

## **The Cognitive Economy: An approach to Developing the Faculties of Education Competitive Abilities**

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### **Abstract**

The current study aims at recognizing the cognitive economy reality at the faculties of education and the effect of its dimensions on developing the competitive abilities of the faculties of education. The two researchers used the perspective method .

Two questionnaires were prepared. The first one was applied on a sample of staff members at the faculties of education, which it concluded (117) person in order to; recognize the reality of the cognitive economy at the faculties of education and the effect of its dimensions on developing their competitive abilities. The second questionnaire was applied on the same previous sample in order to; recognize the requirements of the cognitive economy at the faculties of education to increase its competitive abilities.

The study came down to several results, most important of which were the agreement of the sample individuals, as whole, that ,the requirements of the cognitive economy at the faculties of education that increase its competitive abilities, were represented in evolving information technology and telecoms, the curriculum, the service and research programs, enabling staff members to participate in the activities of information mobility of human principals among universities, giving students the technological skills concerning the international markets and sharing at the unions of the pioneering international universities in the field of information technology and telecoms. The researcher concluded with setting a suggested proposal that included aims, fundamentals, mechanisms and guarantees to achieve the cognitive economy as an Approach to developing the competitive abilities of the faculties of education.

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**Keywords:** Cognitive Economy, Competitive Abilities

## **Introduction:**

The 21<sup>st</sup> century has begun with important and radical changes which imposed many challenges and opportunities besides to the great importance of cognitive which considers Technology as one of its elements in economy until it has become a feature of the 21<sup>st</sup> century which is called cognitive – based Economic. This means that the communities of tomorrow will be based on cognitive.

In order to be able to complete efficiently at the global market, higher education institutions need to be characterized by its service to ensure the satisfaction of interior and exterior customers alike. **(Chiam et al., 2011)** The strong internal culture that estimates the institution customers can help in improving the motivation of employers, and create loyalty in them, make them reach the highest performance and achieve a competitive advantage. This is what the cognitive economy will achieve. **(Khan & Matalay, 2009)**

No study has been conducted to examine the effect of the cognitive economy of the faculties of education on developing their competitive abilities. This study aims to examine the effect.

## **Cognitive Economy**

**(Parker,1997)** defined the cognitive economy as "The study and understanding the process of cognitive accumulation and individual motives to discover Cognitive learning and get what others know.

Therefore, it represents the economic analysis to all current processes in the economy that leads to discovery and the development of modern technology.

The cognitive economy is also defined in the context of the broad definition of cognitive sense which contains the explicit cognitive sense that includes databases, information and software, etc.; and the implied cognitive which is represented by individual experiences, their relationships and their contextual interactions as "the economy which sets wealth through cognitive processes and services such as composition, improvement, sharing, learning, the application and the use of cognitive forms in the different sectors depending on the human elements. **(Kilani, 2005)**

The cognitive economy gets several concepts such as the cognitive economy; cognitive based economy, the post and industrial economy, and other concepts that refer to cognitive economy. **(Charlene Tan, 2005)**

**(Heineman,1997)** indicated that the cognitive economy is related to the renewal and development because cognitive in this genre means the ability of realizing, learning and production through various learning activities.

The components of the cognitive economy are represented in the following points: **(Dimian, 2011)**

- A supportive community infrastructure.
  - Broad connection to the wide package.
  - Getting to the internet.
  - Learning society.
  - Workers and cognitive makers who have to possess knowledge and the ability to ask and comment.
  - An effective system of research and development.
- The advantages of cognitive economy are as follow:  
**(Chattopadhyay, S., & Mukhopadhyay, R. N. 2013)**
- It gives the consumer more confidence and wider choice.
  - It gets to every store, office and school.
  - It achieves electronic exchange.
  - It changes the oldest jobs and replaces it with new ones.
  - It is based on spreading cognitive, employing and producing it in all fields.
  - It forces all institutions on renewal, creativity, and responding to the consumer needs or the beneficiaries of the service.
  - It has an effect in defining growth, production, employment and the required skills.

### **What is meant by sustainable competitive advantages for institution of higher education? And what are its dimensions?**

(Porter, 1985) said that the institution position in the industry is determined by the profitability whether it is higher or lower than the profitability average in the industry. The institution that can be in a good position may earn high rates despite unsuitability of the industry framework, and the fact that profitability rate in this industry is moderate.

The basic rule of the performance above average in the long term is sustainable competitive advantages. (i.e. The extent of institution possessing the sustainable competitive advantage), so that the institution can engross many strength and weakness points towards its competitors. There are two basic kinds of competitive advantage that the organization can own: first is the low cost, and the second one is differentiation. The essence of any strong or weak points that the institution can own is ultimately indicative of its impact on the cost or differentiation advantages that originate – in contrast – from the structure of the industry.

They are produced from the institution's ability to keep up with the five powers (the new entrants, buyers, substitutes, importers, and competitors) in a way that is better than its competitors. Mixing basic types of competitive advantage (low cost, and differentiation) with activities field that the institution is looking forward to being achieved leads to three basic strategies to reach above the average performance in the field industry. Those

strategies are cost leadership, differentiation and focus. Focus strategy includes focusing on two dimensions: cost focus, and differentiation focus.

Figure (1) Porter's basic competitive strategies

1- Cost leadership strategy	2- Differentiation strategy	Wide
Cost focus strategy	Differentiation focus strategy	Competitive scope
Unique product	Low price	narrow

Source: Porter, M, 1985, p.12.

Each basic strategy includes radically different path to achieve the competitive advantage. The strategy blends choice of the desired competitive advantage with the market strategic target, which represents the theatre of achieving competitive advantage. The cost leadership and differentiation strategies aim to achieve competitive advantage in a wide range of industry portions.

While focus strategies aim to achieve cost advantage (cost focus) or differentiation (differentiation focus) through focusing on special market portion in order to serve their needs better than any other competitors.

The specific actions which are required to implement each basic competitive strategy vary widely from one industry to another. While choice and implementing the basic strategy is not an easy matter. We can see that it represents logical paths in order to achieve competitive advantage that should be probed in any industry.

**(Lombardi, 2011)**

The idea that lies in the concept of basic strategies is that the competitive advantage lies in the core of any strategy. Achieving the competitive advantage requires the choice of the institution. If the organization wants to get competitive advantage, it must choose the type and the field of competitive advantage that it looks forward to getting. The institutions "All things to all people ". This is considered as a description to strategic mediocrity, and performance which is less than average, because it often means that the institution doesn't have a competitive advantage at all. **(Porter, 1985)**

**(Akan et.al, 2006)** indicates that there are still many gaps in understanding porter's theory which prevent managers from the implementation of these basic strategies especially if. there are not identified practical steps (tactics) that are associated with those strategies. Any of these steps are accompanied by high levels of organization performance. From here **(Akan, et.al)** indicates that there is a set of practical steps that have been identified as explanations for competitive organizational performance, which is represented at the same time conceptually all poter's basic

competitive strategies in reference to the statistical indicators in performance.

Table (1): the practice of basic competitive strategies

Differentiation strategy	Cost leadership strategy	Focus strategy with low cost	Focus strategy with Differentiation
<ul style="list-style-type: none"> <li>* Creativity in Technology and marketing techniques.</li> <li>* Promoting creative abilities and innovation.</li> <li>* Building a large market portion</li> </ul>	<ul style="list-style-type: none"> <li>* Reduce distribution costs</li> </ul>	<ul style="list-style-type: none"> <li>* Render a distinctive service to the customer.</li> <li>* Improving operational efficiency.</li> <li>* Control products quality.</li> <li>* Intensive training for individuals who work in the front row in the institution</li> </ul>	<ul style="list-style-type: none"> <li>* Introducing special products.</li> <li>* goods or service production for market share with high price</li> </ul>

Source: Akan, O, Allen, R.S, Helms, M.M & Spralls, S.A. (2006), P.45.

### Objectives of the study

The current study aims at recognizing the reality of the cognitive economy of the faculties of education and the effect of its dimensions on developing their competitive abilities. It seeks to give answer to the following questions.

Q1: What are the views of the participants on cognitive economy dimensions?

Q2: What are the requirements of abilities competitiveness of faculties of education?

Q3: What is the suggested proposal to activate the role of the knowledge economy in achieving abilities competitiveness at the faculties of education?

### Research Design and Methodology

A survey research methodology was employed in the study. A common goal of survey research is to collect data representative of a population. Survey research is a non-experimental, descriptive research method. Surveys can be useful when a researcher wants to collect data on phenomena that cannot be directly observed. Surveys are used extensively to assess attitudes and characteristics on a wide range of subjects.

### Sampling Procedures and Participants

The participants of the study were 117 staff members at faculties of education in Assuit, Alexandria and Qena universities Egypt. Including 63 members from the faculty of education in Assuit about 38% of the original society, 21 individuals from the faculty of education in Alexandria by 11% of the original society, and 33 members from the faculty of Education in Qena by 12% of the original society. The current study aims at include staff

members from different types in faculties of education at Assuit, Alexandria, and Qena universities, Egypt.

### **Data Gathering Tools**

The researchers used two questionnaires: The first one included four axis which are; Institutional leadership that contains 7 items, the human resources that contains 4 items, the infrastructure for communication and information technology that contains 5 items besides to Marketing and international cooperation for the institution that contains 11 items. Then, it was applied to a sample of staff members at the faculties of education which researches 117 in order to get acquainted with the reality of the cognitive economy at the faculties of education, and the impact of its dimensions on the development of competitive abilities. The second questionnaire was applied previously to the same sample in order to recognize the requirements of the cognitive economy at the faculty to increase its competitive ability.

The researchers make sure that the validity of the two questionnaires through the validity of the arbitrators as the two questionnaires are presented in their primary form on a number of arbitrators professors at the faculty of Education, so as to know their points of view and benefit from their observations including the dimensions in questionnaire, and its suitability to achieve the objectives of the field study, and the extent of their connectivity and appropriateness to each statement in the dimension to which it belongs.

On the basis of opinions which the arbitrators introduced, same statements have been modified.

The researchers make sure of the stability of the questionnaires through the mode probability, because of its suitability to the educational studies nature, and its ability in revealing accuracy and perfection of the questionnaire which provides us with information. According to this method, the two researches calculate the stability of each questionnaire as follows:

A- Calculation of the stability of each statement in the questionnaire using the following equation:

$$\text{The stability coefficient} = \frac{N}{N-1} \left[ \frac{L-1}{L} \right]$$

Where "n" means number of optional possibilities.

"L" means probability or any great repetition.

for any choice of possibilities which is included in the statement and divided by the total number of sample individuals.

b- Calculation of the stability of each axis in the questionnaire through the calculation of Median which the coefficient statement is consisted of.

c- Calculation of questionnaire stability as a whole through median calculation and the stability of axis that make up the questionnaire. Here, we clarify questionnaire axis coefficients. To verify stability of the questionnaire

as a whole and its axis, the research used the mode probability methods, which is shown in the following table, where (N=117)

Table (2): Stability Coefficients axis for staff members about the reality of the cognitive economy

Institutional leadership		Human resources		Infrastructure for information and communication technology		Marketing and international cooperation of the institution	
st	s	st	s	st	s	st	s
1	0.85	8	0.90	12	0.83	17	0.80
2	0.78	9	0.71	13	0.88	18	0.86
3	0.88	10	0.72	14	0.77	19	0.76
4	0.65	11	0.60	15	0.76	20	0.78
5	0.63			16	0.89	21	0.65
6	0.89					22	0.78
7	0.66					23	0.89
						24	0.63
						25	0.55
						26	0.49
						27	0.55
<b>Axis</b>	0.72		0.71		0.81		0.65

"St" means Statement

"S" means Stability

It is clear from the previous table that correlation coefficients of the questionnaire axis which is related to the opinions of staff members about the reality of the cognitive economy at the faculties of education, and the effect of its dimensions on the development of competitive abilities were ranged from (.72 to .81) in terms of the degree of approval. These coefficients denote stability, as the significance of correlation coefficients at the critical value (N-2= 348) was ranged from (0.113 at .05 and .148 at .01). Also, the stability of the questionnaire as a whole (Median=0.72). The stability coefficients are high in comparison with the sample size. Thus, the questionnaire becomes in the final form viable.

Table (3) Stability coefficient axis to identify the requirements of the cognitive economy

Number	Statement	Stability
1	Setting strategic plans to activate the educational and research activities in the field of information and communications.	0.80
2	Holding international cooperation agreements with the pioneer international universities in the field of communication and information technology.	0.83
3	Establishing research positions in cognitive fields with an international dimensions.	0.76
4	Embodying information and communication technology (ICT) in the curriculums and research programs and services.	0.68
5	Enabling staff members of participating in the activities of information and communication technology in the pioneer international universities.	0.82
6	Embodying scholastic plans in the faculty courses with an international feature.	0.82

7	Holding agreements and partnership with the world's pioneer universities in the field of information technology and international communications.	0.78
8	Applying a strategy to increase the mobility of human resources among universities.	0.71
9	Providing students with the technological skills which are related to global markets.	0.85
10	Including the international dimensions in programs and training courses for staff members.	0.84
11	Participating in the international universities union in research in the field of information technology and communications.	0.80
	Questionnaire as a whole	0.80

It is clear from the previous table that the correlation coefficients axis which are related to the opinions of the staff members about the cognitive economy requirements to increase the competitive abilities. They range from (0.68 to 0.84) in terms of the degree of approval. These are coefficients which denote stability, because correlation coefficients significance at the critical value (N-2= 348). It ranges from (0.113 at 0.05 and 0.148 at 0.01) and the stability of the questionnaire as a whole (**Mean** =0.72). They are high coefficients in comparison with the sample size. Thus, the questionnaire becomes in its final form subject to application.

### Data Analysis

After applying the questionnaire on the sample individuals, the two researchers followed the following steps in the statistical treatment of data and individuals responses as follows:

- 1- Calculate the repetition of sample response under the three ranks of approval (agree – agree to some extent – disagree), and this is introduced to every questionnaire Items.
- 2- The digital scale was given as follows (Large 3, medium 2, weak 1).
- 3- Calculate probable mean of the relative weight and calculate the percentage for every item of the questionnaire items. This was done as follows:

(Abdullah Sayed Abdel Gawad, 205, 1983)

### **Total frequency response x relative weight or digital weight or response degree**

#### **Total frequencies**

$$1- \text{Mean} = \left( \frac{K1 \times S1 + K2 \times S2 + K3 \times S3}{K1 + K2 + k3} \right)$$

Mean

"K1" refers to the frequency response which is "achieved".

"K2" expresses the frequency response "to some extent"

"K3" expresses the frequency response "cannot be achieved"



Mean percentage = Mean ÷ (response number's or number of choice) × 100

4- The individuals response were analyzed in the light of the following statistical treatment.

a- The digital weight for the degree of approval on every questionnaire item were ranged from (3 to 1).

b- The approval between intense and average ratio was estimated about every item of the questionnaire items. (Fouad Gorgeous Sayed, 1978, p.414)

The percentage of approval severity

mean=

the greatest degree of approval on the item–the least degree of approval

$$\text{The percentage of approval mean} = \frac{\text{choices number} \frac{3-1}{3}}{3} = \frac{2}{3} = .67$$

As the individuals sample is relatively large. Therefore, the individuals' response averages gather around the real mean. So, we can guess the possible points for errors to calculate what is called standard error through assessing the standard error in comparison with approval mean at every item of the Questionnaire items through the following equation:

$$\text{The standard error} = \sqrt{\frac{A \times B}{N}}$$

As "A" = Approval intensity average ratio on the item=.67

"B"= 1-A

$$=1-.67=.33$$

"N"= number of sample individuals.

5- Identifying the confidence limits in comparison with the research sample as follows:

**(John Milton Smith: Translator: Ibrahim Bassiouni Emira, 1986,80)**

(1) If the response averages ratio for the sample individuals is limited to (.67 + Standard error × 1.96), (.67 – standard error × 1.96). It is considered that the individuals sample responses on these items are moderate approval.

(2) If the responses average ratio for the individual greater than or equal to (.67 + standard error × 1.96), it is considered that there is a tendency to increase approval on the content of this item.

(3) If the responses average ratio for the individuals less than or equal to (.67 – standard error × 1.96), it is considered that there is a tendency to weaken the approval on the content of these items.

6- Confidence limit was calculated according to the previous relationship to the average of the educational supervisors' responses when N = 117 as follows.

$$X.M = \sqrt{\frac{.67 \times .33}{117}} = .35$$

Thus, confidence limits for the response average ratio is ranged from  $0.67 + (.035 \times 1.96) = .76$  as a maximum, and between  $0.67 - (0.35 \times 1.96) = .58$  as a minimum. Thus, the confidence limits of staff members responses is ranged between (0.60 and 0.61). If the response average ratio become more than (0.73) on the items of questionnaire, it means there is positive or strong trend to achieve the statement in fact or its positive impact or approval. If the response average ratio become less than 0.60. This means that there is a weak tendency towards the rule of not achieving this statement in fact, or its negative impact or non-approval, but if the relative weight is located between the minimum and maximum, the approval or verification degree will be medium or the effect will be positive or negative.

Table (4): Confidence limits for the responses the sample

Confidence limits	The sample as a whole
The Maximum	0.72
The Minimum	0.62

### Results and Discussion

To identify the reality of the cognitive economy at the faculties of education and the effect of its dimensions in the development of competitive ability from the point of view of the study sample, the researchers followed the following procedures:1- The questionnaire was applied to the study sample, and the individuals responses were uploading on the items.

2- The relative weights were calculated for each statement or each axis separately.

Staff members' perceptions of the reality of cognitive economy at the faculties of education and the impact of its dimensions in the development of their competitiveness in the questionnaire axis in terms of the degree of approval.

W: the relative weight.

T: tidiness.

Table (5) Staff members' perceptions of the questionnaire axis

Axis	Staff member n = 117			
	Verification degree		Influence degree	
	P	A	P	A
-Institutional leadership	73.83	1	89.75	2
-Human Resources	60.07	3	92.27	1
-Infrastructure for information and communication technology	60.92	2	87.33	3
-Marketing and international cooperation for the institution	58.58	4	86.27	4
Total	63.35		88.91	

P: Proportional Weight    A: Arrangement

The individuals of the total sample to a quite degree realizes the verification about the reality of the cognitive economy at the faculties of Education, and what it involves, as the relative weight average of the sample as a whole reach (63.35) which is lied in the average among confidence limits. This emphasizes the faculty of Education need for more cognitive which is related to information and communication technology to support their competitive abilities.

The individuals of the total sample also stress the influence of cognitive economy dimensions on the competitive abilities in the faculties of Education as the relative weight average of the sample as a whole (88.91). It lies in the maximum of the confidence limits. This emphasizes the importance of cognitive economy as a modern input in fulfilling competitiveness.

### A-Institutional leadership Axis

Table (6) Staff members' perceptions of "Institutional leadership"

Statements	Staff members n = 117			
	Verification degree		Influence degree	
	P	A	P	A
1- Publishing the culture which is related to how to deal with information and communication technology	88.54	2	93.71	1
2- Supporting information and communication systems at the faculty	79.54	4	78.79	1
3- Encouraging employees to use information and communication technology	88.31	3	93.51	2
4- It allows training courses for workers in the field of information and communication technology	91.2	1	92.55	3
5- The ability to deal efficiently with the information and communication systems	59.41	6	89.32	6
6- The leadership links its policy to the information and communication systems	57.32	7	90.55	4
7- motivation the activation of laws which is related to information and communication technology	60.51	5	89.8	5
Total	73.83		89.75	

It is clear from the above table that the institutional leadership axis comes at the first place for the sample as a whole which is achieved moderately, as the relative weight average of the sample as a whole reached 73.83. This emphasizes the administrative leadership needs at the faculties of Education to link its policy to communication and information systems, its

desire to activate the laws which is related to it, and increase its ability to work with information and communication systems.

It has come at the second place in terms of the high effect from the individuals sample viewpoint, and the relative weight which reach (89.75). This emphasizes the importance of the role of the institutional leadership in the development of the cognitive economy at the faculties of Education and enhancing its competitive abilities through publishing the culture which deals with the information technology and communication, and allows training courses for workers in this field.

## B-Human Resources

Table (7) Staff members' perceptions of "Human Resources"

statement	Staff members N=117			
	Verification degree		Influence degree	
	P	A	P	A
8- The faculty has a distinctive human competencies in the field of information and communication technology	75.33	1	92.58	3
9- Faculty has workers who have the skills that enable them to deal with information and communication technology	64.64	3	93.89	2
10- Faculty employs its human resources to support its competitive abilities in the field of information and communication	65.6	2	96.41	1
11- There is an active plan in the faculty to develop the workers skills in the information and communication technology	34.72	4	86.41	4
Total	60.07		92.27	

It is clear from the previous table that the "human resources axis" came in the third place for the sample as a whole, which is achieved moderately, as the relative weight average of the samples as a whole reached (60.07). This confirms the need for activated plans for the development of workers skills in communication and information field.

It also came in the first place in terms of the effect with a high degree from the individual sample point of view, and relative weight reached (92.27). This emphasizes the importance of the faculty role which own distinctive human competitive in the information and communication technology field through the skills which the workers have. These skills manage them to deal with information and communication technology.

**c- The infrastructure for information and communication technology**

Table (8) Staff members' perceptions of "the infrastructure for information and communication technology"

Statement	Staff members n=117			
	Verification degree		Influence degree	
	P	A	P	A
12- The materialistic resources and the adequate equipments are provided to deal with information technology	57.81	3	92.81	1
13- The faculty has advanced technology that enables it to compete locally	78.1	1	78.11	5
14- Faculty has advanced technology that enables it to compete internationally.	59.1	2	84.8	4
15- Possessing the necessary material resources to offer programs and services which are related to information technology.	55.2	4	91.81	2
16- The faculty assigns the cognitive resources in the library to support information technology and communication.	54.5	5	89.14	3
Total	60.92		92.27	

It is clear from the above table that the axis of "infrastructure of information and communication technology came in the second place for the sample as a whole, which is achieved moderately as the relative weight average of the sample as a whole reached (60.92). This emphasizes the need for necessary financial resources to offer programs and services which is related to information technology, and assigning the cognitive sources in the library to support information and communication technology.

Moreover, It has come at the fourth place in terms of the high degree of effect on the individuals sample from their point of view, and the relative weight reach (87.33). This emphasizes the important of abundant of the materialistic resources and the adequate equipment to deal with information technology which enables it to compete both locally and internationally.

**D- Marketing and international cooperation for the institution**

Table (9) Staff members' perceptions of the axis of "Marketing and International Cooperation for the Institution"

statement	Staff members n=117			
	Verification degree		Influence degree	
	P	A	P	A
17- Interesting in the marketing services and programs which are offered through the faculty globally.	77.6	1	90.2	3
18- Interesting in the marketing services and programs which are offered by the faculty locally.	54.3	7	92.46	2

19- Maintaining the presence in the global markets for technological Education.	53.2	8	89.3	5
20- The faculty has to meet the needs for local and global markets of distinctive specialists in the field of information and communication technology.	54.6	6	91.3	4
21- Providing learning outcomes which can compete in the local markets.	75	28	76.45	11
22- Providing learning outcomes which can compete in the global markets.	53.11	9	92.5	1
23- Applying a strategy to reach the best positions in the international markets.	32.11	11	88.8	6
24- Holding cooperation agreements and partnership to exchange students and researchers with the pioneer global universities.	66.2	4	81.9	8
25- Holding cooperation agreements and partnerships with the global universities in the field of information and communication technology.	50.53	10	81.11	9
26- Doing collaborative researches with the global universities which achieve international competitiveness.	67.5	3	78.6	10
27- Cooperation with international organizations and institutions to transfer academic cognitive and research	60.2	5	86.4	7
Total	58.58		86.27	

It is clear from the previous table that the axis of the marketing and international cooperation for the institution came at the fourth place for the sample as a whole, which was achieved moderately, as the relative weight average of the sample as a whole reach (58.58). This emphasizes the need to apply strategy to reach the best positions in the global markets, and the necessity to do collaborative researchers in the global universities that achieve global competitiveness. Provide learning outcomes in the local and global markets.

It has also come at the third place in terms of the effect with a high degree from the individuals sample point of view, and the relative weight which reached (86.27). This emphasizes the importance of marketing services programs which are offered by the faculty, and holding cooperation agreements and partnerships to exchange students and researchers with the pioneer global universities. Also, holding cooperation agreements and partnerships with the global universities in the field of information and

communication technology. The faculty has to meet the needs for local and global markets of distinctive specialists in the field of information and communication technology.

**Secondly: The requirements of the cognitive economy in the faculties to increase their competitiveness**

Table (10) Staff members' perceptions of the requirements of the cognitive economy in the faculty its competitiveness.

Statement		Staff members n=117	
		Verification degree	
		P	A
1	Setting strategic plans to activate the educational and research activities in the information and communication field.	87.34	3
2	Holding international cooperation agreements with the pioneer world's universities in the information and communication technology field.	69.58	9
3	Establishing research positions in cognitive fields with an international dimensions.	67.91	10
4	Embodying information and communication technology in the curriculums and research programs and services.	92.58	1
5	Enabling staff members to participate in the information technology activities and communicate with the pioneer global universities.	91.76	2
6	Embodying study plans in the faculty curriculums with an international feature.	44.39	11
7	Holding cooperation agreements and partnership with the pioneer global universities in the field of information technology and international communication.	86.59	5
8	Applying a strategy to increase the mobility of human cadres between universities.	87.01	4
9	Providing students with technological skills which are related to the global markets.	79.4	6
10	Embodying the international dimension in training courses and programs for staff members.	74.4	7
11	Participating at pioneer global research universities union in the field of information and communication technology	74.4	8
Total		78.09	

It is clear from the previous table that the sample individuals emphasize the great importance of the cognitive economy requirements in the faculties of Education to achieve the competitive ability in relative weight (78.096), where the sample individuals responses came in a high degree to some statements like (1,4,5,8,7,9). Also, the sample individuals response came in a medium degree on certain statements such as (2,3,10,11), but the statement number (6) came in the last rank in a weak degree.

## **Proposal**

In the light of the theoretical literature study and relevant scientific studies, and the filed study results, which showed the importance of the cognitive economy as an input to achieve competitiveness at the faculties of Education, which the result of the study showed. This also requires conception formulation which contains the following:

### **Philosophy of proposal**

By the way of the cognitive society which emphasizes considering cognitive is the power which is based on the cognitive production. Form out of the privileged society and its ability to compete and face challenges depends mainly on the production and marketing of cognitive so that it can become an important economic source which doubles power capacities and pave the way to the evolution, improvement and progress. This requires the availability of leadership and institutional leaders and infrastructure for information technology which is able to deal with the variability, and changes.

The philosophy of visualization is based upon a set of the most important foundations:

- Learning is the most important source of enhancing the international competition.
- Learning is the passkey to enter the cognitive era and the development of societies.
- The challenge is the success range in reaching the optimal investment of technology in order to increase the quality of education, expand the spread of education, and achieve spreading cognitive.

### **The objectives of proposal visualization**

From the previous show to the philosophy of visualization, and its bases, we can identify objectives of visualization as follows:

- Shedding light on the reality of cognitive economy at the faculties of education, and its influence on the development of competitive abilities
- Identifying some necessary requirements for the success of the school administration in order to face the phenomenon of abuse in the treatment of children and neglect as well.

### **Procedures of the proposal visualization**

- Spreading the cognitive economy culture among institutions and workers.
- Activating the economy culture to include the following:



### **A- The institutional leadership**

The institutional leadership has a great role towards the cognitive based economy. So, it must do the following:

- Linking its policy to the in for motion and communication systems.
- The ability to deal efficiently with the information and communication systems.
- Keeping on the activation of lows which are related to information and communication technology.
  - Also, it must be increased the activation of the following:
    - Availability of training courses in the information and communication technology systems.
    - Spreading the culture of dealing with information and communication technology.
    - Encouraging the workers to use information and communication technology.

### **B- Human resources**

There should be care of human resources through:

- The faculty employs its human resources to support their competitive abilities in the information and communication fields.
- Having a plan for the development of employees' skills in information and communication technology.
- It must activate the following:
  - The availability of workers who have skills that enables them to deal with the information and communication technology.
  - Having a plan for the development of employees' skills in the information and communication technology.

### **Infrastructure for information and communication technology**

There should be care of infrastructure for information and communication technology through:

- The availability of advanced technology which enables the workers to compete internationally.
- Providing materialistic resources and the adequate equipment to deal with information technology.
- Providing the necessary material resources to offer programs and services which are related to information technology.
- The faculty has to employ the cognitive resources in the library to support information and communication technology.
- Marketing and International cooperation for the institution.
- There should be interest in marketing and international cooperation through.

- Interesting in marketing services and programs which are offered by the faculty internationally.
- Interesting in the marketing services and programs which are offered by the faculty locally.
- Maintaining the presence in the global Technological markets for education.
- Meeting the faculty needs of the local and global markets through providing distinctive specialists in the information and communication technology.
- Providing learning outcomes that can compete in the local markets.
- Providing learning outcomes that can compete in the international markets.
- Applying a strategy to reach the best position in the global markets.
- Holding cooperation agreements and partnership to exchange students and researchers with the pioneer global universities.
- Holding cooperation agreement and partnership with the global universities in the information and communication technology.
- Doing collaborative researches in the international universities that can achieve global competitiveness.
- Cooperating with international organizations and global institutions to transfer academic cognitive and research.

### **The requirements**

The faculties of education need many cognitive economy requirements to increase their competitiveness which includes:

- Providing organizational culture that supports the excellence, creativity and innovation values.
- Setting strategic plans to activate the educational and research activities in the information and communication field.
- Holding international cooperation agreements with the pioneer global universities in the information and communication technology field.
- Establishing research position in the cognitive fields with an international dimension.
- Embodying information and communication technology in the curriculum and research programs and services.
- Meet society's expectations of teacher preparation and training locally and internationally.
- Enabling staff members to participate in the information and communication technology activities in the pioneer global universities.
- Embodying study plans in the faculty curriculums with an international feature.

- Holding cooperation agreements and partnership with the pioneer global universities in the field of information technology and international communications.
- Applying a strategy to increase the mobility of human cadres between universities.
- Providing students with technological skills which are related to global markets.
- Embodying the international dimension in training courses and programs for staff members.
- Participating at pioneer global research universities union in the field of information and communication technology.
- Working in faculty according to the institutional performance quality norms.
- Establishing centers and units which interests in academic reliance and quality assurance and competition ensuring.

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