

## Role of the academic curriculum in the development of the basic learning outcomes (knowledge - skills – capabilities) of the architect using the method of currere

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### ABSTRACT

Basic learning outcomes play an important role in giving students the general academic profile that determines the characteristics of the academic program outcome. The research problem is formulated, which is the lack of clarity about the role of the academic curriculum in the development of the basic learning outcomes of the architect in particular. Based on the foregoing, the research has tackled the development of basic learning outcomes (knowledge-skill-capability) for the architect in particular, using the method of Currere that is approved globally in the development of academic curricula and vocabulary (knowledge - skill - capacity) for the purpose of developing the efficiency of the academic outcome. The research adopted a descriptive analytical method using the method of Currere. The results of the research include a diagnose of a number of gaps which were based on reviewing the vocabulary of the course according to the need for it or its compatibility with the academic description of the graduate engineer or the academic outcome. Furthermore, the research determines some conclusions that showed the shortcomings of the academic curriculum and the reality of the practice, as well as the research has recommended with a set of recommendations that maximize the compatibility between the outcomes of the academic program and the requirements of the labor market.

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### 1. Introduction

The rapid and successive changes in the areas of architectural education and its relationship to the labor market in the world in general and in Iraq in particular have influenced the formulation of the academic curriculum with its vocabulary school in general and in all engineering, social competencies and others as well. In view of the foregoing, there was a need to review the academic outcome characterization (architect), which determines the efficiency of its performance in the reality of the practice through the development of the academic curriculum as the basic input of the academic program.

### 2. Academic curriculum

The academic curriculum is a distinguished and organized set of courses that lead to the granting of the academic degree associated with this program (Bachelor, Diploma, Master, etc.) [1]. It is having been also defined by Hameed as the most effective means of learning that provide a translation for philosophies and

educational policies into a reality fact. Through the academic curriculum, development plans to increase the options available to people to live a life free of ills are supported. Further, to acquire and get the resources to have a decent life, and through the curriculum [2,3]. The Arab Universities Union has defined the curriculum as a distinguished and organized set of courses that lead to the granting of the academic degree associated with this program (Bachelor, Diploma, Master, etc.) [4]. It is a group of educational experiences designed in the framework of planning ahead to achieve educational and educational goals with the intention of helping Learners on the overall growth in all aspects of personality by creating educational and academic institutions within the framework of goals, content, activities and methods of teaching and evaluation [5].

### **3. Learning outcomes**

Learning outcomes are the outcome of the learning process, which is delivered to the learner - which the institution wishes to achieve through specific educational activities and knowledge, as well as assessment methods that measure the extent to which these results are achieved [6]. Rizko has also defined it as phrases that describe what the learner should know and able to perform. Students are expected to complete such outcomes at the end of their studies for a specific curriculum or course of study. Learning outcomes are of great importance to all parties involved in the educational process or are the basic information and concepts that the student must acquire when completing the academic program until graduation. [7,8]. In addition, some literary studies have shown several definitions of learning outcomes, such as the study of the student's expected ability to do a work as a result of an educational activity. American Association of Law Libraries has defined it as the knowledge, skills and tendencies acquired as a result of an educational activity. Moreover, it is a practical application of how knowledgeable the learner is or what will be able to do as a result of this activity. They are defined by Adam as what is expected from the students/learners to be able to do as a result of the conclusion of the unit/curriculum or a qualification. It is one of the essential foundation blocks in the transparency of educational systems. Based on the above, we find that learning outcomes are divided into two parts; target learning outcomes, which are the knowledge, skills and abilities that are acquired through the curriculum, and actual learning outcomes, which are actually required in the labor market that is based on the employment of architect [9]. The learning outcomes associated with the architect are divided into the knowledge, skills and capabilities as follows:

#### **3-1 Knowledge**

Knowledge is the basic information and concepts that a student must acquire when completing the academic program until graduation. The elements that characterize the engineer are his knowledge of facts and concepts. Knowledge represents the database of the professional engineer [10,11]. Knowledge is linked to the knowledge material needed by the student according to pure theoretical lessons such as theory and history of architecture, design methodology, building services, and other theoretical lessons such as architectural design lessons, construction of buildings and others [12].

#### **3-2 Skills**

Skills represent the tools used by the architect to invest knowledge in order to accomplish a particular work according to his behavior [13]. These skills are cognitive skills [9]. Professional and practical skills [14] and general skills: [15].

#### **3-3 Capabilities**

Capability is the behavior that will guide knowledge and skills to achieve a specific goal and what this behavior includes such as personal values, attitudes, interests and personal tendencies [13]. Since man is born with certain abilities and talents that vary from one person to another. Therefore, some abilities and talents, some inherent and the other acquired, must be available in the individual to become an architect. The most obvious capabilities and talents of the personality of architectural qualities must be the logical capacity, creative artistic skill, scientific and professional capabilities, and administrative capacity, which affect the professional performance of the architect and meet the requirements of his profession [16,17].

#### 4. Architect

The architect was defined according to French law as a translation of the French word "Architect", which means the professional entrusted with the design, drawings and models for the establishment, maintenance, decoration and supervision of the proper implementation. [9,18]. The architect at the linguistic level is a name derived from "yueamar", and at the professional level is determined in three basic pillars: the achievement of the benefit and the building function - the achievement of durability and strength of construction - the beauty of formation [14]. Maamouri has also defined the architect as the person whose ideas and thoughts overlap in the life of every human being on earth; he is the one that form the empty in which the individual lives [19,20].

#### 5. Method of Currere

In an article entitled "Method of Currere", Pinar suggests that the method can be addressed through four moments or steps (regressive - progressive - analytical – synthetic) [13]. Method of Currere was first known and defined when the concept of the method of Currere in linguistics in 1970s, when Pinar and other curators developed the term Currere based on the Latin source of the word "curriculum", which means run the course, that is, the management of the course. For "Currere", it means (track-run-trip) . The concept of the method of Currere was conventionally defined by a number of researchers; as it is defined by Pinar as (Currere), is a time self-reflection with a temporal and conceptual nature, and aims to create a developmental perspective over time and between concepts, and from another point of view, what is conceived over time is presented. In the hope of exploring the complex temporal and conceptual relationship through performing that, it is an endless form of curriculum that includes a framework for thinking about the curriculum vitae that ultimately forms the individual's understanding of oneself in our democratic society. Madeleine R. has defined (currere) as a reflective cycle where thought is reflected on itself and thus regains its will, namely, "understanding life by going backwards, living looking forward" [21]. The method of Currere was used to evaluate a number of literary studies from outside the field of architecture. As for the field of architecture, one foreign study for the development of the architectural program for the master stage, entitled "Becoming an Architect: Narratives of Architectural Education," was conducted through the evaluation of the participant (academic outcome) of the program has tackled the same idea. Therefore, the academic program inputs are developed represented in the architectural academic curriculum through four moments (regressive - progressive - analytical – synthetic). Such four moments represent four approaches (Curriculum - narrative approach - Anthrax curriculum - participant leadership approach), which are a reflection of the experience of the participant (the academic outcome) in the practical reality of the labor market, through the stories of real or imaginary express the past and future vision of the participant. In addition, they are an analysis of his experience at the present time, and accordingly, through a synthetic process of the previous three moments, the participant gives his vision of co-evaluate and develop the architectural academic curriculum, and this is done through the words and the text and its interpretations.

#### 6. Four Moments/Steps of the Method of Currere

Method of Currere is a systematic method consisting of four steps or moments that depict temporal and reflective movements in the study of the actual practice in the labor market ((1) regressive, (2) progressive, (3) analytical, and (4) synthetically moment). In the regressive moment, the living individual experience is the data source [22]. In the progressive moment We now turn to the future, reflecting the retrograde echo as "the future of the present in the sense that it is the present of the past , Based on Pinar's idea that the future affects, in complex ways, present and present, to understand the future, one must think of the future at present, because "the future exists in the same sense as the past" [15,24,25] . In the analytical moment We have now reached the analytical moment, examining the present through a more reflective exercise. In this step, participants begin to integrate the effects of social, cultural and institutional factors on their current situation [16,27]. In the synthetically moment This moment is the main source of analyzed data. Here, we ask the participants to review the three ideas they have already created during the process, and although this phase is separate from experience, it is still a material experiment [23,26]. These four moments and their literary approaches will become the reliable source for us to collect the information of the participants in this study and to present a vision regarding the compatibility of the outputs of the academic program with the requirements of the labor market by reviewing the curriculum vitae of the practicing engineer, What you get from the academic academic program of competence (knowledge, skills and abilities) qualify him to work in

line with the needs of the labor market, and imagine the future by telling a fictional story about the architectural profession and the relationship of the architect, and analyze the relationship of free to practice with His current career, which represents the third moment of Corrier, and finally the collection of the previous images in one image represents the participant's vision to evaluate the inputs of the academic program (curriculum in its own vocabulary) as a feedback to draw the features of the architect of the future.

## 7. Results related to the adoption of the method of currere for the development of the academic curriculum

Table 1. shows the results from the responses of the participants in the Method of Currere

Participant	Text and its interpretations			
	Regressive moment	Progressive moment	Analytical moment	Synthetically moment
First participant	Most of my time was devoted to the design	In-depth study of technology and its relation to architecture are important axes of the outlook	Design and implementation of commercial houses and buildings	Through previous moments, I find it necessary to have a vision for the structural aspect so that the architect can create new and unconventional forms
	I had earlier visions of architecture		Participate in the design of a number of health buildings	
Second participant	Painting and imagination are the basic requirement for excellence in the study of architecture	Architectural competition based on advanced technologies, competitive prices and standard delivery time	Practitioner currently suffers from lack of resources and difficulty of implementation	Practitioner must understand the standards and dynamics of different buildings
	Who did not adapt to the reality of the situation had to postpone the study	Know the technical aspects of implementation and design		The time is not enough to study everything about architecture (suggested that the study be seven years)
	Students who had imagination and love of architecture completed the school years with excellence	There are places dedicated to horizontal buildings and other vertical buildings	Lack of advanced companies in terms of technology in the field of implementation	Specialization for the study of architecture is a necessary requirement
	All my time was dedicated to design, painting and show	Adoption of many laws to protect the architectural profession		Study of the industrial establishment as a study unit, including the internal design of the aircraft and aircraft
	I did not have time to study events and functions (Ref.	There is greater awareness of the community about architecture thanks to the means of social communication		Restriction of the architect

	I was hoping to learn more about the vocabulary of the other curriculum but the time was not enough	There are many buildings that will be over 100 years old		Business management, advanced construction techniques and construction economics of vocabulary that I imagine to be a requirement for the labor market	
	The study was superficial and simple for some materials (such as architecture, environment, lighting, acoustics, building systems)	Tourism is the most important financial resource	I was commissioned to study and design an industrial plant and did not have a basic knowledge of this type of establishment	Preservation and rehabilitation of old buildings	
	The architect must understand what he draws			Attention to creativity and innovation	
Third participant	My relationship may not look good with the architecture profession in the first stage.	The most important future projects are the work on residential complexes and the development of old neighborhoods.	Participate in the development of the master plan for ten cities	RAFT program is currently the architect's tool	
	The design was difficult to understand at the same time			Gis program represents an important work tool in project planning, housing and urban projects	
	Signs of understanding of the architectural profession start in the second stage				
	The single history of architecture was an important one through which ancient civilizations were identified			The most important requirements that the customer has requested to add a local touch on the buildings according to the city's specificity	RAFT program is currently the architect's tool
	The greatest benefit of this phase was learning the Max program (MAX)				
Fourth participant	The architectural profession is vague in the first stage	I am the Director of Engineering Consulting Company	I worked on many investment projects (hospitals - schools - university buildings)	There is weakness in detailed drawings (architectural and structural)	
	The second phase was stressful and useful at the same time	Needed young graduate engineers	Worked on external space designs	There is a weak regulation of time	
	The ambiguity	Some are specialized in	I worked on the	The need for	

	returned to the architecture profession in the third stage	architectural details with modern touch and others specialized in construction details	development of a number of religious buildings, including Mazar Qasim in the city of Hilla	cooperation in work
	There are misconceptions about the profession of architecture	Specialists in the work of the three models	The work has been provided with all the requirements of internal and external binoculars and external spaces	Increase interest in interior designs, green spaces and sustainability Local models are one of the requirements of the local labor market
	Link building with ocean, history and society	Some are sustainable	One of the most important requirements of the customer to work according to local models	Building buildings according to modern technologies
	There is a local and global character of the buildings	Work integrated projects with my team regarding internal and external design and taking into account the environmental aspects. How to implement the building in accordance with modern building regulations	Some customers were asking us to implement or supervise the implementation to be done according to the designer	Specialization in architectural study so that the student has the time to learn and train on a specific thing
	Structural and architectural details			
	Sense of understanding the profession through the fourth stage			
	My guesswork and practice had a distinctive addition to this stage			
Fifth participant	The first phase has explained the basic nature of the study and the definition of what architecture	Provide designs bearing the identity of the region while simulating the qualitative shift and development in the building materials used. To submit design proposals to a number of areas that represent key figures in the governorate.	Trying to reconcile the desire of the client and what is expected of a set of goals in the design process	Adopting design programs to the core Pay greater attention to building material and develop its curriculum to suit the requirements of the times
	The second phase represented the actual stage during which the architectural profession was dealt with			
	The third stage was a refinement of the identity of the student and determine his orientation			
	Phase IV represented a new gateway to the study of architecture			
	Phase V was a process of extracting			

	information and knowledge gained			
Sixth participant	Drawing is a handicap for those who did not possess talent	Make future projects more convenient	Continuing education for architecture profession	Students are taken from the first stage to the site
	I did not understand what architecture in the first stage			Focus on graphics, building materials and software
	In the third stage I began my understanding of the architectural profession			3Any student knows the strengths and weaknesses of a child
	No new information has been added to my fifth phase			

## 8. Conclusions on the results of the currere approach to the development of the academic curriculum

### 8-1 Regressive moment

- 1- Dedication of a large amount of time to complete the curriculum of the architectural course, such as the number of hours devoted to this subject within the curriculum, as well as the number of hours spent by the student outside the official working hours, as indicated by the participants.
- 2- Devoting a time to the formal aspects of the designs much more than the time devoted to study the nature of events and jobs in those projects.
- 3- The architectural academic study was characterized as indicated by the participants of the vocabulary such as architecture, environment, lighting, acoustics and building systems by superficiality and simplicity.
- 4- The participants pointed out the ambiguity about the architecture of the first stage and the fact that they began to understand architecture as a profession from the third stage and others in the fourth stage of the study of the architectural academic study.

### 8-2 Progressive Moment

- 1- Participants stressed the importance of awareness and depth in studying the technological potential in design and construction.
- 2- Participants pointed to the need to be aware of the inputs of the concept of competition in architecture and at all levels of design, operational, technical, consulting, etc.
- 3- Awareness of the problems of housing and urban environments.
- 4- Emphasize that the BIM system in the five grades as the most black and important practices.

### 8-3 Analytical Moment

- 1- Emphasize the need to be a graduate student in accordance with the requirements of the reality of the practice of technological aspects and construction or planning and skill of communication with customers and also mechanisms of integration with other engineering specialties.
- 2- Request for the adoption of mechanisms designed to produce designs for houses or commercial buildings to be environmentally friendly (BIOFILIC DESING).
- 3- The need to examine the site work before and during the process of construction of various projects.

### 8-4 Synthetically Moment

- 1- Participants pointed to the need to highlight disciplines in the architectural study in view of the progress in all areas related to the design of buildings.

- 2- Adoption of modern and specialized software because of its importance in achieving accurate results and direct and real.
- 3- Emphasize the important role that lighting receives as the element that distinguishes the internal and external spaces - at night.
- 4- Developing the mechanisms of critical thinking among students and different stages of the study in order to achieve the goal of the classroom and the least time and effort.

### **Recommendations**

- 1- To review the architectural academic program of the departments of architecture in local universities in terms of compatibility with the requirements of the local and global architectural labor market.
- 2- To emphasis on the relationship between the requirements of the labor market and the qualifications of the outcomes of the academic program as a prescription for the benefit of this academic product. Graduates or engineers are effective in providing the society with the potential to improve the reality through their integration with the requirements of the labor market.
- 3- To review some of the vocabulary of the premises and learning outcomes as representing the inputs of the academic program in line with the scientific development, especially in the technological aspect in all aspects of public life.
- 4- To promote an important set of skills that is the ability to analyze and activate the skills of critical thinking which in turn may result in reducing the unnecessary content of the course.

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