
**Community Colleges: An Approach for
Sustainable Development in the Egyptian
Higher Education Sector in light of Egypt
Vision 2030 and the Experiences of the
United States of America & India**

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Community Colleges: An Approach for Sustainable Development in the Egyptian Higher Education Sector in light of Egypt Vision 2030 and the Experiences of the United States of America & India

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Abstract

The country of Egypt nowadays is witnessing comprehensive development plans in all fields within the national strategy even 2030 that has adopted sustainable development goals in all parts of the country. Among the national initiatives is dignified life program that was launched in June 2019 targeting the most disadvantaged locations of Egypt and that is considered nowadays one of the biggest sustainable development programs worldwide aiming at the comprehensive development of nine thousand villages. Meanwhile, the current setup of higher education platform does not support this ambitious initiative since age group 18-22 cohort today represents 8,109,456 individuals, only GER 36% of them are enrolled in all types of higher education programs. From which, only 5% are enrolled in all types of vocational and professional higher education programs where higher education opportunities available for youth in Egypt are primarily located in big cities. Young people living in many disadvantaged communities scarcely have an opportunity in getting quality higher education that enables them to proceed with their professional careers, which indicates the low enrolment rates and mal distribution of upper middle higher education institutions with the lack of community based upper middle higher education institutions that can contribute to the direct local needs at the disadvantaged locations in Egypt.

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Thus, the current research is proposing community colleges as a new upper middle higher education model that can contribute to the local needs of development following the steps of the American and Indian models of community colleges while keeping into consideration the specificity of the Egyptian governance system, laws and regulations, and national administrative structure. Research has followed the comparative method that is concerned with describing and analyzing educational phenomena within their own sociopolitical contexts and which has followed a number of procedures: a) A background that includes an introduction, selected relevant literature review that contributed to identifying research problem, questions, objectives, and research method, b) First axis, that discusses the Egyptian context including the current higher education sector and the national ambition of Egypt Vision 2030, with exploration of the National presidential program “Dignified Life” that is targeting disadvantaged geographic locations of the country of Egypt that includes educational sub-programs of different levels that has a direct relevance to local development needs. c) Second axis, that includes a description for the models of community colleges at both of the United States of America and India, their recent reforms, basic features, governance, relation to local community, fields of specializations and contribution to local development within the American and Indian unique social, political, economic, and cultural contexts, d) Third axis, that includes a proposal for integrating community colleges model within the Egyptian context in the light of Egypt Vision 2030 and the national project “Dignified Life” as well as the foreign experiences, and that concludes with a set of recommendations that are meant to maximize the return on local communities at the most disadvantaged geographic locations.

Keywords: community colleges, junior colleges, dignified life, Egypt vision 2030, higher education, Egypt

المخلص

تشهد الدولة المصرية في الوقت الحالي خطط للتنمية الشاملة في جميع المجالات في إطار الرؤية القومية "رؤية مصر ٢٠٣٠" والتي تتبنى أهداف الأمم المتحدة للتنمية المستدامة في جميع أنحاء الدولة، ومن بين المبادرات القومية البرنامج الرئاسي "حياة كريمة" الذي أطلقت في يونيو ٢٠١٩ مستهدفاً الأماكن الأكثر احتياجاً في مصر، والذي يعتبر من أكبر برامج التنمية المستدامة في العالم مستهدفاً تسعة آلاف قرية. ولكن لا تدعم منظومة التعليم العالي الحالية هذه المبادرة، حيث إنه أعداد الفئة العمرية ١٨ إلى ٢٣ تتخطى الثمانية ملايين فرد، يلتحق منهم فقط ٣٦% بجميع أشكال وبرامج مؤسسات التعليم العالي منهم ٥% فقط مقيدون بمختلف برامج التعليم العالي فوق المتوسط المهني والفني، علاوة على تركز خدمات التعليم العالي في المدن الكبرى. وبالتالي فإن الشباب من قاطني المناطق الأكثر احتياجات في مصر، نادراً ما تتوافر لديهم الفرصة لتعليم عالي تمكنهم من استكمال حياتهم المهنية، مما يؤكد مشكلة انخفاض معدلات القيد وسوء توزيع مؤسسات التعليم العالي، وبالأخص الفوق متوسط منها، والتي تمثل احتياج حقيقي للتنمية المحلية في تلك المناطق. وبالتالي يقترح البحث الحالي تبني نموذج "كليات المجتمع" وفقاً لنموذج كليات المجتمع كنموذج جديد للتعليم العالي فوق المتوسط بمصر في ضوء خبرات كل من الولايات المتحدة الأمريكية والهند، والذي يمكنه الإسهام في التنمية المحلية مع الأخذ في الاعتبار خصوصية السياق المصري من عوامل اجتماعية واقتصادية وسياسية وثقافية، وقوانين وتشريعات وهيكل إدارية.

اتبع البحث المنهج المقارن الذي يعني بوصف وتحليل الظواهر التربوية في سياقها الثقافي والاجتماعي والسياسي، وقد اتبع البحث عدة إجراءات تتمثل في: (أ) خلفية عامة، والتي تتضمن مقدمة، ومسح للأدبيات التي أسهمت في تحديد مشكلة البحث، والتساؤلات والأهداف، ومنهجية البحث، (ب) المحور الأول، الذي يناقش السياق المصري وتضمن وصف لقطاع التعليم العالي والرؤية الطموحة لمصر في ٢٠٣٠، مع استطلاع البرنامج الرئاسي "حياة كريمة" الذي يستهدف المناطق الأكثر احتياجات في مصر، وعلاقته المباشرة باحتياجات التنمية المحلية، (ج) المحور الثاني، والذي تتضمن عرض لنموذج كليات المجتمع في كل من الولايات المتحدة الأمريكية والهند بدءاً بالخلفية التاريخية، وأهم خصائصها، حوكمة تلك المؤسسات، التخصصات العلمية والمهنية بها، وعلاقتها بسوق العمل، والمجتمع المحلي وقدرتها على الإسهام في التنمية المحلية في إطار خصوصية السياق الاجتماعي والثقافي والسياسي والاقتصادي الأمريكي والهندي، (د) المحور الثالث، ويتضمن مقترح إنشاء كليات المجتمع في السياق المصري على ضوء "رؤية مصر ٢٠٣٠" والبرنامج الرئيسي "حياة كريمة"، والخبرات الدولية والذي اختتم بعدد من التوصيات التي من شأنها تعظيم الاستفادة والعائد على المجتمعات المحلية في المناطق الأكثر احتياجاً في مصر.

Background

Currently, Egypt is witnessing comprehensive development plans within the National Strategy “Egypt Vision 2030” and its successive strategic plans that was inaugurated in 2016 and updated in 2018 taking into consideration sustainable development in all aspects of the life of Egyptian people as well as an equitable action across different parts of Egypt in an attempt to decrease inequalities and promote SDGs in all fields. Hence, there is a special focus on disadvantaged areas and multidimensional poverty indicators in all parts of Egypt. Egypt Vision 2030 was determined to make the vision a motivating vision that describes how the Egyptian role will serve the UN agenda, and how it will serve that international perspective. The revised vision concentrates on addressing and integrate all issues from the viewpoint of the three components of sustainable development: environmental, economic, and social dimensions. It is a thorough and consistent vision comprising sectoral strategies for various government organizations. Egypt Vision 2030 emphasizes improving the quality of life of the Egyptian people and refining their standard of living in different aspects of life by ensuring the alliance of the values of justice, social inclusion and the participation of all citizens in political and social life, with elevated, inclusive and sustainable economic growth, supporting investment in human beings, and developing their creativity by endorsing increased knowledge, innovation and scientific research in every aspect of life. Egypt Vision 2030 highlights the vitality of tackling the effects of climate change via a cohesive and sustainable ecosystem that boosts flexibility and capacity to handle natural threats. The vision concentrates, as well, on the governance of public bodies and society through administrative restructuring, enhancing transparency, backing for monitoring and evaluation procedures and support of provincial organizations. All these aims take place in the framework of safeguarding Egyptian peace and security and boosting Egyptian leadership on the regional and international fronts. (MPED, 2020). This has led to a few presidential initiatives among which are: “100 Million Health” launched in October

2018, “Dignified Life” program, launched in June 2019, and other programs targeting women health and empowerment.

Dignified Life is a program that is considered one of the biggest sustainable development programs worldwide aiming at the comprehensive development of nine thousand villages

The ambition of the higher education sector in Egypt is quite diversified and big in the sense that it is trying to respond effectively to the social demand for higher education, not only achieving national development plans, but rather to lead development in a big country like Egypt. The Higher Education sector in Egypt has witnessed varied and quick changes during the past few decades that have affected its character of the Egyptian higher Education. A higher education sector that encompasses around 3 million undergraduate students and 500 thousand graduate students is considered the largest in Africa and the Middle East. Such a sector represents a genuine challenge for policy makers and decision takers regarding the priorities of reform and urgent strategies that can take the system forward and achieve the ambitions and aspirations of the young generations as well as the overall national development.

Research Problem

Age group 18-22 cohort today represents 8,109,456 individuals, only 36% of them are enrolled in all types of higher education programs. From which, only 5% are enrolled in all types of vocational and professional higher education programs (SPU, 2020). Hence, a major challenge is that higher education opportunities available for youth in Egypt are primarily located in big cities. Young people living in many disadvantaged communities (representing the majority of targeted age-group) scarcely have an opportunity in getting quality higher education that enables them to proceed with their professional careers thus are considered a disadvantaged group in this regard. This sub-sector needs special attention through introducing unconventional modes and programs that can respond to the varied needs of young people at this stage.

The problem of the current research could be identified in the low enrolment rates and mal distribution of upper middle higher education institutions with the lack of community based upper middle higher education institutions that can contribute to the direct local needs at the disadvantaged locations in Egypt.

This has created an urgent need for establishing short cycle (2 years) professional higher education institutions for people that are directly related to economic activities at these places.

Research Questions:

In order to resolve the research multidimensional and complex problem, the following questions need to be answered:

1. What are the current problems facing higher education at disadvantaged areas in Egypt?
2. What are the most prominent community colleges models in the United States of America and India?
3. How can strategic directions for integrating the community colleges model into the Egyptian higher education system in Egypt be proposed?

Research Aim and Objectives

Given the challenges that face higher education and development in Egypt, the current research aims at proposing community colleges as a new upper middle higher education model that can contribute to the local needs of development following the steps of the American and Indian models of community colleges while keeping into consideration the specificity of the Egyptian governance system, laws and regulations, and national administrative structure.

In order to achieve the research aim, the following research objectives need to be addressed:

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1. Identifying the current problems facing higher education at disadvantaged areas in Egypt.
 2. Analyzing the most prominent community colleges models in the United States of America and India.
 3. Proposing strategic directions for integrating the community colleges model into the Egyptian higher education system in Egypt.

Research Importance:

The importance of the current research lies in its ability to support the national vision Egypt strategy 2030 in achieving its goals through introducing a community based higher education model that can contribute to the direct needs of local economic development and that can solve its problems. The current research outcomes can help young people get better job opportunities that change their life and lead to direct impact on the Egyptian economy. The following is a more detailed illustration of the benefits of the current research:

- Social return

The outcomes of the current research are expected to contribute to the local development of the disadvantaged areas in different parts of Egypt. it is expected to increase the enrollment rate at tertiary education level, specifically at the two years short cycle higher education programs leading to better job opportunities and higher levels of social welfare. it is thus expected to increase social mobility from lower to lower middle and middle classes just because of education and provide a venue for affordable higher education service.

- Economic return

The current research is also expected to contribute to the economic development of the most disadvantaged locations in Egypt creating more job opportunities that would reflect on income of Egyptian families and the development of economic activities relevant to local needs. It is meant to support and enhance local investments and the establishment of

micro, small and medium size enterprises within the geographic outreach of the community based higher education institutions.

Research Terminologies

Higher Education

In the World Declaration on Higher Education adopted by the World Conference on Higher Education in 1998, higher education was defined as: “all types of studies, training or training for research at the post-secondary level, provided by universities or other educational establishments that are approved as institutions of higher education by the competent state authorities.”² (UNESCO, 1998) The current research adopts this definition when referring to higher education institutions.

Community Colleges

The term community refers to:

Community is the people living in one area or people who are thought as a unit because of their mutual interests, social group, or nationality. It could also refer as the general public, as distinct from the government. On social media, a group of people who have similar interests or who want to achieve something together. (Cambridge University Press, 2020)

Whereas the term college refers to:

College could be defined as a university where you can study for an undergraduate/first degree. It could also be defined as any place for specialized education after the age of 16 where people study or train to get knowledge and/or skills. It could also mean one of the separate and named parts into which some universities are divided. But, in Britain and Australia, used in the names of some schools for children, especially private schools (Cambridge University Press, 2020).

² UNESCO, the World Bank, UNDP and others also use this same basic definition.

But the term “Community Colleges” refers to:

Cohen and Brawer (2003) describe that community colleges “include public and private comprehensive two-year colleges and technical institutions but exclude vocational schools and adult education centers and proprietary business and trade colleges”, community colleges are significant providers of baccalaureate degree, occupational education, remedial and developmental education, and supplementary educational skills. (Cohen, Brawer, & Kisker, 2013). Several countries address these institutions by different labels, particularly, two-year college, junior college, technical college, polytechnics, college of further education, and community college (Raby & Tarrow, 1996). They are publicly regulated colleges extending two-year degree or less where they perform a crucial part in higher education in both USA and India.

Research Boundaries:

The current research is bound to a number of constraints that define its scope of study and analysis and that could be identified in the following boundaries:

Time:

The current research is focusing on the current problems of the Egyptian higher education system as well as the contemporary models of community colleges in the United States of America and India for at the academic year 2018/2019.

Scope

The scope of the study is bound to the short cycle post-secondary (2 years/Upper middle) higher education institutions in USA, India and Egypt and not the bachelor or higher-level institutions .

Location:

The current research is bound to studying community colleges models in the United States of America and India, as well as upper

middle (2 years post-secondary) institutes in Egypt. The selection of the United States of America is justified for being a global leading country with long experience, that exceeds a century long, with the community colleges model where direct relevance to local development was evidenced by research. Whereas the selection of India was for many reasons among which is the relatively recent experience that sprung for 25 years yet was able to achieve tangible return on community and development both on local and national levels. Moreover, there are some commonalities between the Indian and Egyptian context where both countries are following aggressive expansion policies in the higher education sector, striving to decrease social inequalities and support local and national development plans.

The selected locations in Egypt are the most disadvantaged groups based on the human development index (HDI) identified in the latest Human Development Report issued in 2020.

Research Methodology

The current research is focusing on the sociocultural and geopolitical factors of the community based higher education institutions dealt with, and then dealt with these factors as the core of the analysis process. The research in hand focused on the distinctions that comparisons can offer by examining the ways in which educational models were ratified, transformed, and accepted across contexts, including at the local, district levels, as well as the national level. Thus, the current research has followed the comparative education method that is concerned with describing, analyzing, and describing educational phenomena within their own sociopolitical contexts and which has followed the following research procedures:

- 1- A background that includes an introduction, selected relevant literature review, that contributed to identifying research problem, questions, objectives, and research method.
- 2- First axis, that discusses the Egyptian context including the current higher education sector and the national ambition of Egypt Vision

2030, with exploration of the National presidential program “Dignified Life” that is targeting disadvantaged geographic locations of the country of Egypt that includes educational sub-programs of different levels that has a direct relevance to local development needs.

- 3- Second Axis, that includes a description for the United States of America and India’s models of community colleges, their recent reforms, basic features, governance, relation to local community, fields of specializations and contribution to local development with the American and Indian unique social, political, economic, and cultural context.
- 4- Third Axis, that includes a proposal for integrating community colleges model within the Egyptian context in the light of Egypt Vision 2030 and the national project “Dignified Life” and foreign experiences and concludes with a set of recommendations that are meant to maximize the return on local communities at the most disadvantaged geographic locations.

First axis: The Egyptian context

The country of Egypt has devised an ambitious strategy Egypt Vision 2030, that was launched in 2014 and that targets a significant progress in all the UN SDGs. Education and training are cross cutting themes related to objective one, targeting providing education and ensuring its quality as well as equitable provision of educational opportunities as specified by objective two, in addition to objective three, working on increasing employment rates and decent employment opportunities (MPED, 2020). Consecutive strategic plans as well as a few national and presidential initiatives were launched to support achieving the national vision targets and outcomes. The primary social development program that was launched as a presidential initiative (gaining support from the highest political entities in the country) is “Dignified Life” program that targets the comprehensive and sustainable development for nine thousand villages in the most disadvantaged areas of Egypt. Thus, the current research is relying on the human development index (HDI), using the most recent report issued in 2020, as a valid indicator for identifying the

targeted locations classified as disadvantaged areas. Upon which, a gap analysis for the existing higher education institutions, specifically the community based short cycle (2 years programs) is conducted to identify priority areas for establishing the targeted higher education institutions that can contribute most to the local development.

Human Development Index (HDI) in Egypt:

The Human Development Index (HDI) is a composite statistic used to rank countries by level of 'human development' and separate 'very high human development', 'high human development', 'medium human development', and 'low human development' countries. The Human Development Index (HDI) is a comparative measure of life expectancy, literacy, education and standards of living for countries worldwide. It is a standard means of measuring well-being, especially child welfare. It is used to distinguish whether the country is a developed, a developing or an under-developed country, and also to measure the impact of economic policies on quality of life. There are also HDI for states, cities, villages, etc. by local organizations or companies.

This note illustrates and explains Egypt's achievements with respect to each of these indices. For details on how each index is calculated please refer to Technical Notes 1-4 in the 2010 report, and the associated report background papers.

The HDI is a summary measure for assessing long-term progress in three basic dimensions of human development: a long and healthy life, access to knowledge and a decent standard of living. In previous reports these basic dimensions were measured by life expectancy at birth; adult literacy rate and combined gross enrolment in education; and GDP per capita in purchasing power parity US dollars (PPP US\$) respectively. The indicators measuring access to knowledge and a decent standard of living have changed in the tables in this report.

Egypt's HDI value for 2019 is 0.707—in the high human development category—positioning the country at 116 out of 189 countries and areas.

The HDI is not designed to assess progress in human development over a short period because some of its component indicators do not change rapidly in response to policy changes. This is particularly so for mean years of schooling and life expectancy at birth. It is, however, useful to review HDI progress over the medium to long term. Between 1980 and 2020, Egypt's HDI value increased from 0.393 to 0.707, an increase of 58 per cent or average annual increase of about 1.5 per cent. With such an increase Egypt is ranked 8 in terms of HDI improvement based on deviation from fit, which measures progress in comparison to the average progress of countries with a similar initial HDI level.

Table 1: Egypt's progress in each of the HDI indicators (Between 1980 and 2019)

	Life expectancy at birth	Expected years of schooling	Means years of schooling	GNI per capita (PPP US\$)	HDI value
1980	56.6	7.5	2	2465	0.393
1985	59.9	8.6	3	2896	0.448
1990	62.9	9.1	3.5	3359	0.484
1995	65.8	10.4	4	3680	0.523
2000	68.2	11.6	4.7	4366	0.566
2005	69.5	11	5.6	4665	0.587
2010	70.5	11	6.5	5889	0.62
2015	70.8	11.8	7	7230	0.691
2019	72	13.3	7.4	11466	0.707

Assessing Egypt's progress relative to other countries

Long-term progress can be usefully assessed relative to a country's neighbors', both in terms of geographical location and HDI value. For instance, in 1980, Egypt, Morocco and Tunisia had close HDI values for countries in the Arab States. However, during the period between 1980 and 2020 the three countries experienced different degrees of progress toward increasing their HDI.

Egypt's 2020 HDI of 0.707 putting Egypt among the high human development countries although ranking 116 and is above the average of 0.705 for countries in the Arab States. From the Arab States, Egypt's

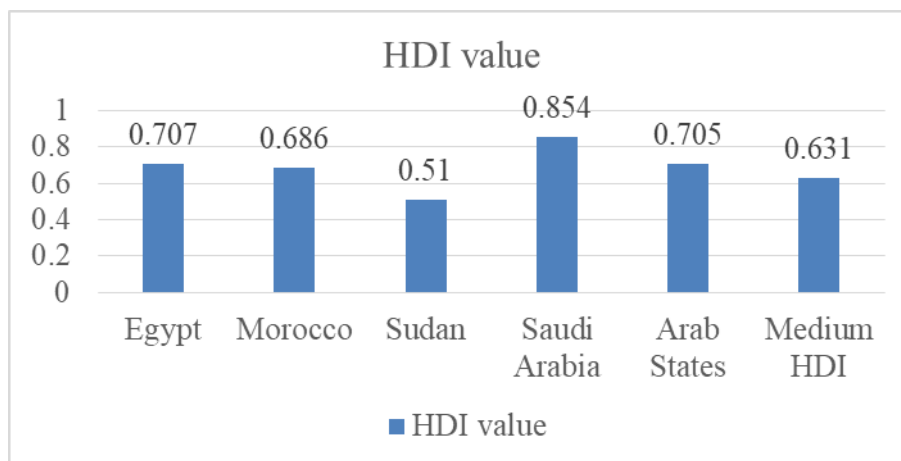
2020 “HDI neighbors”, i.e., countries which are close in HDI rank and population size, are Jordan and Morocco, which had HDIs ranked 107 and 121 respectively Egypt is also compared to Algeria and Tunisia, a high human development country.

Table 2: Egypt’s 2020 HDI compared to other countries

	HDI value	HDI rank	Life expectancy at birth	Expected yrs of schooling	Mean years of schooling	GNI per capita (PPP US\$)
Egypt	0.707	116	72	13.3	7.4	11,466
Morocco	0.686	121	76.7	13.7	5.6	7,368
Sudan	0.510	171	65.3	7.9	3.8	3,829
Saudi Arabia	0.854	40	75.1	16.1	10.2	47,495
Arab States	0.705	—	72.1	12.1	7.3	14,869
Medium HDI	0.631	—	69.3	11.5	6.3	6,153

Source: Human Development Report, UNDP, 2020

Figure 1: Egypt’s 2020 HDI compared to other countries



Source: Developed by researcher from data aggregated from Human Development Report, UNDP, 2020

On the local level, a closer look was given to the level of governorates and even local authorities (Markaz). The HDI values were identified for each governorate as well as the most disadvantaged three

local authorities within each governorate to identify areas of need taking into consideration the multidimensional poverty index.

The following table gives the records for each governorate, three local authorities with least HDI values and major economic activities in each according to the Human Development Report 2020 (UNDP, 2020) & (CAPMAS, 2020):

Table 3: HDI and Major Economic Activities at Governorates of Egypt

Ser.	Governorates	HDI	L As	HDI	Economic Activities
1	Cairo	0.743	El Waily	0.676	Education - Services of home service for private house hold - public administration, defense, social security management
			Masr El Adema	0.64	manufactures- Construction , building - Services of home service for private house hold
			Manshaet Naser	0.65	manufactures- Construction , building - Services of home service for private house hold
2	Behira	0.733	Abo EL Matamer	0.57	Agriculture - Transportation and storage - -- Services of home service for private house hold
			Abo Homoss	0.58	Agriculture - -Education - Services of home service for private house hold -
			Wadi El Natroon	0.645	Agriculture - Transportation and storage - -- Services of home service for private house hold
3	Marsa Matrouh	0.734	Sedy Barany	0.541	Agriculture - Services of home service for private house hold - public administration ,defense, social security management

Ser.	Governorates	HDI	L As	HDI	Economic Activities
	New Valley	0.794	El Farafra	0.631	Agriculture - -Education -public administration ,defense, social security management
4	Gharbia	0.754	Ktoor	0.623	Agriculture –Education public administration ,defense, social security management
5	Dakahlia	0.751	Belkas	0.563	Agriculture -Education - Services of home service for private house hold
6	Damieta	0.764	Kafr Saad	0.673	Agriculture-manufactures- Education - hunting
7	Sharkia	0.737	El Hosenya	0.572	Agriculture - Education - Services of home service for private house hold
			Mnya El Kamh	0.562	Agriculture -Education public administration ,defense, social security management
8	Sohag	0.711	Tama	0.559	Agriculture -Education - Services of home service for private house hold
			El Blena	0.555	Agriculture - Construction , building - Services of home service for
			Dar EL Salam	0.552	Agriculture -Education - Services of home service for private house hold
9	Red Sea	0.773	Marsa Alam	0.595	Agriculture - Services of home service for private house hold - Food, residence services
			Shalateen	0.555	Agriculture - Services of home service for private house hold - public administration ,defense, social security management - hunting
10	South Sinai	0.778	Abo Rdees	0.433	manufactures- Services of home service for private house hold - Mining & Quarrying
			Abo Znema	0.433	manufactures- Services of home service for private house hold - Mining & Quarrying

Ser.	Governorates	HDI	L As	HDI	Economic Activities
			Sant Katreen	0.422	Construction , building -Services of home service for private house hold - public administration ,defense, social security management -
11	Luxor	0.748	Luxor	0.586	Services of home service for private house hold -Construction , building- public administration ,defense, social security management
12	Aswan	0.745	Draw	0.678	Agriculture-Education - Services of home service for private house hold
13	Qena	0.711	Qena	0.571	Agriculture - Construction , building - Education
			Abo Tesht	0.569	Agriculture -Construction , building - Education
			Nage' Hamady	0.563	Agriculture -Construction , building - manufactures
14	North Sinai	0.757	Nakhl	0.657	Agriculture -Education - Services of home service for private house hold
15	Suez	0.776	Ataka	0.727	Transportation and storage - manufactures- Construction , building
16	Port Said	0.783	El Zehor	0.652	Agriculture - manufactures- Services of home service for private house hold
			El Dawahy	0.758	manufactures- Services of home service for private house hold - public administration ,defense, social security management
			El Araab	0.779	Education - Services of home service for private house hold - public administration ,defense, social security management
17	Ismailia	0.758	El Tal EL Kebeer	0.683	Agriculture - Construction , building - Services of home service for private house hold
18	Minia	0.702	Bani Mazar	0.575	Agriculture -whole and retail sale vehicles ,motorcycles - public administration ,defense, social security management

Ser.	Governorates	HDI	L As	HDI	Economic Activities
			Abo korkas	0.591	Agriculture -whole and retail sale vehicles ,motorcycles - public administration ,defense, social security management
			maghagha	0.554	Agriculture -whole and retail sale vehicles ,motorcycles - public administration ,defense, social security management
19	Fayoum	0.699	Ibshway	0.532	Services of home service for private house hold -Education-public administration ,defense, social security management
			Tamay	0.546	Agriculture - Construction , building-manufactures
			El Fayoum	0.576	Agriculture - Construction , building-public administration ,defense, social security management

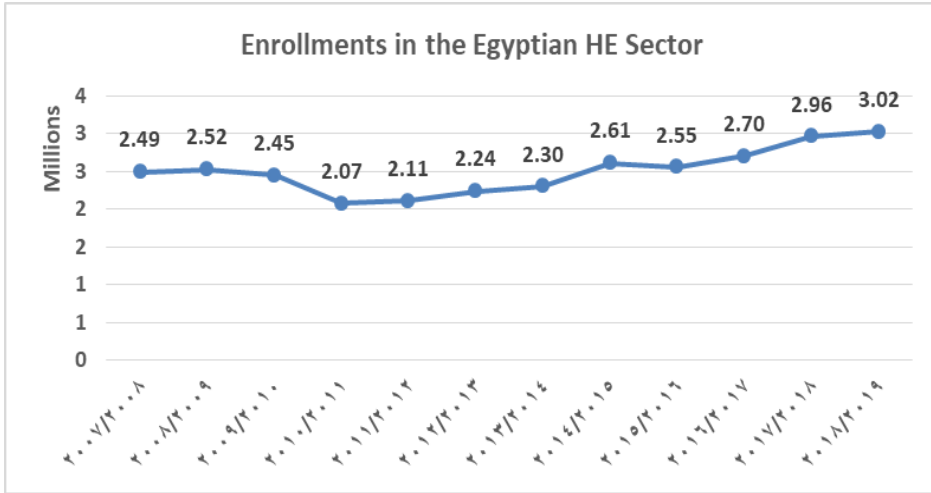
Source: HDR & CAPMAS, 2020

Higher Education provision for programs equivalent to Community Colleges

Higher education sector is the biggest in Africa and the Middle East where more than three million undergraduate students and 500 thousand graduate students are enrolled in the Egyptian higher education sector. The age group 18-22 cohort today represents 8,109,456 individuals, only 36% of them are enrolled in all types of higher education programs. From which, only 5% are enrolled in all types of vocational and professional higher education programs (SPU, 2020)

The higher education system has undergone a great deal of change in the recent years where new laws and legislations were introduced and the size of enrolment has increased significantly. The following chart illustrates the enrolment figures during the past 12 years:

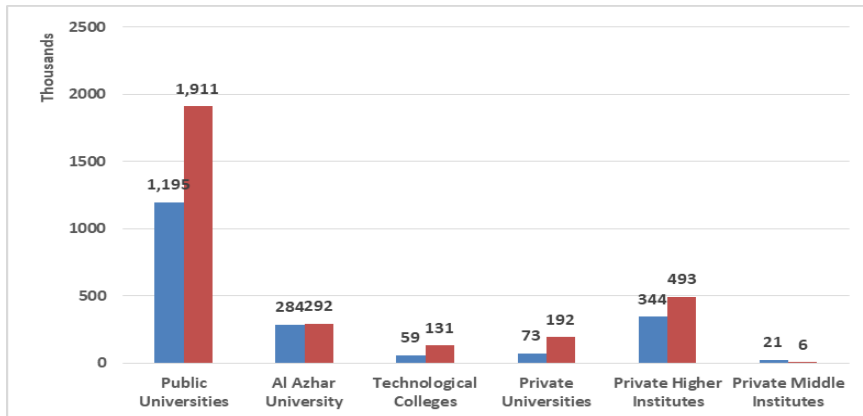
Figure (2): Enrolment figures at the Egyptian higher education sector



Source: developed by researcher from data of the Strategic Planning Unit (SPU), Ministry of Higher Education

It is evident that enrolment capacity increased by almost 24% in the past 10 years to accommodate for the demographic growth and increasing demand on higher education sector. This growth varies from a type of institution to the other. The following chart compares data of a 10 years difference for both 2010/2011 and 2018/2019:

Figure (3): Enrolment figures per type of institutions

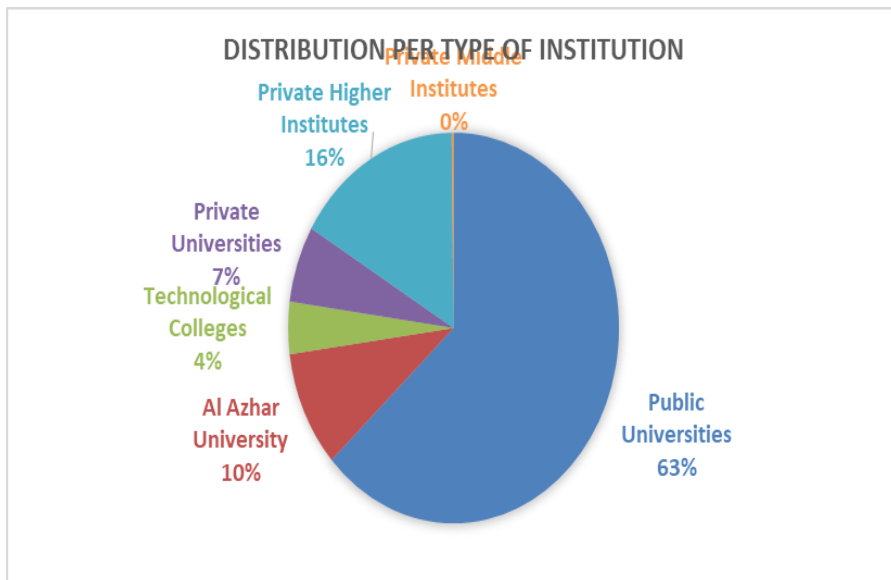


Source: developed by researcher from data of the Strategic Planning Unit (SPU), Ministry of Higher Education

As observed from the chart that public universities were the biggest sector that accommodated for enrolment increase with more than 715 thousand higher education opportunities. Yet, the most significant increase in enrolment was at the private universities sector where the size of increase reached 161%, followed by the technological universities sector where the size of increase reached 120%; followed by the public universities sector where the size of increase reached 60%.

The following chart represent the most recent enrolment distribution per type of institution in 2018/2019:

Figure (4): Enrolment percentage per type of institutions



Source: developed by researcher from data of the Strategic Planning Unit (SPU), Ministry of Higher Education

It's evident from the previous chart that enrolment in public universities represent the biggest source of higher education opportunities representing 63% followed by private higher institutes sector representing 16%, then followed by Al Azhar University representing 10%, then by the rest of types of institutions. Hence, both

technological colleges and private middle institutes account for about 5% of the overall enrollment of the higher education sector in Egypt.

According to the academic year 2019/2020, the upper middle higher education programs offered in Egypt are available in five types of Institutions as shown in the table below (SPU, 2020):

Table (4): Types and Numbers of Higher Education Institutions Granting Associate Degrees in Egypt

Institute Type	Number
Private Middle Institutes	10
Labor University	11branch (2 years program)
Technical Colleges	45 institutes + Technical Institute for Advanced Industries + Technical Institute of Nursing at wady al Nile Hospital + Technical Institute of Railway Technology
Technical universities	3
Technical Institutes of Health	12
Technical Middle Institute for Nursing	17

Source: Strategic Planning Unit Statistics, MoHE, 2020

The overall number of institutes at this category is 98 institutes plus 3 Technical universities offers a 4 year technical program. They enroll 165227 students in all governorates of Egypt. The following table illustrates enrollment per type of Institute (SPU, 2020):

Table (5): Total Enrollments in Higher Education Institutions Granting Associate Degrees in Egypt

Institute Name	Total Enrollments 2019-2020
Private Middle Institutes	5690
Labor University	
Technical colleges	97,539
Technical Institutes of Health	43051
Technical Middle Institute for Nursing	13393
Total	165227

Source: Strategic Planning Unit Statistics, MoHE, 2020

The previous table indicates that technical colleges are the most attractive type of upper middle higher education institutions followed by the technical institutes of health.

Table (6): New Commers at Higher Education Institutions Granting Associate Degrees in Egypt

Organization Type	Admission in 2019/2020
45 institutes + Technical Institute for Advanced Industries + Technical Institute of Nursing at wady al Nile Hospital + Technical Institute of Railway Technology	45888
Technical university	636
Technical institutes of health	2316
Private Middle institutes	2380
Technical Middle institute for nursing	7508
Total	58728

Source: Strategic Planning Unit Statistics, MoHE, 2020

These types of institutions also include limited number of programs in different academic disciplines as follows (SPU, 2020):

Table (7): Distribution of Higher Education Institutions Granting Associate Degrees in Egypt per Academic Sector

Organization Type	Integrated sectors	Detailed Sector	No. of Institutes
Private Middle institutes	Social sciences	Arts	5
Private Middle Institutes	Social sciences	Business Studies and Applied Statistics	1
Private Middle Institutes	Engineering Sciences	Engineering studies	2
Private Middle Institutes	Medical Science	Medical studies	2
Private Middle Institutes	Social sciences	tourism	2
Technical Colleges	Social sciences	Arts	1

Organization Type	Integrated sectors	Detailed Sector	No. of Institutes
Technical Colleges	Social sciences	Business Studies and Applied Statistics	19
Technical Colleges	Social sciences	Tourism and Hotels	4
Technical Colleges	Engineering Sciences	Engineering studies	22
Technical Institutes of Health	Medical science	Medical studies	12
Labor University	Social sciences	Business Studies and Applied Statistics	11
Technical Middle Institute for Nursing	Medical Science	Medical studies	17

Source: Strategic Planning Unit Statistics, MoHE, 2020

The presented data about the upper middle higher education institutions on Egypt which is equivalent to community colleges in other parts of the world (including the United States of America and India) are very limited in numbers, enrollment capacity and diversity of fields of study reflecting the need for a more flexible setup for short cycle higher education institutions in different parts of Egypt and specially those of the disadvantaged areas. They are either publicly operated by the central government or privately operated by investors on a very small scale. None of them are operated by local or governorate level authorities.

Based on the provided information on the socio-economic status of different geographic locations, as well as the provision of higher education service, a priority matrix was developed to help identify geographic locations of the proposed community colleges as well as the proposed programs and disciplines according to the major economic activities in these local authorities.

Second Axis, Community Colleges models in the USA and India

Community colleges are post-secondary educational institutions that offer two-year programs qualifying for the Associate of Arts (AA) or Associate of Science (AS) degree which is an upper middle higher education degree. These colleges also offer technical and vocational

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programs with tight ties to secondary/high schools, community groups, and employers in the local society. Large community colleges exist with several campuses in an urban/suburban setting or concise campuses in a countryside context. Undergraduate students at community colleges are able to gain academic credit towards a bachelor's degree. Gaining academic credit in a community college, which is generally less costly, might assist decrease the total expense of bachelor's degrees. Community colleges have as well a more compliant admissions procedure (EducationUSA, 2020).

Community colleges and universities frequently establish special agreements for the transfer and recognition of credits and degrees amongst the institutions. Within this "2+2 process," a student is able to earn a bachelor's degree with two years of community college, followed by two years of university study while being much less expensive from spending 4 years at a university (EducationUSA, 2020). Moreover, Community colleges usually lead the United States in qualifying graduates in state-of-the-art fields like biomedical technology, biotechnology, robotics, laser optics, internet and computer technologies, and geographic information systems. The reasonable size of classes at community colleges is extremely useful for students of any backgrounds to adjust to the nature of U.S. academic life and develop their language skills (AACCC, 2020) .

Community colleges offer a variety of support services and cross-cultural programs, including tutoring, advising, career planning, study skills, and counseling—many designed specifically for international students.

Historical background:

The model of community colleges formerly known as junior colleges or two-year colleges, was developed as early as mid-nineteenth century in 1862 when the Morrill Act was issued, basically increased access into public higher education. This growth permitted for the inclusion in colleges and universities a substantial majority of students who was not

admitted to or excluded from higher education for several causes. The first independent public junior college in America was founded in 1901. Few years later, specifically in 1914 there were 14 public junior colleges and 32 private junior colleges (Drury, 2003)

The establishment of the current community college models was in the 19th century through the development of Preuniversity institutions across Europe, Canada, and the United States. The United States Junior College aimed for non-traditional students on academic course of study. Some junior colleges turn into multi-function establishments with a variety of duties, comprising the possibility to transfer credits and complete education at a four-year institution. These various institutions laid the basis for what is known now as the community college model (Raby & Valeau, 2018).

During the twentieth century, the community colleges model was getting more popular where there was a sense of community pride in developing these colleges and a feeling of belonging and cultural growth of the local inhabitants. Local communities were calling for college education to be available for everyone. Even though a few colleges offered professional courses back then, most of them offered liberal arts courses that could be integrated with university level study. Preparation for college was the principal emphasis, with little consideration given to professional training at this time. (Drury, 2003).

The American Association of Junior Colleges (AAJC) was established in 1920, at a crucial point in time in the development of junior colleges. Nowadays, this association is the American Association of Community Colleges and is the national organization for community colleges in the United States. Yet the greatest challenges faced junior colleges at this time were image recognition, and lack of respect from senior colleges and universities (Drury, 2003) (AACC, 2020).

Few decades later, in the 1960s, an enrollment rise took place, and the community colleges expanded more quickly than any other sector of higher education. Community colleges increased during this period at the rate of a new college every week (Cohen, Brawer, & Kisker, 2013).

During the 1970s, community colleges continued rapid enrollments going from 1.6 million students to more than 4.5 million in 1980 (Brint & Jerome, 1989). By the late 1970's, community colleges had become predominantly vocational institutions. Transfer- oriented student enrollments declined. Economic-development activities were initiated under the premise that high technology would spur job opportunities for students.

The 1980s witnessed a prevalence of specialized training, tailored training, and exceedingly occupational-oriented programs. It has been claimed that this expansion was due to the ability of community colleges to better compete with the four-year institutions (Brint & Jerome, 1989).

In India Community College development has started in 1990s. The implication of Community Colleges in India differs from the United States of America. Community Colleges in India is an alternative pathway of education, which is intended to empower disadvantaged groups via suitable competences in partnership with local industry and community for direct hire. Nowadays in India, Community Colleges are called “Roofs for the Roofless”, “Giving the Best to the Least” and “Includes the Excluded” by the citizens of local communities.

The Current American and Indian Community Colleges Models:

The US government has provided ultimate support to community colleges including funding allocations because they were seen as a vehicle for expanding on access to higher education. Thus, seen as having an important role to play in the American society (Dougherty, Lahr, & Morest, 2017).

In 2019 the number of community colleges reached 920 that represent almost 20% of higher education institutions and enrolled about 6 million students that represent 25.3% of all students at higher education institutions in the US (U.S. National Centre for Education Statistics, 2019).

Although community colleges are considered relatively recent as the first of a type was established in 1995 in India, It has reached nowadays

about 2000 institutions where some communities are more successful than other in the use of the community college model. The following map shows the top three States in the establishment of Community Colleges in India:

Figure (5): Map of India showing the top three States in the establishment of Community Colleges



Source: Department of Higher Education, Ministry of Education, Government of India (Department of Higher Education, 2020)

The Indian government admits that the features of the American community colleges model cannot be imported to India due to the socio-economic and socio-cultural disparities, despite the fact that initial Indian community colleges were aggressively labeled as being founded on the North American model yet “adjusted to meet India’s unique needs and aspirations” (Alphonse, 2013), that the two countries have despite several connections. A combination between knowledge and skills is needed for

the Indian model of community colleges with support from both the states and the national government/ (Department of Higher Education, 2018)

Governance & Funding:

In the USA, community colleges governance and funding schemes differ from one state to another. Yet, the common model of community colleges in most of the American states entails significant federal, state, and local control with the state responsibility being the most prominent. According to the constitution of the United States, the regulation of education is a power preserved to the states. State governments consequently determine if community colleges are to be established and in what way they ought to run. Normally, the states provide for local operating or advisory boards where some of them are elected, and some are appointed by the state. Even though some states choose to run their community colleges through an exclusive state-controlled systems with insignificant contribution from local communities (Fletcher & Friedel, 2017). The State-appointed steering boards decide about the state size of contribution to community colleges and oversee their operations. These boards are either solely responsible for community colleges as the case in twenty states, or they are responsible for all forms of higher education institutions in the state (including community colleges) as the case in eighteen states. The following table illustrates the governance setup classification (Fletcher & Friedel, 2017):

Table (8): State level community colleges coordinating and governance structure as of 2015

Type of Structure	Number of States
Coordinating boards separate from other forms of education	20
Coordinating boards for community colleges and universities	18
Coordination follows a university governing board	5
Governing boards for community colleges and other non-university education institutions	2
No state level governing boards	5

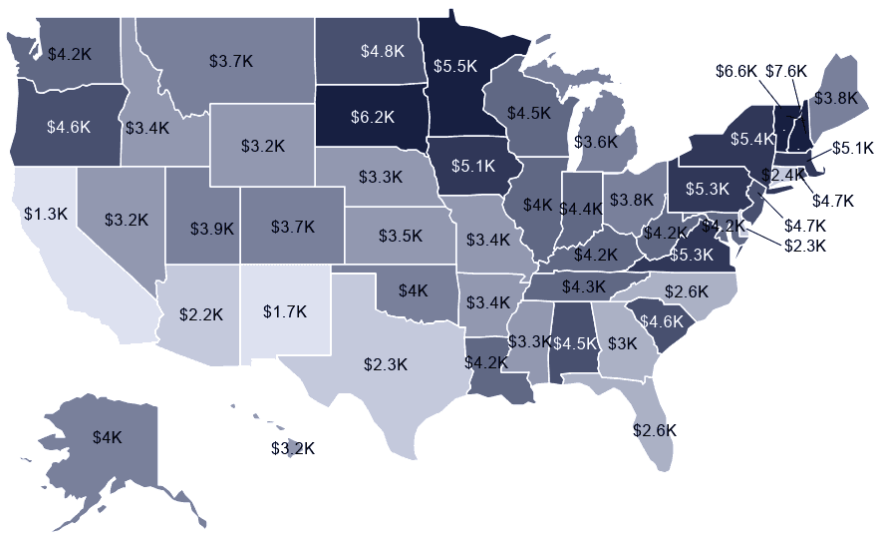
Source: Fletcher & Friedel (2017, P. 318)

Yet, the federal government still has a vital role to support community colleges through student aids, funding allocation to different states as well as colleges themselves, enforcing constitutional protections against discriminations, and highlighting the vital contribution of community colleges to society (Cohen, Brawer, & Kisker, 2013).

Nevertheless, the cost of study at community colleges differ from one state to the other, where the cost of study for state citizens is much lower than out-of-state students. Similarly, the cost differs substantially from public to private ones where private two-years institutions can be as ten times higher than state community colleges and could be as three times higher for out-of-state students.

The following map illustrated the disparity of cost of study among different states at the United States of America for the “in-state” community college tuition:

Figure (6): Average In-State Community College Tuition



Source: <https://educationdata.org/average-cost-of-community-college>

In India, the governance setup of community colleges differs significantly where the Indian community colleges (ICCs), outlined as

“education for employment,” have grown in three intersecting stages: first, a nongovernmental organizational (NGO) model functioning on the margin of formal education; second, national development through the open education system; and third, integration in formal higher and technical education institutes. All forms aimed at tackling an inequitable educational system and is compatible with the global model of a community college by providing adaptable postsecondary education to disadvantaged students in their local context (Raby & Valeau, 2018)

There are various governance models for community colleges in the Indian context that could be highlighted in the following:

- A. **NGO Model:** Non-Governmental Organizations (NGOs) are generally run by Religious Organizations, No-Profit Organization, Charitable Trusts, etc.
- B. **University Model:** In this model, Community Colleges are launched as a component of a university. They are normally situated in separate sections or areas of the university facility or stand-alone facility as needed. They split the existing resources. As an example, Pondicherry Central University launched a Community College in October 1995. It is offering Associate Degrees, PG Diploma courses, PG courses, Diploma courses and Certificate courses. All courses are offered in partnership with industries in the local community.
- C. **Local Body Model:** The Chennai Company has launched a Community College at Chennai in 1999. It is the first of its type in India that a local entity has taken the charge of opening a Community College for offering skills enhancement for the disadvantaged groups in the community. The purpose of the college is to offer appropriate career guidance for students that are dropping out from the corporation colleges each year.
- D. **Affiliated Model:** According to this model, the Community Colleges are initiated by some entities, where they are associated with a university. Generally, these Community Colleges are operating like degree colleges with full infrastructure, faculty, students, etc and

affiliated to the nearby University. In the national level, there are more than 200 Community Colleges at different areas of India associated to Indira Gandhi National Open University (IGNOU). These colleges implement different syllabuses corresponding to their local needs.

- E. **State Government Model:** In 2010- the State Government of Tamil Nadu has launched 10 Community Colleges in all the Traditional Universities in Tamil Nadu to offer skill-based education as expansion pursuits of traditional universities.

Fields of Study, Credit Transfer and Accreditation

Since community colleges is a very popular higher education model in the USA, students are usually interested in the fields of study that would help them get better job opportunities within their local communities. Among the most popular fields are: General studies encompassing about 57% of enrolments followed by Liberal arts and sciences/liberal studies with 14.3%, Business administration and management with 5.8% and Early childhood education and teaching with 5.5%. other fields are still popular too like Pre-nursing studies, Psychology, Computer systems networking and telecommunications, Biology/biological sciences, Engineering, and Animation, interactive technology, video graphics and special effects.

Within the Indian context, to make the skill gained by students and graduates recognized nationally, the curricula and system of certification has to be compatible with national standard. To simplify the provision of a nationally standardized skill related programs, the Government of India (Ministry of Human Resource Development) has declared the National Vocational Education Qualifications Framework (NVEQF). It is a nationally unified education and competency-based skill framework which caters for several trails, both within vocational education and amongst general and vocational education, to connect one level of learning to other higher levels and allow students to advance to higher levels from any study point in the education / skill system. It allows learners to build up their competencies and transfer them through testing

and certification by the designated authorities, into higher level of official recognition, which could be a certificate or a degree or diploma or advanced diploma (Department of Higher Education, 2018).

Third Axis, The Egyptian Community Colleges Model (ECC)

Why Egypt Needs Community Colleges?

As indicated earlier at the second axis of the current research, community colleges have proven being effective in social and economic development at local levels in USA context. They were able to provide flexible type of tertiary education for young people with transferable credits towards a bachelor's degree if needed, opening ambitions and pathways to them, relating to the direct economic needs of the local areas and develop professional skills needed in the labor market. Several studies have already indicated the importance and impact community colleges have on the local and state level communities. Hence, it is an educational model that is worth considering for the local and regional development in Egypt. the socioeconomic and political setup of community colleges in the USA would require thorough policy transfer study. Accordingly, it requires laws and regulations that can help the transfer of the Community College is model into the Egyptian context in addition to capacity development for local authorities as well as academics and teaching staff about the unique nature of these institutions, curricula, agreements with industry, and governance structure.

Among the prominent disparities between the Egyptian and the American contexts is the administrative structure where Egypt has a centralized administrative structure whereas the United States of America has a decentralized administrative structure. this has led to the successful operation of community colleges at state and local levels. Hence, an intervention is needed to allow for the decentralized steering an operation of community colleges but in the Egyptian context. the pre university educational sector in Egypt enjoys a level of decentralization where the governors and local authorities have a say in a number of decisions related to the supervision, hiring and firing of teachers, selection of

educational leaderships and more, laying the foundation for using the same set up while introducing community colleges into the Egyptian context. The following are strategic directions for establishing the Egyptian community colleges:

First: Governance and Funding

For the community colleges model to operate smoothly within the Egyptian context, some legal procedures need to be executed at different levels. The following is a proposal for the needed legal procedures:

- 1- A national law regulating the establishment of Egyptian community colleges needs to be drafted by the Egyptian parliament allowing for the formulation of governing boards at the governorate level (which is equivalent to state level in the US) that are responsible for funding allocations and operation of the community colleges. The law would include the membership protocols to the governing board, their numbers, whether they are elected or hired by the governors, and the potential sources of funding. Laws should also indicate the transfer of credits towards a bachelor's degree and their integration with university level education. Agreements with universities as well as labor market entities are also to be regulated by the laws, bylaws, and regulations.
- 2- An amendment to the laws of private higher education institutions is a feasible option where ownership could be granted to governorates and local education authorities. Community colleges could also be an exit to universities available at the same geographic location whether public or private. Financial and administrative accountability is to be clearly identified since community colleges are to represent a public interest.
- 3- Funding resources and financial allocations should be clearly identified indicating shares from the Ministry of Finance as well as

governorates budgets, percentage of tuition fees, if any, and endowments and donations from the local community.

- 4- Public and private ownership of community colleges is to be identified according to the national Laws governing public and private higher education institutions in the country of Egypt.

Second: Fields of Study, Credit Transfer and Accreditation

As discussed earlier in the second axis indicating community colleges as a popular higher education model in the USA, students select the fields of study that help them get better job opportunities within their local communities. Among the most popular fields are: General studies encompassing, Liberal arts and sciences/liberal studies, Business administration and management, and Early childhood education and teaching. Other fields are still popular like Pre-nursing studies, Psychology, Computer systems networking and telecommunications, Biology/biological sciences, Engineering, and Animation, interactive technology, video graphics and special effects.

The proposed fields of study build on the American model of community colleges and most recent fields of specializations as of the academic year 2019/2020 in accordance with the local prominent economic activities.

Credit transfer is a crucial requirement for the success of community colleges within the Egyptian context opening pathways to higher education and giving it a better social status among technical and vocational higher education institutions. Therefore, the track of “general studies” is very popular in the USA as it provides better integration with university level study while granting a stand-alone degree that qualify for job opportunities in various fields. A two-years study program would normally be equivalent to a two-years study at university given the validity of credits for transfer into university study and being compatible with the discipline where credits should be integrated. In this regard, the

Supreme Council of Universities SCU is to offer guidelines for credit transfer in each field of study based on the program specification to be approved for associate degrees.

The quality assurance and accreditation process of community colleges in the Egyptian context is to follow the National Authority for Quality Assurance and Accreditation of Education “NAQAAE” which is the designated body for accrediting education providers at all levels on the land of Egypt. Regulations, procedures, and guidelines used for upper middle higher education institutions (pre-university category) should naturally be used for community colleges that includes representation of local educational authorities (LEAs) and governorates.

Third: Identifying Priority Geographic Locations

The geographic locations for proposed community colleges were based on the socio-economic context of different local authorities in all the governorates of Egypt. This has primarily included the search for the most disadvantaged locations through considering the Human Development Index (HDI) values. Local authorities were sorted in an ascending order where lower values came first. Then, the lower three Las were considered as a possible location for the proposed community colleges.

According to the table 3 that identified the local municipalities with the least HDI and their prime economic activities, proposed locations for community colleges were identified. Yet, a gap analysis between the need and actual provision of higher education opportunities was conducted. Thus, an analysis of the equivalent higher education opportunities was conducted in relevance to the prime economic activities to be able to identify the targeted fields of specializations.

Priority Matrix for Establishing Egyptian Community Colleges:

The following matrix includes the priority ranking based on the human development index and economic activities per each geographic location in addition to the gap analysis with the existing upper middle/junior higher education institutions at the targeted locations. The proposed fields of specializations are corresponding to the economic activities and are drawn from the most recent associate degrees at the top ten community colleges in the USA. The following is the proposed priority matrix for establishing community colleges in Egypt:

Priority Matrix												
Ser.	Governorates	HDI	L.A.s	HDI	Economic Activities	Upper Middle Higher Education				Priority Rank 1 to 5 ⁸	Proposed Community Colleges fields of Specialization	
						TC ³	PMI ⁴	HI ⁵	PN ⁶			LU ⁷
1.	Cairo	0.743	EI Wally	0.676	Education - Services of home service for private house hold - public administration, defense, social security management	0	2	0	0	0	2	<ul style="list-style-type: none"> Air conditioning technology (Diploma) Aviation Maintenance Technology Water quality and wastewater treatment management and recycling technology⁸ technician
						0	1	0	0	0	3	<ul style="list-style-type: none"> Certified Construction Worker Animation, interactive technology, video graphics and special effects Community health services liaison/counseling

- 3 - Technical Colleges
 4 - Private Middle Institutes
 5 - Health Institutes
 6 - Practical Nursing
 7 - Labor University

8 - 1 represents lowest priority whereas 5 represents top priority.

Priority Matrix												
Ser.	Governorates	HDI	L As	HDI	Economic Activities	Upper Middle Higher Education				Priority Rank 1 to 5 ¹	Proposed Community Colleges fields of Specialization	
						TC ²	PAI ³	HI ⁴	PN ⁵			LU ⁷
2.	Giza	0.752	Monsheet Naser	0.65	manufacture- Construction ,building - Services of home :service for private house hold	0	0	0	0	0	5	<ul style="list-style-type: none"> • Laser and optical technology/technician • Carpentry • Practical Nursing • Computer systems networking and telecommunications • Aviation/airway management and operations
						0	0	0	0	0	5	<ul style="list-style-type: none"> • Aviation/airway management and operations • Arts & Crafts • Sugar production industry
						0	0	0	0	0	5	<ul style="list-style-type: none"> • Mechanics and heavy machinery maintenance • Horsemanship • Hospitality • Traditional crafting
						0	0	0	0	0	5	<ul style="list-style-type: none"> • Small business management • Automobile maintenance • Cinematography and film/video production
3.	Alexandria	0.675	El Gounok	0.546	Manufacture - Services of home service for private house hold - Transportation and storage	0	0	0	0	0	5	<ul style="list-style-type: none"> • Practical Nursing • Health services/allied health/health sciences • Fire prevention and safety technology/technician
						0	0	0	0	0	5	<ul style="list-style-type: none"> • Agriculture and Natural Resources • Customer service support/call center/retail service operation
4.	Behira	0.733	Abo EL Motamer	0.57	Agriculture - Transportation and storage - -- Services of home service for private house hold	0	0	0	0	0	5	<ul style="list-style-type: none"> • Practical Nursing • Vision Care Technology
						0	0	0	0	0	5	<ul style="list-style-type: none"> • Vision Care Technology

Priorities Matrix												
Ser.	Governorates	HDI	L. As	HDI	Economic Activities	Upper Middle Higher Education				Priority Rank	Proposed Community Colleges fields of Specialization	
						TC ⁶	PMI ⁶	PH ⁶	PN ⁶			LU ⁷
					Agriculture - Transportation and storage - Services of home service for private house hold	0	0	0	0	0	5	<ul style="list-style-type: none"> Wind Turbines Technology Farming, livestock and natural resources management Green Technology Water quality and wastewater treatment management and recycling technology/technician Aviation/Maintenance Technology
5.	MarSA Matrouh	0.734	Sedy Barany	0.541	Agriculture - Services of home service for private house hold - public administration ,defense, social security management	0	0	0	0	0	5	
6.	New Valley	0.794	El Farafra	0.631	Agriculture - Education -public administration ,defense, social security management	0	0	0	0	0	5	<ul style="list-style-type: none"> Arts & Crafts Home health Aid
7.	Gharbia	0.754	Ktoof	0.623	Agriculture -Education public administration ,defense, social security management	0	0	0	0	0	5	<ul style="list-style-type: none"> Water quality and wastewater treatment management and recycling technology/technician
8.	Dakahlia	0.751	Belkas	0.563	Agriculture -Education - Services of home service for private house hold	0	0	0	0	0	5	<ul style="list-style-type: none"> Laser and optical technology/technician Practical Nursing
9.	Damien	0.764	Kafr Saad	0.673	Agriculture-manufacture- Education - hunting	0	0	0	0	0	5	<ul style="list-style-type: none"> Visual and performing arts Laser and optical technology/technician Food Industries Carpentry
10.	Sharkia	0.737	El Hosenya	0.572	Agriculture - Education - Services of home service for private house hold	0	0	0	0	0	5	<ul style="list-style-type: none"> Farming, livestock and natural resources management
			Maya El Kamh	0.562	Agriculture -Education public administration ,defense, social security management	0	0	0	0	0	5	<ul style="list-style-type: none"> Environment preservation
			Tama	0.559	Agriculture -Education - Services of home service for private house hold	0	0	0	0	0	5	<ul style="list-style-type: none"> Practical Nursing
11.	Sohag	0.711	El Blena	0.555	Agriculture - Construction - building - Services of home service for	0	0	0	0	0	5	<ul style="list-style-type: none"> Certified Construction Worker

Priority Matrix												
Ser.	Governorates	HDI	L As	HDI	Economic Activities	Upper Middle Higher Education				Priority Rank 1 to 5 ^a	Proposed Community Colleges fields of Specialization	
						TC ^b	PAII ^c	HI ^d	PN ^e			LU ^f
			Dar EL Salam	0.552	Agriculture -Education - Services of home service for private house hold	0	0	0	0	0	5	<ul style="list-style-type: none"> Laser and optical technology/technician
			Marsa Alam	0.595	Agriculture - Services of home service for private house hold - Food, residence services	0	0	0	0	0	5	<ul style="list-style-type: none"> Water quality
12.	Red Sea	0.773	Shalateen	0.555	Agriculture - Services of home service for private house hold - public administration ,defense, social security management - hunting	0	0	0	0	0	5	<ul style="list-style-type: none"> Practical Nursing Water resources management Visual and performing arts
			Abo Rdées	0.433	manufactures- Services of home service for private house hold - Mining & Quarrying	0	0	0	0	0	5	<ul style="list-style-type: none"> Mining Technology Petrochemical 's manufacturing
13.	South Sinai	0.778	Abo Zama	0.433	manufactures- Services of home service for private house hold - Mining & Quarrying	0	0	0	0	0	5	<ul style="list-style-type: none"> Tribal environmental Management Arts & Crafts
			Sant Kaitreen	0.422	Construction , building -Services of home service for private house hold - public administration ,defense, social security management -	0	0	0	0	0	5	<ul style="list-style-type: none"> Certified Construction Worker Herbology
14.	Luxor	0.748	Luxor	0.586	Services of home service for private house hold - Construction , building-public administration ,defense, social security management	1	0	0	0	0	3	<ul style="list-style-type: none"> Business Administrative Technology Visual and performing arts
15.	Azwa	0.745	Draw	0.678	Agriculture-Education -Services of home service for private house hold	0	0	0	0	0	5	<ul style="list-style-type: none"> Energy Management Specialist Certificate Mining Technology
			Qena	0.571	Agriculture - Construction , building -Education	5	0	0	0	0	1	---
16.	Qena	0.711	Abo Techt	0.569	Agriculture -Construction , building -Education	0	0	0	0	0	5	<ul style="list-style-type: none"> Laser and optical technology/technician
			Naga Haudy	0.563	Agriculture-Construction , building - manufacture	1	0	0	0	0	4	<ul style="list-style-type: none"> Farming, livestock and natural resources management

Priorities Matrix													
Ser.	Governorates	HDI	L As	HDI	Economic Activities	Upper Middle Higher Education				Priority Rank 1 to 5*	Proposed Community Colleges fields of Specialization		
						TC ³	FMI ⁴	HI ⁵	PN ⁶			LU ⁷	
17.	North Sinai	0.757	Nakhal	0.657	Agriculture - Education - Services of home service for private house hold	0	0	0	0	0	5	<ul style="list-style-type: none"> Customer service support/call center/retail/service operation Hospitality administration/management Automotive Systems Technology Accounting technology/technician and bookkeeping Fire prevention and safety technology/technician 	
18.	Suez	0.776	Ataka	0.727	Transportation and storage - manufacture-Construction , building	0	0	0	0	0	5		
19.	Port Said	0.783	El Zohour	0.652	Agriculture - manufacture- Services of home service for private house hold	2	0	0	0	0	3	<ul style="list-style-type: none"> Small business management 	
			El Dawaby	0.758	manufacture- Services of home service for private house hold - public administration , defense ,social security management	0	0	0	0	0	0	5	<ul style="list-style-type: none"> Energy Management Specialist Certificate AAS Degree in Environmental Technologies and Sustainable Practices
			El Arab	0.779	Education - Services of home service for private house hold - public administration , defense ,social security management	0	0	0	0	0	0	5	<ul style="list-style-type: none"> Fire prevention and safety technology/technician
20.	Ismailia	0.758	El Tal El Kebeer	0.683	Agriculture - Construction , building -Services of home service for private house hold	0	0	0	0	0	5	<ul style="list-style-type: none"> Electrical/electronic drafting and electrical/electronics cad/cadd Drama and dramatics theatre arts Hospitality administration/management Web/multimedia management and webmaster 	
21.	Minia	0.702	Bani Mazar	0.575	Agriculture -whole and retail sale vehicles ,motorcycles - public administration ,defense ,social security management	0	0	0	0	0	5	<ul style="list-style-type: none"> Clinical Laboratory Technician Architectural technology/technician Mass communication/medi 	

Priorities Matrix											
Ser.	Governorates	HDI	L As	HDI	Economic Activities	Upper Middle Higher Education			Priority Rank	Proposed Community Colleges fields of Specialization	
						TC ⁵	PMT ⁵	HI ⁵			PN ⁵
										<ul style="list-style-type: none"> Animation, interactive technology, video graphics and special effects Mechanical drafting and mechanical drafting cad/cadd 	
			Abo kookas	0.591	Agriculture -whole and retail sale vehicles ,motorcycles- public administration ,defense, social security management	0	0	0	0	5	<ul style="list-style-type: none"> Natural resources management Home health Aid
			Maghagha	0.554	Agriculture -whole and retail sale vehicles ,motorcycles- public administration ,defense, social security management	0	0	0	0	5	<ul style="list-style-type: none"> Fire prevention and safety technology/technician
			Ibshaway	0.532	Services of home service for private house hold - Education-public administration ,defense, social security management	0	0	0	0	5	<ul style="list-style-type: none"> Electrical /electronics drafting and electrical/electronics cad/cadd
22.	Fayoum	0.699	Tamay	0.546	Agriculture - Construction , building-manufactures:	0	0	0	0	5	<ul style="list-style-type: none"> Home health Aid
			El Fayoum	0.576	Agriculture - Construction , building- public administration ,defense, social security management	0	0	0	0	5	<ul style="list-style-type: none"> Electrical Construction & Maintenance

ECC Success Indicators:

The inauguration of a new higher education model needs indicators that can help follow-up of the successful implementation of the initiative. Hence, success of the Egyptian Community Colleges establishment within “Dignified Life” program could be identified through a few policy level indicators that could be monitored through the use of the balanced score cards to indicate the balance of its successful implementation. These indicators could be identified in the following:

- The establishment of at least 25 new professional higher education institutions supported/partially funded by local communities.
- Opening at least 40 new/untraditional fields of specializations that specifically cater for the needs of young people in disadvantaged areas.
- Admitting of at least 15,000 students /year starting in September 2022.
- Graduation of at least a total of 25,000 students /year starting from 2024.
- Employment of at least 75% of graduates within 6 months from graduation within their local community.

Successful collection of data and information about the proposed indicators for follow-up purposes is a key factor for the sound monitoring of implementation procedures.

Time Plan:

Community colleges implementation can take place within the duration of 3 years that can take place in three overlapping phases as follows:

Phase	Description	Duration
Phase One	<ul style="list-style-type: none"> - Establishment of a number of 25 community colleges in partnership with the top community colleges in the US. - Preparation of the curricula and teaching material - Approval of Legal authorities for the proposed program (SCPIs) - Capacity development of curriculum developers, teaching and administrative staff 	1 year
Phase Two	<ul style="list-style-type: none"> - Admitting first year students and implementation of the chosen academic program 	1 years
Phase Three	<ul style="list-style-type: none"> - Admitting the second cohort of first year students. - Promoting students who were admitted in the previous year to the second year of the program. - Submitting programs for accreditation - Follow-up and evaluation of success indicators 	1 years

International Partnerships:

The Indian experience in establishing community colleges was supported and endorsed by a few international partners on top of which was the US Embassy, and the United Kingdom where support was in the form of technical assistance and twinning arrangements with top community colleges in both American and Great Britain. This could be an opportunity for the Egyptian government to request assistance with introducing the community colleges model within the Egyptian context with help of the top community colleges worldwide through grants allocated for this purpose.

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