporting entrepreneurship in specific education at the Faculty of Specific Education, represented by manual and technical skills.

Research Terms:

- ❖ Entrepreneurship
School to Work Transition Units are defined in Ministerial Decree No. 283 issued in June 2014. The central unit for facilitating the transition to the labor market is responsible for enabling students and graduates of specific education to transition to the labor market by helping them make sound decisions for their professional lives, based on accurate information about the labor market.

The current study defines it as: A proposed unit to qualify recent graduates from faculties of specific education with structured skills training aimed at acquiring and enhancing the specialized abilities and skills necessary to perform specific tasks in a particular field of work, leading to improved performance, increased productivity, and raising the individual's level of competence in the real work environment, and equipping them with the manual and technical skills appropriate to the requirements of the labor market.

Entrepreneurship:

Entrepreneurship is a process through which an individual engages in an activity or practice with the aim of establishing a new enterprise to achieve economic goals. This individual is known as an entrepreneur who innovates something of value.

Entrepreneurship is defined as the innovation of systems and practices that did not previously exist within an organization, developed by some employees under the supervision of a manager, in order to improve its economic performance through the efficient utilization of the organization's resources.

Entrepreneurship is also defined as: taking the initiative to design and organize new projects or activities by discovering and exploiting opportunities with a proactive mindset and embracing calculated risks to achieve profits by emphasizing creativity, productivity, work, and economic growth.

Furthermore, entrepreneurship is defined as: taking the initiative to organize projects by exploiting opportunities within an organization to create new value or a new product.

The current study defines it as: the ability of students in the Faculty of Specific Education to transform ideas into actions and practices by taking the initiative to create, plan, and manage projects based on creativity and innovation in manual and artistic projects.

Theoretical Framework of the Study

❖ Units Facilitating the Transition to the Labor Market

This study aims to discuss the development of quality education to meet labor market demands, and to develop a vision for implementation mechanisms, coordination, and integration among all stakeholders involved in vocational education and training (VET). It also addresses the challenges related to the current state of VET and presents development efforts and successful experiences locally, regionally, and globally. This highlights the need to explore alternative mechanisms to encourage youth to enroll in vocational education and training. These mechanisms include:

1. Linking vocational education to actual job markets, creating new and tangible investments to absorb trained workers, and eliminating unemployment, which is a critical issue related to human rights and youth empowerment.
2. Utilizing information and communication technology (ICT), such as satellite channels and

local and international communication networks, in vocational education and training.

3. Expanding opportunities for graduates of vocational education to pursue university studies by raising the quality of pre-university vocational education and meeting its needs.
4. Achieving integration among ministries concerned with the outputs of vocational education and training in light of development strategies.
5. Promoting a culture of vocational education. By mobilizing public opinion and encouraging mass participation through digital surveys, recognizing quality education as the engine of development and progress for society.
6. Developing legislation and labor laws related to granting licenses for small projects, and encouraging young graduates of quality education and vocational training.
7. Providing opportunities for on-the-job training during studies.
8. Upgrading laboratories and workshops in universities, technical colleges, and vocational training centers to keep pace with the latest technological advancements.
9. Expanding the use of alternative assessment and performance evaluation mechanisms, encouraging graduates to market their products, and activating the role of civil society in this regard.
10. Distributing the various colleges and specializations of quality education according to the conditions and needs of the local environment (agricultural, commercial, and industrial).
11. Developing educational and guidance departments for technical education, and retraining and qualifying administrative staff within the framework of achieving Total Quality Management (TQM) in quality education and training.
12. Revising the curricula of technical education, so that teaching models are designed that are linked to job analysis theories and task assignment, including skills and problem-solving.

❖ The proposed development mechanisms (how to overcome the obstacles and shortcomings that hinder the development of quality education) have several axes, which are (Huweil, 2017):

First Axis: The Labor Market Axis:

- Providing job opportunities for graduates of specialized education projects in local and global markets.
- Introducing new specializations that align with the labor market.
- Involving business leaders in developing specialized education curricula and programs.
- Identifying the specializations needed by the labor market and reviewing existing ones.
- Linking specialized and vocational education to the world of work, and strengthening its connection with productive institutions and various sectors of economic activity.

- Training students within these factories and industrial facilities, establishing training contracts with them, and covering training expenses.
- Involving the private sector and business owners in developing appropriate curricula and selecting professions required by the local market and for production needs.
- Involving the private sector and business leaders in employing graduates of specialized education.
- Providing skilled and competent workers for employers and investors, thereby attracting foreign investment.
- Connecting universities with the environment, society, and labor market. □ Threats to the relationship between quality education and the labor market:

❖ **The numbers required by the current and future labor market, as stated in labor force statistics, are inaccurate, due to the following reasons (Sabri, 2013).**

1. Market randomness: This is characterized by the training, preparation, and graduation of an unlimited and unrestricted number of individuals, in addition to the unskilled labor generated by the labor market itself due to its need for workers.
2. Absence of a state role: Developed countries prioritize plans and programs to provide and train the workforce needed by the labor market and focus on developing the skills of their workforce.
3. Scarcity of statistical agencies: These agencies are responsible for identifying the numbers needed by the labor market.
Consequently, the private sector is incentivized to increase economic activity, boost production, and create more job opportunities for new entrants into the labor market. However, most of the job opportunities provided are within the informal private sector. The majority of workers in the informal private sector work without contracts, health and social insurance, or end-of-service benefits upon retirement, and they often work long hours and receive low wages (Elzanaty and Association, 2013).
4. Weak education systems.
5. The role of social insurance: Most companies, consulting firms, and various construction sectors do not provide social security for their workers, considering it a cost-saving measure.
6. The limited role of labor unions: Their role is minimal in Egypt, and there is a general shortage of available labor in the country, coupled with a lack of studies on the labor market and its specializations.
7. The absence of institutions for analyzing and providing information, and the inadequacy of the supply and demand system.

The concept of alignment is linked to quality, encompassing a set of distinctive characteristics of a product, activity, process, person, or institution, enabling it to meet its needs and be capable of fulfilling them.

Many reports confirm the weak returns from quality education and vocational training systems, citing the

high unemployment rates among graduates of these systems as evidence. While many unemployment cases are attributed to economic conditions, the primary reason lies in the poor quality of the education and vocational training systems themselves, which fail to meet the needs of the labor market.

❖ **Objectives of Facilitating the Transition to the Labor Market:**

The objectives of linking education to the labor market are defined by a set of goals, including connecting education with production and service institutions in the surrounding environment, training students on the machinery, equipment, and methods used by these production institutions, relying on the strategies underpinning development plans in Egypt, expanding the education and training system, and encouraging production and service institutions and new urban communities to contribute to the establishment of specialized technical colleges within factories and companies to prepare and qualify students in the fields of work of these institutions.

The focus is on training as a primary goal for developing students' capabilities and skills. To achieve this, the dual education and training system must be expanded through agreements with entities benefiting from graduates of specialized colleges. These agreements should include a range of specializations that align with the nature of the specializations and activities of the established institutions. □ Objectives of Facilitating the Transition to the Labor Market:

- The success of the quality education system in achieving its objectives through its graduates' competitiveness at the regional and global levels depends on the relationship between inputs and the processes that work to achieve the desired outcomes, as follows:
- Coordination among all government agencies working in the field of quality education through the Supreme Council of Universities for Human Resources Development.
- ❖ **The processes followed to transform inputs into outputs are as follows:**
 - a. Planning: This means developing a strategic vision for quality education that brings together the entities concerned with quality education and stakeholders, and involving stakeholders in developing strategies and plans for the quality education system.
 - b. Organization: Selecting visionary leaders, adopting a Total Quality Management (TQM) approach, relying on strategic management as an entry point, adopting the principle of participatory decision-making, providing qualified and trained human resources, and designing curricula based on a competency-based methodology. Implementing competency- and skills-based curricula will lead to comprehensive changes in the education system and the labor market.
 - c. Coordination: This is achieved by activating the role of the Supreme Council for Human Resources Development to coordinate with government

agencies involved in vocational education and training.

- Electronic linking between employers and labor market transition facilitation units across the Arab Republic of Egypt to provide job opportunities for graduates.
- Granting the university more authority and facilitating communication with business owners in a way that serves education.

Second Axis: Entrepreneurship:

1. In recent years, entrepreneurship has gained greater and more comprehensive importance within official circles, providing young people with the knowledge and skills to empower them to face social and economic challenges and changes at all stages of their lives.
2. It helps provide opportunities for human development and social justice. It facilitates participation in training activities and enables individuals to overcome problems (UNESCO, 2012).

Training and Skills Development:

Job Title:

Training Officer, reporting to the Director of the Central Unit for Facilitating Transition to the Labor Market.

Training Coordinator, reporting to the Training Officer in the Unit.

Job Objective:

To build the capacities of students in specialized education programs by providing various types of training to equip them with specific skills and personal qualities that contribute to their development.

To build the capacities of teachers, students, and graduates of specialized education programs, equipping them with specific skills and personal qualities that contribute to improving their performance.

Business Incubators

In order for business incubators to play an effective role in achieving their objectives and supporting entrepreneurship, several measures are required, including:

Preparing the necessary physical and human resources for establishing business incubators at the university level.

Activating the role of business incubators in the development process by providing a legislative and legal environment that gives these incubators a greater role in development.

- Establishing specialized incubators to support entrepreneurial ideas and emerging projects that lack the necessary resources to begin actual operations and production, with the aim of achieving balanced local development.
- Raising awareness among investors and businesspeople to encourage investment in these incubators.
- Leveraging local and expatriate expertise by establishing business incubators and utilizing the information revolution to contribute to building

technological institutions that drive sustainable development.

- Promoting a culture of technology incubators and science parks to encourage various sectors of society to support Egyptian universities and to educate industrial institutions about the role these incubators play in serving and developing society.
- Learning from the experiences of higher education institutions worldwide in the field of technology incubators and science parks by establishing broad relationships with these universities and understanding the key challenges they faced in establishing incubators, in order to create successful technology incubators and science parks in Egyptian universities.
- Developing clear policies, strategies, and a vision for the incubator, defining its administrative and organizational structure, and determining its funding methods. • Developing legal frameworks to regulate the relationship between universities and businesses, and defining the responsibilities and ethics of technology incubators at Egyptian universities.
- Universities must conduct a comprehensive study to establish a system for evaluating the projects and companies they incubate, in order to select those that can truly contribute to economic growth and technological development in Egypt.
- Grants must be allocated to universities seeking to establish an incubator or science park, and incentives must be provided to their staff to support scientific research, drawing on the experiences of the United States and Japan.
- Technical support must be provided to incubators by linking them to universities, scientific research centers, colleges, and technological institutes in particular, in addition to benefiting from the experiences of developed countries and international organizations specializing in establishing and managing incubators.
- Awareness of the concept of business incubators and their role in supporting entrepreneurial projects must be raised, and coordination between business and technology incubators and the private sector must be fostered so that they become partners in the development process, not competitors, by creating opportunities for complementary roles in supporting entrepreneurial work.
- Competitions should be held between business incubators and civil society organizations to encourage creativity, innovation, and participation in supporting entrepreneurship.

Sustainable Development Strategy:

Egypt Vision 2030 is a long-term development plan for a new Egypt with a competitive, balanced, and diversified economy based on innovation and knowledge, founded on justice, social inclusion, and participation, with a balanced and diverse ecosystem, and investing in the genius of both place and people to achieve sustainable development and improve the quality of life for Egyptians. The strategy encompasses

three dimensions: economic, social, and environmental (International Labour Organization, 2016).

❖ **Methods for Developing Specialized Education in Egypt through Labor Market Transition Units:**

It is clear that the Labor Market Transition Unit has a significant impact on developing specialized education in Egypt. This is due to:

1. Granting students the freedom to choose a specialization that suits their abilities and interests, as it is ranked third.
2. Equipping students with the knowledge and skills relevant to the labor market, thus qualifying them for employment.
3. Developing curricula to meet the needs of the labor market and its evolving requirements. This is because technological advancements have led to a rapid increase in knowledge and information, necessitating curriculum development that aligns with labor market demands and integrates specialized education curricula to keep pace with current market trends.
4. Supporting sports and cultural activities in technical secondary education to develop students' personalities. School activities play a crucial role in shaping students' personalities and fostering a cooperative and positive outlook.
5. Providing suitable and sufficient training halls and workshops. This is essential for developing students' abilities and skills in their chosen field, both practically and theoretically.
6. Providing modern equipment that keeps pace with the latest scientific and technological developments. This enables students to keep up with technological advancements and become familiar with modern work methods.
6. Providing students with practical training in community institutions relevant to their specializations. This allows students to gain practical experience in their fields. This conclusion underscores the need to establish channels for strengthening communication and cooperation between quality education and the labor and production sectors.

Third Axis: Proposed Framework for Developing Labor Market Transition Units in Specialized Education in Egypt

- Labor Market Transition Units in the Proposed Framework: These are a fundamental requirement for graduation from Faculties of Specialized Education. Students enroll in labor market transition units at training institutions related to their specialization. Students are only eligible to enroll in the labor market transition unit program after completing the required academic prerequisites.
- Labor Market Transition Unit Management: This is a department within the Faculties of Specialized Education and operates according to the unit's established administrative structure. This department handles all matters related to student

training, from approving training applications to identifying training opportunities, assigning students to training institutions, monitoring their progress, preparing training results, and providing departments with the necessary information about their students, among other training-related tasks.

- Training Supervisor: This is a faculty member from the Faculties of Specialized Education assigned to supervise student training for a specific period.
- o Student Affairs Training Officer: This is an administrative staff member within Student Affairs who possesses appropriate administrative skills, preferably with experience in dealing with students and training providers.
- Trainee: This is a student who meets the training requirements.
- Training Provider: This is the entity that undertakes the student's training during the training period, according to the student's specialization. It is selected by the Student Affairs Unit Officer and the academic department.

❖ **Objectives of the Transition to the Labor Market Units in the Proposed Framework**

The objectives of the transition to the labor market units can be summarized as follows:

1. To provide students with the opportunity to familiarize themselves with the work environment they are expected to work in after graduation, through internships.
2. To deepen students' understanding of the theoretical knowledge they have acquired in their field of specialization.
3. To instill in students a sense of responsibility and punctuality.
4. To train students to interact with members of the community outside the university.
5. To cultivate in students respect for others and the ability to listen to their opinions.
6. To familiarize students with the obstacles and difficulties they encounter in the workplace and how to overcome them.
7. To provide practical work experience in the workplace, complementing the educational process.
8. To familiarize students with the equipment and tools available in workplaces and connect this to what they learn in the unit.
9. To allow students to explore different employers and choose suitable employers in their field of specialization.
10. To provide industrial institutions with information about the types of human resources that will contribute to the industry in the future.
11. Providing these institutions with the opportunity to evaluate student performance during the training period and assess the student's effectiveness and employability after graduation.
12. Giving students the opportunity to identify problems in their environment and attempt to find appropriate solutions through research or graduation projects.

13. Providing the unit with a clear understanding of the labor market's needs and diverse requirements, which positively impacts the unit, whether in terms of developing its curricula or introducing new specializations, based on suggestions from faculty members supervising student training.

The unit's student affairs officer coordinates with department heads to assign faculty members to provide on-site supervision of students in the labor market transition facilitation units at their training sites.

The unit's obligations to supervisors include:

1. Providing each supervisor with lists of the students they are supervising, specifying the student's name, specialization, type of training, training institution, and required phone numbers.
2. Providing them with lists of the training institutions, specifying the training coordinator's name and various phone numbers. 3. Provide him with an evaluation form for each student.
3. Coordinate with him regarding any changes that may occur to student lists or their training providers.

The supervisor's duties are as follows:

1. Visiting the student at their training site.
2. Observing the student's training progress and understanding the training conditions.
3. Ensuring the student has a suitable training program.
4. Discussing the student's level and identifying their strengths and weaknesses.
5. Ensuring the student's attendance and adherence to the training program.
6. Providing guidance and advice to the student during the training period.
7. Monitoring the student throughout the training period.
8. Answering inquiries from training providers or students regarding the training, its regulations and procedures, or the forms required by the training provider.
9. Fostering a relationship between training providers and the unit in a way that serves the common good.
10. Resolving any problems the student may encounter during the training period in coordination with the unit's student affairs officer.
11. Providing the unit's student affairs officer with any brochures, pamphlets, or information about the providers visited, so that students can benefit from them when needed.
12. Completing evaluation forms and returning them to the unit's student affairs officer within one week of the training period's completion.
13. Submitting recommendations and proposals to the Student Affairs Unit Officer regarding the following:
 - The level of training institutions visited and the possibility of future cooperation with them.

- The specializations in which these institutions can train students and the appropriate number of students in each specialization.
- Proposals for developing labor market transition facilitation units based on the institutions' perspectives and in light of practical realities.

The student begins training on the first day of the training start date, as indicated in the letter addressed to them by the Training Department. If the student does not begin training within the first three days, the Student Affairs Department has the right to take one of the following actions:

- If the student does not have an acceptable excuse, they will receive a failing grade for training, which will be recorded on their academic record. They will be placed on the waiting list for the following year and will be given one of the remaining opportunities available through the Student Affairs Department.

The student's obligations during training are defined in the following points:

1. Commencing training from the first day of the training start date.
2. Maintaining attendance and punctuality according to the institution's regulations.
3. Accepting advice and guidance from their training supervisors.
4. Adherence to the training program prepared for him by the training provider.
5. Compliance with the safety regulations in place at the training provider.
6. Cooperation with other employees and fulfillment of assigned tasks.
7. Safeguarding the provider's property and handling it with utmost honesty and integrity.
8. Maintaining confidentiality regarding any information obtained from the training provider and adhering to professional ethics.
9. Following the established administrative procedures at the training provider when necessary.
10. Contacting his supervisor through his unit if he encounters any problem he cannot resolve.

A student's training will be canceled under the following circumstances:

1. Failure to attend training within the first three days without an acceptable excuse.
2. Absence for five consecutive days not included in the first three days.
3. Absence exceeding 20% of the training period or four separate days (whichever is less) during the training period.
4. Based on a report from the company indicating a lack of engagement with the training and failure to maintain compliance with the established regulations at the training provider.
5. Failure to submit the report on the transition to the labor market modules by the deadline.
6. Combining the transition to the labor market modules with the study of any other course.

Student training during the transition to the labor market modules is a form of training aimed at familiarizing students with the realities of the work environment and the diligence and discipline it requires. Furthermore, it...

provides an opportunity for private sector and research institutions to identify students' potential and skills. This is in addition to its benefits in guiding young people to make the most of their studies to meet the demands of the labor market.

Academic Requirements for Transition to the Labor Market

To be eligible to enroll in the Transition to the Labor Market program, students must meet the following requirements:

- **Selection of Training Provider**

The academic departments, in coordination with the Student Affairs Unit Officer, are responsible for coordinating with companies and institutions both within and outside the governorate to secure training opportunities for all students nominated for the Transition to the Labor Market program. The academic departments announce training opportunities and arrange visits to training providers during the final weeks of each semester. Students may also negotiate directly with training providers, provided they obtain approval from both the academic department and the Student Affairs Unit, which will provide the official approval and any other information requested by the training provider.

- Studying and analyzing the labor market, particularly promising sectors, in collaboration and coordination with various economic stakeholders and officials.
- Identifying the most in-demand professions, both currently and in the future, for relevant economic sectors, based on the aforementioned analyses.
- In collaboration with the business community and in coordination with other social partners and relevant ministries, defining job specifications and job descriptions accordingly. Accordingly, and based on the actual needs of the economic sectors and the demands of the labor market, realistic curricula are developed in collaboration with representatives from the business sector, technical schools, and companies. This ensures alignment with global skill standards and is appropriate for the levels of the target groups.

Following this, a realistic approach to tests and examinations, both theoretical and practical, is adopted. These are overseen and controlled by joint committees from the private sector and relevant ministries to guarantee the achievement of required standards, the quality of training, the competence of graduates, the effectiveness of practical training, and the acquisition of diverse skills and dialogues.

A certification system is ensured, whether by the relevant ministry or by the concerned investor and business community, and accredited by an independent accreditation and quality assurance body.

Responding to requests and needs submitted at both the sectoral and regional levels, provided the necessary conditions and circumstances are met, in key sectors such as production, services, and construction, along with certain other industries in the agricultural sector, based on sectoral and regional studies and analyses. • Collaborative work, not in isolation from other related activities. On the contrary, there must be ongoing dialogue and coordination with other relevant stakeholders, officials, ministries, international organizations, other donors, NGOs, etc. This is to avoid duplication of effort, coordinate activities, and utilize available resources and capabilities in the best possible way.

- Ensuring the development and training of well-qualified personnel at the required levels, capable of assuming responsibility for planning, feasibility studies, curriculum development, monitoring, and evaluation.
- Establishing a robust, practical, and flexible system, driven by labor market needs, based on systematic and realistic methods for developing and implementing standards through technical and vocational education and training at its various levels and types.
- Establishing and strengthening a strong monitoring and evaluation mechanism, through close cooperation and mutual coordination with other relevant bodies and organizations, to ensure the continuous achievement of standards in technical and vocational education and training.

Expected outcomes of implementing public policies to link training outputs with labor market needs:

- Establishing a forum for dialogue among all officials, decision-makers, employers, factory owners, etc., and various state bodies and stakeholders in relevant ministries (Education, Higher Education, Manpower, Trade and Industry, Social Development Funds, etc.), in coordination with representatives of the private sector, donors, and non-governmental organizations.
- This forum will discuss ways to structurally reform education and training and manage a comprehensive societal dialogue.
- Fostering cooperation between training service providers from the public and private sectors and service seekers, whether at the company and factory level or at the individual level, to develop programs, courses, and curricula that prepare trainees for labor market needs in line with global standards of competence and skill.
- Establishing an independent, specialized body to ensure the quality of education and training, accreditation, and certification, and developing a national qualifications framework with the participation of all relevant stakeholders, based on international best practices. • Developing national skills standards with the participation of all relevant stakeholders, including experts in various economic fields and specialists in related professions and trades.

- Establishing organized entities in different industrial zones to connect all stakeholders and participate in training and education, thus achieving the principle of decentralization.
- Implementing monitoring, evaluation, and verification mechanisms to ensure the accurate and efficient execution of their tasks.
- Involving stakeholders from various economic sectors in the planning and implementation of all qualification and training steps, from defining profession specifications and job descriptions, to developing curricula and content that meet the required level of knowledge, skills, and competencies for each profession according to market demands, determining the number of graduates needed for each specialization and providing practical training opportunities, as well as participating in evaluation processes, including the development, administration, and evaluation of practical examinations in the final years and at the end of training courses.
- Establishing local and regional observatories to continuously study labor market needs and keep pace with the dynamics of change and global technological and technical developments.

Conclusion

In light of the researcher's presentation of the problems in preparing and training students in specialized education through transition facilitation units for the labor market, the various solutions that could contribute to mitigating these problems, and the facilitating and hindering aspects of implementing these solutions within the context of the educational reality in Egypt, the researcher proposes the following:

1. Modifying the current system of faculties of specialized education to prepare students in specialized education in accordance with its philosophy and objectives, through the following:
 - a- The transition facilitation units should offer diverse specializations in which students study the required courses and practical training to prepare students in specialized education in a unified and integrated manner, including general preparation and training, without compromising the mandatory skills preparation unit. This would allow students to choose to study in one of the specialization fields required by the labor market and categories of practical fields, etc.
 - b- The transition facilitation units should include specialized specializations, so that these specializations become departments within the transition facilitation units.
 - c- C. Increasing the number of students admitted to departments with fewer graduates than required, at the expense of departments with a surplus of graduates beyond the needs of specialized education faculties in each governorate. This will achieve the necessary balance in the number of graduates from each specialization and address the shortage of students in various professions.

- d- D. Radically revising the programs and curricula of specialized education by preparing students within units that facilitate the transition to the labor market. This will lead to graduating students capable of achieving the goals of specialized education, through:
 - Ensuring that curricula and courses address the concept and philosophy of specialized education, its requirements, and the student's role in this system, and equipping students with the necessary skills to work in this field.
 - Focusing on integrated programs in preparing specialized education students so they can implement comprehensive programs. It is important that student preparation curricula reflect the desired integration between the theoretical and practical aspects for future students, so they graduate convinced of the integrated philosophy. This necessitates the establishment and development of units that facilitate the transition to the labor market to provide integrated experiences and skills in various fields of preparation.
 - Technical education student preparation programs within labor market transition facilitation units should include new topics in one or more practical fields, methods for community development and problem-solving, how to strengthen the university's connection with the environment, and field visits and how to plan them, given their significant importance in the preparation process. Additionally, some security education courses should be included to familiarize students with safety rules and equip them with the necessary security-related behavioral skills during practical training.
 - Teaching skills within labor market transition facilitation units should be developed by focusing on the use of modern methods and emphasizing their application in various situations, making them easier to use when students enter the workforce.
2. Develop a five- or ten-year plan to qualify all current students in faculties of specialized education to the university level. This can be achieved by expanding the implementation of the qualification program for students in specialized education, ensuring the program includes most of the units that facilitate the transition to the labor market. This will alleviate the numerous problems faced by students in faculties of specialized education in the governorates as a result of their enrollment in the program. To achieve this, the researcher proposes the following:
 - a- Seeking new financial resources for this qualification program. These resources could come from the Ministry of Education or from public contributions in this field. It is important that the Ministry allocate a sufficient budget specifically for the qualification project for students in specialized education, including units that facilitate the transition to the labor market in

- the governorates, thus making it easier for students to enroll.
- b- Setting a timeframe within which all current students must enroll in this program, and ensuring they are not transferred from one specialization to another during their training in the units.
 - c- Providing incentives for high-achieving students during their studies and for those who successfully complete the program. Develop a clear and specific plan for the regular and rigorous training of students in specialized education programs. This plan should contribute to raising their cultural, scientific, and professional levels, complement their pre-service training programs, align with the current qualifications of various student groups in specialized education colleges, compensate for any shortcomings in their preparation, and equip them with the knowledge and skills required by new educational developments.
3. The program within this plan should be diverse, with some programs providing students with the latest professional skills related to their field of specialization, while others focus on developing their abilities to perform specialized tasks and jobs that are often overlooked in pre-service training programs. Regarding the training of students in specialized education, the researcher suggests the following:
- a) Training should encompass all students in specialized education, as specialized education is an integral part of the entire educational system and not limited to practical fields. However, it is essential that, alongside the training for all specialized education students, students in practical fields receive additional practical training on the use, repair, and maintenance of equipment. This training should be conducted periodically during the summer break or the academic year as part of the plan to facilitate the transition to the labor market.
 - b) Accurate surveys should be conducted to form the basis for effective programs aimed at bridging the gaps between students in specialized education, whether based on academic qualifications or training levels. This will help achieve the desired homogeneity, with the number of trainees determined according to their similar skill levels and distributed across several centers to prevent overcrowding at any single center.
 - c) C. Training programs should include a sufficient explanation of the concept of quality education, its philosophy, objectives, and how to achieve the principle of knowledge unity and the link between theory and practice. This should be accomplished by standardizing all different study materials, as well as by coordinating between students in practical fields across different disciplines.
 - d) D. Training methods and approaches should be diverse, not limited to lectures alone. Modern and advanced methods in this field must be utilized, such as workshops, discussion groups, conferences, visits, and field trips. Trainees should have the opportunity to observe the best colleges practicing quality education in each educational district within each governorate. At the end of the visit, everyone should meet in organized groups to evaluate these experiences, make serious comparisons, and adopt the best practices implemented in those colleges. Fieldwork is the best way to experiment, far removed from theoretical frameworks that are written on paper but lack proper application. The researcher also suggests that each trainee should be provided with a small booklet containing the training course topics, which they can refer to as needed.
- d. The training period and content should be sufficient in both quantity and quality, considering the time allocated to each course, the availability of workshops and model farms, and all necessary training requirements and supplies, taking into account the trainees' circumstances, and the appropriate time, location, and duration of the training.
 - e. A system of rewards and penalties should be established for those who attend or are absent from these courses.
 - f. Attention should be given to methods of evaluating training courses, including a report at the end of each course to gather trainees' feedback, the difficulties they encountered, and their suggestions, as well as a final report on the course and the results achieved.
- ### Conclusions
1. It was found that the most important factors contributing to the success of facilitating the transition to the labor market are consistent training and skills development for students through training courses and educational seminars. It was also found that the most significant challenge facing students during this transition is the increasing need for practical application of the skills they acquire.
 2. The success of strategies to facilitate the transition to the labor market depends on developing students' personal and professional skills.
- Since strategies to facilitate the transition to the labor market have a greater impact on human resource development, this may be attributed to students' increased interest in acquiring new skills and knowledge relevant to their work.
- Regarding the process of facilitating the transition to the labor market, students have a greater need to develop their work skills, regardless of their academic qualifications. This may be because, as mentioned previously, they have the opportunity to acquire the necessary skills due to obtaining a higher academic qualification than a high school diploma. Those with higher qualifications may have had greater opportunities to develop their skills during their studies. The strategies implemented in labor market transition facilitation units rely on developing student performance and fostering their desire for training. Trainers, training program curricula, and administrative and supervisory services all play a

significant role in the success of training programs, whether in developing practical skills related to various professions or in developing human resources (achieving desired goals and translating them into training needs, motivation, and a desire for change).

In light of the preceding findings, the researcher reached the following recommendations:

1. The necessity of continuous development of labor market transition facilitation units in faculties of specific education.
2. The necessity of keeping pace with modern work methods and developing work processes to enable graduates of technical faculties of specific education to perform their jobs more effectively.
3. The necessity of linking training courses to the practical aspects of work in order to achieve the desired goals of the training process in labor market transition facilitation units.
4. The necessity of benefiting from the experiences of developed countries regarding labor market transition facilitation and human resource development.

Suggested Studies

1. Preparing students in specific education to meet the requirements of the labor market.
2. A strategic plan to activate the role of specialized education in community engagement.
3. Ongoing training for graduates of specialized education colleges and its impact on labor market demands.

Appendix

Proposed Plan for Developing Labor Market Transition Facilitation Units for Specialized Education Students in Egypt

Phase One: Establishing Labor Market Transition Facilitation Units (3 months)

1. Identifying Target Locations for Units:
 - Identifying the departments and academic groups that will benefit from the units.
 - Communicating with senior management to determine suitable locations.
2. Equipping Units with Necessary Resources:
 - Furnishing the units with the necessary furniture and equipment.
 - Providing the necessary technology and software.
 - Establishing partnership agreements with a number of workshops, factories, and technical centers where training will take place.
3. Staffing Units:
 - Appointing qualified staff to work in the units.
 - Providing the necessary training for staff.

Phase Two: Implementing Training Programs (6 months)

1. Identifying Students' Training Needs:
 - Conducting surveys with students and employers.
 - Identifying the skills required in the labor market.
2. Designing Training Programs:
 - Designing training programs in technical and manual skills.

- Designing training programs in entrepreneurship and project management.
- 3. Implementing Training Programs:
 - Implementing training programs in the units.
 - Providing technical and advisory support to students.

Phase Three: Entrepreneurship Support (6 months)

1. Identifying Promising Entrepreneurial Projects:
 - Identifying entrepreneurial projects that can be supported.
 - Evaluating projects based on specific criteria.
2. Providing Financial and Technical Support to Projects:
 - Providing the necessary funding for projects.
 - Providing technical and advisory support to projects.
3. Monitoring Project Performance:
 - Monitoring project performance periodically.
 - Providing the necessary support to projects to improve their performance.

Phase Four: Evaluating Program Performance (3 months)

1. Evaluating Program Performance:
 - Evaluating program performance based on performance indicators.
 - Identifying strengths and weaknesses.
2. Taking Necessary Actions to Improve Performance:
 - Taking the necessary actions to improve program performance.
 - Providing the necessary recommendations to improve the program.

Required Resources:

1. Human Resources:
 - Staff to work in the transition to the labor market facilitation units.
 - Trainers for training programs.
 - Staff to support entrepreneurship.
2. Financial Resources:
 - Funding for labor market transition facilitation units.
 - Funding for training programs.
 - Funding to support entrepreneurship.
3. Technical Resources:
 - Equipping units with the necessary technical resources.
 - Utilizing technology to implement training programs.

Evaluation Mechanisms:

1. Performance Indicators:
 - Number of students employed.
 - Number of entrepreneurial projects supported.
 - Student satisfaction with the program.
2. Performance Evaluation:
 - Periodically evaluating program performance.
 - Identifying strengths and weaknesses.
 - Taking necessary actions to improve performance.

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