

Quality of Student Performance Criteria for the Academic Curriculum of the Architectural Department - Al-Nahrain University- Learning Outcomes as a Case Study

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Abstract: Higher education is the most important pillar of the development of human societies and the tools to promote them because it occupies a place in the preparation of technical and scientific frameworks that are qualified for economic and social development. In addition to its role in the manufacture and dissemination of knowledge and science, and the adoption of quality systems in university education is only to respond to the requirements of the community and stimulate creativity, and conduct scientific research to achieve sustainable development for the sake of human society.

This research focuses on one of the most important components of the Academic learning system: the Quality of students Performance Criteria (SPC) in the Academic education in the departments of architecture in Iraq, where the research sought to measure the quality of students Performance Criteria approved in the Department of Architectural Engineering - Nahrain University - for all stages of studying period and all the Learning vocabularies After describing them for the five stages and defined their Intended learning Outcomes which are associated with each subject and compared with the standards set by the (NAAB), one of the most important programs of Accreditation for Academic quality In the United States it is the only agency to approve professional programs in the United States in the field of architecture - and the extent to which the learning outcomes of the NAAB Were monitored in the learning outcomes of the Curriculum modules of the Department of Architecture - AL-Nahrain University and for all five grades. One of the results of the research was the apparent lack of

Research completing mechanism:

1. Establishing a conceptual framework that illustrates the concept of quality in university education.

2. Establishing a conceptual theoretical framework on what is meant by concepts such as (Students Performance Criteria- SPC) and intended learning outcomes as basic terms in the quality of the academic curriculum.

Second: research application framework

clear-cut deficiencies in the architecture department of the Nahrain University IN (SPC) related to the learning outcomes of the curriculum Learning Vocabularies with those of NAAB, which includes also all Learning Vocabularies for the five stages of studying Period, Therefore, the research recommended reviewing the students' Performance Criteria related to the intended learning outcomes in the Curriculum Vocabularies of the Architectural Department in AL - Nahrain University - to improve the quality of Academic Learning in it.

Keywords: quality, Intended Learning Outcomes, Student Performance Criteria, Curriculum's Vocabularies, NAAB.

1-Research problem

Lack of clarity on the quality of the Student Performance criteria based on the intended learning outcomes in the academic curriculum vocabulary of the Department of Architecture - Al-Nahrain University.

Research objective: Exploring the quality of the Student Performance criteria based on the intended learning outcomes in the academic curriculum vocabulary of the Department of Architecture - Al-Nahrain University.

Research Hypothesis: low quality of Student Performance criteria based on the intended learning outcomes of the academic curriculum vocabulary in the Department of Architecture-Al-NahrainUniversity.

3. Statement of Student Performance Criteria (SPC) for all the academic architectural curriculum items approved by the (NAAB), one of the most important university quality accreditation programs in the United States of America (National Architectural Accrediting Board) that are attached to the curriculum vocabulary to the study of the architecture curriculum.

4. Vocabulary description of the academic curriculum of the Department of Architecture Engineering - Al-Nahrain University for all levels of study with the intended learning outcomes, which results in student performance Criteria (SPC).

5.A comparison of what is achieved from learning

outputs in the academic curriculum vocabulary of the Department of Architecture Engineering - Al-Nahrain University, with those of the same vocabulary by the NAAB which is one of the most important university quality accreditation programs in the United States of America (National Architectural Accrediting Board).

6. Drawing comparative conclusions with a view to "Exploring the quality of the Student Performance Criteria (SPC) based on intended learning outcomes in the academic curriculum vocabulary of the Department of Architecture Engineering - Al-Nahrain University.

Introduction

Educators assert that education in general, and university education in particular, has both significant and dangerous dimensions because the educational process has social, economic, psychological, and cultural dimensions. Besides, it's an ongoing process that's not connected to a particular time, place, and generation. In the face of the challenges of the accelerated age, the era of competitive globalization, the changing demands of the labor market, and scarce employment opportunities, nations are striving to develop the educational system, as it has a direct impact on the economic and societal aspects of the individual. Society relies heavily on institutions of higher education to prepare its children to meet their needs, and to provide new vocational requirements and employment opportunities. In light of this, these institutions provide the criteria for a graduate to work in different professions. Within the framework of the concept of quality assurance that has emerged in industry intending to obtain industries and products that meet the standards and conditions that satisfy customers, the nations have taken steps to introduce and apply the concept of quality in education, to obtain an educational product that is a vital foundation for the development of industrial and technological products. Without the good agricultural product of the nation's children, who are capable of producing good industrial and economic products, and who can develop and build its future, there can be no quality in any aspect of society. One of the most important factors for the success of the educational institution is the availability of social standards among its children and the acquisition of social confidence in the institution. Educational institutions compete together in the use of effective mechanisms that lead to the acquisition of these qualifications by graduates. Students' enrolment in these institutions is accompanied by opportunities to seek employment and take into account the requirements of the profession. To provide accreditation requirements, the educational institution should provide the specifications of the graduate within the framework of what is known as the National Academic Standards for educational programs and the learning outcomes they contain. Whether or not accreditation is granted to the educational institution depends on the mechanisms by which the institution ensures

that its alumni acquire these qualifications and on the extent to which the graduate possesses them.

This research is concerned with the issue of ensuring the quality and accreditation of educational institutions which is considered the mainstay of the educational program, which are the learning outcomes that represent what the student should know and be able to perform after studying a particular course or educational program. Higher education institutions strive to formulate the desired learning products, to prepare students who can meet the demands of society and to develop them, and what the labor market requires in the light of future variables and the evolving knowledge and skills involved. The academic program in its vocabulary is an important determinant of the academic educational process but is further determined by the resulting learning outputs that directly affect changes in student personality in terms of the nature of new knowledge, skills, and attitudes acquired. Intended Learning Outcomes are the basic information and concepts that the student must acquire upon completion of the academic program until graduation.

1. the cognitive framework of the research:

1-1 The concept of quality in education:

Attention to the subject of quality in educational institutions has become a major concern among those concerned for its significant role in continuous improvement. Quality in education is defined as "a basic business strategy that contributes to the provision of products and services to satisfy the internal and external customer and meets its implicit and stated expectations." (Salama, 1996, p. 2).

Quality in education is considered by (Ashiba, 2000, p. 12) as a set of standards and characteristics to be found in all components of the educational process, whether in terms of inputs, processes, or outputs that meet the needs, requirements, wishes, and needs of the learners and achieve those standards through the effective use of all material and human elements.

Both Jomtien & Dakar focus on the characteristics of learning in their definition of the quality of education, where they indicated that they represent "the introduction of the desired characteristics of learning through a process of processing based on competent teaching staff familiar with Pedagogues and integrated and appropriate educational curricula under a fair and equitable system of governance" (EFA, 2005:29).

Besides, according to (Al-Khamisi, 2007, p. 5) point of view, quality in education is the process of meeting the agreed standards and levels of efficiency and effectiveness of the educational system with its various components (inputs, processes, outputs, and environment) to achieve the highest value, efficiency, and effectiveness of both the objectives of

the system and the expectations of the applicants (students, society).

Quality is a philosophy that concerns any organization in all its components and for the long term, to create an organizational culture in which quality and excellence play an essential role. The quality culture and its programs lead to the participation of all officials in the management of the educational institution. Students and faculty become part of the quality culture program. (Evan, 1997: 12).

1-2 Quality and accreditation System:

Quality means the driving force required to effectively advance the university education system to achieve its goals and mission, entrusted to it by society and by the many parties with an interest in university education. Contemporary global social discourse consensuses that university education will be an arena among world powers, especially in a world of increasing interdependence. However, education systems are always criticized, as this monetary process seems to be a phenomenon involving scientific experts with different perspectives. According to some, the developing community must adopt a descriptive project aimed at introducing higher education in developing countries so that its deviations can be adjusted and move slightly behind the scientific progress of the world's top-ranking countries. Quality and dependency standards are an urgent necessity to enable the current realities of university education in architectural engineering departments to be rectified and developed (Al-Hajj, 2008, pg. 3).

1-2-1 Quality Assurance

Quality has been defined as the means to ensure that academic standards derived from the mission of the concerned person have been defined and achieved in accordance with the corresponding standards, both regionally and globally, and that the quality of educational, research, and community participation opportunities is adequate and meets the expectations of the different types of beneficiaries. (Al-Hajj, 2008, pg. 3)

1-2-1-1 Domains of educational quality:

The concept of quality as agreed at the UNESCO Conference on Education, held in Paris in October 1998, states that quality in higher education is a multidimensional concept that should encompass all the functions and activities of education, such as:

1. Curriculum.
2. Educational programs.
3. Scientific research.
4. Students.
5. Buildings, facilities, and tools.

6. Providing services to the local community.

7. Internal self-education.

8. Establish internationally recognized comparative quality standards. (Al-Khafaji, 2006, pg. 45).

1-2-1-1- The importance of quality in education:

1. Reviewing the direct educational product, which is the student.

2. Review of the indirect educational product.

3. Detection of waste places and their different types.

4. The development of education through the evaluation of the educational system and the diagnosis of deficiencies in inputs, processes, and outputs so that the evaluation becomes a genuine development and effective quality control of the educational service. (Al-Qazzaz, 2010, pg. 19)

1-2-2 Curriculum:

A distinguished and structured set of courses leading to the academic degree associated with this program (Al-Hamali, 2008, pg. 6).

1-2-3 Intended Learning Outcomes

It is the basic information and concepts that the student must acquire upon completion of the academic program until graduation. (Al-Hamali, 2008, p. 21)

1-2-4 Academic Program

A set of mechanisms to achieve the set of knowledge, skills, and attitudes offered by the University within and outside its walls to achieve the desired learning output from an academic program within a limited period (Al-Hamali, 2008, pg. 9)

1-2-5 Accrediting

The set of procedures and processes carried out by the accreditation body to ensure that the enterprise has fulfilled the quality requirements and specifications of the evaluation institutions. Its programs conformed with declared and adopted standards and it had in place regulations to ensure the quality and continuous improvement of its academic activities in accordance with the stated controls published by the Office, namely, confirmation and empowerment of Iraqi universities to acquire a distinct status and a single identity and recognition that the steps taken to improve quality were successful.

The National Architectural Accrediting Board (NAAB) program has also been defined as the external quality audit process used to examine universities, colleges, and educational programs to ensure and improve quality. Private

independent non-profit organizations are accredited by educational institutions. (Al-Hamali, 2008, pg. 29)

1-2-6 National Architectural Accrediting Board (NAAB)

It is the only agency to adopt professional programs in the United States in architecture since most alumni enrollments in the United States require a graduate student to be licensed from NAAB. This degree is essential in preparing for professional architecture practice. The program also supports university architectural schools with an emphasis on integrating the educational process from basic artistic and engineering principles, business, innovation, and innovative design exploration. This system assumes that there are basic criteria to be found in an architectural graduate which are:

- Basic knowledge
- the design
- communication
- Practical Training

Considering that the gap between technical information and practical training is a strong indicator of the weakness of the educational program. The education program must also achieve several indicators:

- Competence in a range of intellectual, spatial, artistic, and personal skills.
- Understand the historical, social, cultural, and environmental context of architecture.
- Architectural design problem-solving.
- Integration of technical and health systems and safety requirements.
- Understanding of the roles and responsibilities of architects in society. (Source: The National Architectural Accrediting Board, Inc. 1735 New York Avenue NW. Washington, DC 20006 www.naab.org).

1-2-7 Learning Outcomes and their importance

Language describing what a student should know and be able to perform. The student is expected to complete it at the end of his study of a specific course or educational program. The identification of learning outputs is of great importance to all parties involved in the educational system. The following are important for the teacher, the student, and the educational institution:

1-3-1 Learning Outcomes and their importance for the teacher:

The formulation of specific and accurate learning outcomes helps the teacher to accomplish many tasks, including:

-Organizing its work to make it easier for its students to acquire the intended learning products away from randomness.

-Learning outcomes help focus on important priorities in line with students' needs.

-Course content selection.

-Using teaching and learning strategies that enable students to acquire intended learning outcomes.

-Identify educational activities that achieve the desired objectives.

-Choosing appropriate and objective assessment methods to verify the extent to which the student acquires the intended learning outcomes.

-Increase the teacher's opportunities to communicate with colleagues and discuss the learning products targeted for college students so that they can see their mission.

-Sustainable professional development in the light of the results of evaluating students' learning outcomes. (Al-Obaidi, 2007, pg. 54).

1-3-2 Learning Outcomes and its importance for the student

-Achieving better learning, where all leadership efforts at the College and those of faculty members are geared towards the acquisition of the intended learning products by the student.

-Self-learning in the light of clear and specific goals, the student chooses activities and tasks according to his inclinations and preparations to achieve these goals.

-Active collaboration between student and faculty members in the acquisition of intended outputs.

-Self-evaluation and up-to-date performance in the light of specific clear rules.

-Increased performance and higher levels of reflection to accomplish the desired tasks.

-Increasing the chances of success to gain the desired learning outcomes. (Majid, 2008, pg. 39).

1-3-3 Learning Outcomes and their importance for the educational institution:

-Ensure the overall quality of the educational institution.

-Unify the efforts of the employees of the institution towards specific objectives.

-Reassuring the achievement of the vision and mission of the institution in the light of students' learning outcomes.

-Provide clear accounting rules that can be applied to all parties concerned.

-Identifying strengths and weaknesses and addressing them within the framework of achieving the vision and mission of the institution.

-Equal opportunities among students of corresponding institutions (Majid, 2008, pg. 41).

1-3-4 Learning Outcomes and their importance for the community

- Society's confidence in the educational institution that its children receive well-founded education and training that meets the needs of professions that promote development processes.

- Permanent upgrading of societal professions.

- Providing opportunities for the people of society, which will be reflected in raising the standard of living of the individual and society.

- Development of citizenship and community values and skills (Majid, 2008, pg. 42).

1-3-5 Learning Outcomes and Curriculum Organization:

The Curriculum includes many elements, the most important of which are: academic standards, learning outcomes, curriculum content/curricula, and strategies for teaching them as well as the activities and methods used in teaching, and assessment methods. The Curriculum is an integrated and dynamic system, where each element is influenced by and integrated with the other, and one requires the development of the rest of the system as a whole. So it's a circular process, so there's no particular starting or ending point in the process of organizing the curriculum, it's a construction process that complements each other, and its elements are consistent.

The new curriculum or course is designed in the light of the following actions:

1. The starting point is the academic standards adopted by the educational institution.

2. Derived from these criteria from the targeted learning outputs of the learning program.

3. The definition of the curriculum and the relationship between the curriculums.

4. Defining and formulating the learning outcomes related to each course. (Salama, 1996, p. 54).

1-3-6 Purpose of the evaluation of student learning outputs:

There are multiple purposes for the evaluation of learning outcomes among students of higher education institutions, the most important of which is (Salama, 1996, p. 56):

-Identifying the level of achieving the desired academic standards.

-Documenting what students have learned, using it to fill multiple jobs, and enrolling in postgraduate programs.

-Recognize the rate of growth of the educational institution's performance by comparing the past, current, and subsequent levels of student performance.

-Presentation of indicators for the accounting of the University and colleges and their staff.

-Help a faculty member identify learning outputs that students have mastered and those that require additional effort to achieve.

-Deciding on the accreditation of the university or college by the accreditation body.

-Providing the student with feedback that helps him identify strengths and weaknesses in his performance.

-Increasing students' sustainable motivation for greater learning and work.

-Provide a license to transfer a student to a higher study group or select specific courses of study.

-Predicting students' success in studying courses at the postgraduate level or with professional success thereafter.

-Provide data on the quality of teaching and learning strategies used by university professors.

-Make comparisons between the level of achievement of the desired academic standards and the amount of expenditure on university education, and make decisions on the maximum benefit.

-Provide the College with strong evidence of the achievement of the standards of its educational programs, the quality of performance of its members, and the determination of their rewards and incentives.

It is clear from the above that the results of the evaluation of learning outputs for student performance have been used by students, professors, university administration, and faculty to improve the performance of the inputs and processes of the educational system; this, in turn, reflects again on the development of the system's output which is represented in the performance of students.

2. Application framework for research:

The practical study includes the following stages:

2-1 Review a table showing the Student Performance Criteria (SPC) that the (NAAB) stresses that they must be achieved in the academic curriculum through the intended learning outcomes of the curriculum for the subjects' vocabulary in the specialization of architecture.

2-2 Name and explain what each NAAB standard means

2-3 Preparation of a table showing a description of the curriculum in the Department of Architecture Engineering, Al-Nahrain University, for all stages of study attached to the targeted learning outputs of each study module according to the Self-Assessment Report for the Department of Architecture for the year (2015-2016).

2-4 Preparing a table showing - through shading and based on the foregoing in paragraphs (2-1-, 2--2-, 2-3-) - what has been achieved from the SPC - Students Performance Criteria - in the section Architecture Engineering - Al-Nahrain University compared to what should be achieved according to the vision of one of the most important university quality accreditation programs in the United States - the National Architectural Education Accreditation Board - or NAAB.

2-5 Draw comparative conclusions

2-1 Review a table showing the Student Performance Criteria (SPC) that the NAAB stresses that they must be achieved in the academic curriculum through the Intended Learning Outcomes of the curriculum for the subjects' vocabulary in the specialization of architecture. As in Figure (1).

(The National Architectural Accrediting Board, Inc. 1735 New York Avenue NW. Washington, DC 20006 www.naab.org)

2-2 Naming and explaining the meaning of each standard in the NAAB Quality Accreditation Program

Accreditation requirements for the year 2009 of the International Architectural Accreditation Board (NAAB), the second part clarifies the accreditation requirements for educational outcomes and curriculum that the academic program should document its current performance in relation to three main themes: (Source: The National Architectural Accrediting Board, Inc. 1735 New York Avenue NW. Washington, DC 20006 www.naab.org

-Students learning.

-The theoretical framework of educational curricula.

-Student achievements.

Form 1 illustrates student performance criteria (SPC) - which NAAB stresses must be achieved in the academic curriculum through intended learning outputs of the curriculum for the vocabulary of study materials in architecture.

(The National Architectural Accrediting Board, Inc. 1735 New York Avenue NW. Washington, DC 20006 www.naab.org)

Moreover, academic programs must show that graduates have learned to the level of achievement the indicator or defined in (SPC) or (Student Performance Standards), which will be explained, assessing the degree to which academic programs adhere to NAAB requirements through a review of the student's achievement. In this section, the academic program has to show how students entering these academic programs are evaluated, and document how the SPC (Student Performance Standards) - from the point of view of the educational experience they obtained.

The university must provide evidence or proof that its graduates have met every standard required in the work of the semester. The criteria for evaluating student performance (SPC) include two levels of achievement that must be achieved:

-Understanding: Ability to classify, compare, summarize, explain or also explain the information.

-Ability: Professionalism in the use of specific information to accomplish a particular task, correct selection of appropriate information, correct application of information to solve a specific problem, as well as identification of effects on implementation if initiated.

(Source: Architectural Accrediting Board, Inc. 1735 New York Avenue NW. Washington, DC 20006 www.naab.org)

The Student Performance Standards (SPC) for NAAB have been organized in certain fields to better understand the relationships between the standards adopted for that academic institution.

Field (A): includes Critical Thinking and Representation:

Architects must be able to build abstract relationships and understand the impact of institutional ideas on the research and analysis of multiple social, political, economic, cultural, and environmental environments or oceans. This ability includes the ability to deal with a wide range of methods used to think about architecture and includes writing, skill achievement, speech, drawing, and motif work.

The aspirations or ambitions of the students:

-Extensive educational knowledge.

-Develop a lifelong love of aspiration and ambition.

-Communicate graphically through a range of means.

-Recognition or perceiving how proofs or indications are rectified.

A-1 Communication Skills:

Ability to read, write, speak and listen effectively.

A-2 Design Thinking Skills:

The possibility of asking clear and specific questions and using abstract ideas to interpret information, taking into account contradictory views, reaching conclusions supported by well-justified reasons, and testing alternatives to enterprise output on relevant criteria and measurements.

A-3 Visual Communication Skills:

The possibility of using appropriate means of representation or resurfacing, such as manual painting and digital techniques skills, as well as the possibility of transferring important formal elements at each stage of either career program preparation or design process.

A-4 Technical Documentation:

The possibility of making drawings with a clear technique, writing specifications in general terms, preparing models that explain and define how materials, systems, and appropriate components of the building design are to be installed.

A-5 investigation skills

The possibility to compile, evaluate, record, apply, and make comparisons to relevant information that appear in architectural classrooms or during design processes.

A-6 Fundamental Design Skills

The potential to use and shape architectural and environmental principles in design.

A-7 Use of Precedence

The possibility of examining and understanding the basic principles that appear in previous examples to choose as to the possibility of including such principles in architectural and urban projects.

A-8 Ordering Systems Skills

Understand the basics of organizing or arranging each of the natural and formal systems and the capacity of each of them to extend the information to the design, whether it is two-dimensional or three-dimensional.

A-9 Historical Traditions and Global Culture:

Understanding harmonious laws, as well as contradictory or far-reaching laws and traditions of architecture, outer spaces, and urban design, including examples of natural, indigenous, heritage, local, regional, eastern, western, northern, and southern environments, and those of the southern hemisphere, taking into account their climate, ecological, technological, socio-economic, public health, and cultural factors.

A-10 Cultural Diversity

Understanding the contradiction or difference in needs, values, behavior, physical qualities, social and space patterns that characterize different cultures or civilizations and individuals, and what this difference or contradiction requires on the societal role and responsibilities of architects.

A-11 Applied Research

Understanding the role of applied research in determining function, form, systems, and what they require in humanitarian situations and conduct or behavior.

Field (B): It includes an understanding of the mechanisms for implementing integrated building systems with each other (Integrated Building Practices), and technical skills and knowledge:

Architects are invited to understand the technical concepts of design, systems, and materials so that they can apply this understanding to the services that can be used in the building. In addition, they - the students - should appreciate the role of these systems and materials in the design decision-making processes and the impact of these decisions on the environment. The educational aspirations or aspirations of the students include the following:

- Creating buildings designed with integrated systems.
- Achieving a structural understanding of the origin.
- Integration of life safety systems.
- Integration of accessibility within the building.
- Apply the principles of sustainable design.

B-1 Pre-Design

The possibility of preparing a comprehensive functional program for an architectural project, such as preparing a specific assessment for the needs of the customer or user, defining innovative requirements for the space and equipment that occupy it, analyzing the site conditions (including the buildings on the site), reviewing the laws and standards related to the construction of the building and evaluating the determinants of the project, as well as

defining the basis for choosing the site for the project, and design evaluation criteria.

B-2 Accessibility

The possibility of designing sites, internal uses, or events, as well as designing systems to provide independent and integrated personnel use while providing physical and sensory isolation.

B-3 Sustainability

The possibility of designing projects that harmonize, preserve, and reuse natural and built sources, as well as provide healthy environments for occupants/users, and reduce environmental impacts on the structure and operation of the building in future years through such means as carbon-neutral design, bio-design, and efficient energy.

B-4 Site Design

Responsiveness or interaction with site characteristics such as soil, the shape of the land (topographical), vegetation, rain pools (vents) are all of the above is taken into account in the design development of the design project.

B-5 Life Safety

Possible application or adoption of basic principles of life safety regulations with emphasis on escape systems or escape exits.

B-6 Comprehensive Design

The possibility of producing an integrated architectural project that shows the possibility of making design decisions on different scales and includes achieving integration with (SPC) - Student Performance Criteria.

A-2 Design Thinking Skills

A-4 Technical Documentation

A-5 Investigative Skills

A-8 Ordering Systems Skills

A-9 Historical Traditions and Global Culture

B-2 Accessibility

B-3 Sustainability

B-4 Site Design

B-5 Life Safety

B-7 Financial Considerations

Understanding the fundamentals of building costs, such as land acquisition costs, project financial allocations, financial

feasibility studies, operating costs, and construction accounts, with emphasis on the building's periodic operational accounts.

B-8 Environmental Systems

Understanding environmental design principles such as comprehensive energy, industrial and natural heating and cooling, indoor air quality, solar guidance, daylight, and industrial light, as well as obtaining appropriate means to assess the performance of these systems.

B-9 Structural Systems

Understanding the basic principles of structural behavior, taking into account gravity and lateral forces, as well as the evolution, scope, and appropriate applications of contemporary structural systems.

B-10 Building Envelope Systems

Understanding the basic principles, appropriate applications, and performance of the building's perimeter systems, which are linked to the way the building is installed and which affect the overall performance of the building as well as the aesthetic, moisture transmission, and robustness, as well as energy sources and raw materials.

B-11 Building Service Systems

Understanding the basic principles, appropriate applications, and performance of the building's service systems such as water and sewer, electrical, vertical movement, safety systems, and fire protection systems.

B-12 Building Materials and Assemblies

Understanding the basic principles used in the appropriate selection of construction materials, products, vehicles, and building installation methods, which depend on their internal characteristics and their respective performance potential as well as their environmental and reuse potential.

Field (C): Leadership & Practice

Architects need to have the ability to manage, defend a particular opinion or explain the rationale for adopting one position rather than another, act under the laws, adopt appropriate creation and determine what is beneficial to the customer as well as to society and the public. This includes maturation and being able to do business, leadership, and skills, so teaching students is to look below to achieve what an architect needs to be or what he should possess from the characteristics, as follows;

- Knowledge of community and professional responsibilities.
- Understanding of building construction works.

-Cooperation and negotiation with the client and consultants in the design process

-Note the exact relationship between the roles of architects and other disciplines.

-Integration of community service and the practice of architecture.

C-1 Collaboration

The possibility of working in collaboration with others in multidisciplinary teams for successful completion of project design.

C-2 Human Behavior

Understanding the relationship between human behavior, the natural environment, and the design of the built environment.

C-3 Client Role in Architecture

Understand the architect's responsibility to extract, understand and reconcile the needs of the beneficiary, owner, and user groups of the building, as well as with other public areas and society in general.

C-4 Project Management

Understanding the modalities or methods of competition between committees or applicants, as well as the selection of consultants and building construction and installation teams and recommending methods of delivery of the project to the beneficiary.

C-5 Practice Management

Understanding the fundamental principles of the architectural profession, such as financial management and business planning, time management, management risks, calm, the possibility of finding solutions, the separation of sides or parties to conflicts, and recognizing or distinguishing areas affecting the practice.

C-6 Leadership

understand the skills and techniques that architects use maturely in the design and construction of buildings, as well as understanding the environmental, social, and aesthetic themes of their societies.

C-7 Legal Responsibilities

Understanding the responsibility of architects by the locals and the customer as defined by the law in force, as well as understanding building codes (codes of competence of different buildings) regulations in force, understanding of professional service engagements, understanding of the conditions for the implementation of spaces and partition

controls, as well as environmental legislation, historical preservation, traffic and motor traffic laws.

C-8 Ethics and Professional Judgment

Understanding ethical issues in professional provisions concerning social, political, and cultural subjects in the process of architectural design and practice.

C-9 Community and Social Responsibility

Understand the responsibility of architects when working in the general community, respect historical sources, and improve the quality of life within the local neighborhood as well as at the wider level.

(Source/ the National Architectural Accrediting Board, Inc. 1735 New York Avenue NW. Washington, DC 20006

www.naab.org).

2-3 preparing a table showing a description of the courses in the Department of Architecture - Al-Nahrain University, and for all academic levels attached to the learning outcomes targeted for each academic subject according to the Self-Assessment Report for the Department of Architecture for the year (2015-2016).

Table 1 shows (a description of the courses in the Department of Architecture - Al-Nahrain University, and for all academic levels attached to the intended learning outcomes for each study subject according to the Self-Assessment Report) for the Department of Architecture for the year (2015-2016). (Source / prepared by the researcher – by referring to (Aljumaily & Hassan, 2016)

Stage	Subject name	Material characterization	learning outcomes
Stage one			
AREQ 110	Architectural Design	To inform students about basic designs and systems for compiling different forms and relationships between them, and to begin preparing abstract geometric compositions based on two and three dimensions.	At the end of the class, a student can design by using the basics of a two-dimensional design and crafting the idea and design elements through the basic principles of composition, and using collage technology to show the design output.

AREQ 111	Architectural Graphics	Develop the student's abilities in architectural drawing, creating plans, and expressing his ideas and designs in modern ways and high-quality capabilities.	At the end of the class, the student can use pencils, ink, and different colors to show the designs as well as the shadow techniques and show the interfaces and draw them with passages and other types of drawings, such as isometric.
AREQ 112	Freehand Drawing	Develop students' abilities in free drawing and methods of using color.	1/ Develop the student's ability in the basics of choosing appropriate formations and colors. 2/ Training the students' eyes to perceive small details in the real world and perceive proportions, movements, shadows, shadows, light, and color. 3 / The student will be able to choose the appropriate technology in the topics of presentation and architectural design.
AREQ 113	Principles of Art and Architecture	Review and analyze elected models of local and global architectural work according to general artistic taste and elements.	At the end of the class, the student will be able to analyze and critique the idea of architectural space, mass, and form in many respects from the scientific and artistic side.
MAT	Mathematics	Introduce the	At the end of

H 110		student to the methods of solving mathematical equations using well-known geometric functions.	the class, the student will be able to solve mathematical equations using well-known geometric functions.			The student acquires sufficient practical experience to produce architectural plans with all their details and according to scientific methods of presentation, considering the subject of presentation as the language in which the architect deals.	At the end of the class, the student obtains sufficient practical experience to produce architectural plans with all their details and according to the scientific methods of presentation, considering the presentation subject is the language in which the architect deals.
UREQ 112	Computer programming I	Introduce the student to the possibilities provided by modern programs in dealing with architectural plans in creating two-dimensional plans	At the end of the class, the student can start applying computer software to design various engineering schemes.	AREQ 212	Architectural Graphics		
UREQ 111	English Language I	Students define the basic terms of architecture and grammatical styles that are correct in the formulation of sentences.	At the end of the class, the student can formulate sentences in English and use different geometric terms in English.	AREQ 213	Freehand Drawing	Activating the role of manual drawing in the methods of showing the design idea.	At the end of the class the student can: Draws using watercolors and posters, taking into account tones and reflections, drawing trees and green areas, drawing perspective and furniture.
PHYS 110	Physical Properties of Materials	Introduce the student to the methods of solving mathematical equations using well-known geometric functions.	At the end of the class, the student may determine the most important characteristics of the building materials and their field of use in building construction.			Introducing some of the prevailing construction systems to enhance design skills, as well as preparing detailed drawings for multi-storey buildings.	At the end of the class the student will be able to: 1/ Choosing the right construction material. 2/ Using different techniques, building skills, materials, and tools. 3 / Preparing detailed drawings for multi-storey buildings
Stage two							
AREQ 210	Architectural Design	Introducing students to the nature of architecture as a benefit, durability, and beauty, with an emphasis on the concept of local privacy and integration with the urban context and landscape.	At the end of the lesson, the student gets the experience that enables him to understand the design and evaluate the project he designed, and be able to provide detailed plans for the residential houses.	AREQ 214	Building Construction II		
				UREQ 211	Arabic Language	Observe the grammatical rules of the language with the meanings of the words.	At the end of the lesson, the student will be able to understand and apply some of

			the most important rules of the Arabic language in the field of constructing linguistic phrases.			architectural orientation, preparation of general schemes manifestations, detailed and service schemes.	their general, detailed, and service schemes.
AREQ 212	Computers II	Introduce the student to the possibilities provided by modern programs in dealing with architectural plans in creating two-dimensional plans.	At the end of the class, the student can start applying computer software to design various engineering schemes.	AREQ 316	Building Construction III	The importance of the structure and its relationship to the design process, and the importance of architectural details, as the choice of the structure appropriate for each building, interact directly with its function and external final form.	At the end of the lesson, the student can deal with structures of different designs and details for different types of buildings.
AREQ 220	Surveying	Introducing the student to the most important mechanisms adopted in calculating land areas through modern equipment in this field.	At the end of the class, the student can be familiar with the most important mechanisms adopted in calculating land areas through modern equipment in this field.	AREQ 311	Structure II	Calculating the loads for the designs of the buildings, which are built with reinforced concrete, for the elements of the building, columns, ceilings, etc.	At the end of the lesson, the student can calculate the values of fixed and mobile loads and the various building elements of the reinforced concrete blocks.
AREQ 215	Engineering Management & Economy	Introduction of engineering management, objectives, and rules, as well as project planning, steps, and time required for completion.	At the end of the lesson, the student can know the subject of engineering management, its objectives, and rules, as well as how to plan the project, its steps, and the time required to complete it.	AREQ 317	Urban Planning	deals with the concepts of planning and the concept of urban planning, the city as a concept, its definition, and emergence, the concept of the master plan and the structures of urban space, land uses in urban areas	At the end of the lesson, the student will be able to explain how Mesopotamian, Egyptian and Roman cities, Renaissance cities, and general housing problems emerged.
Stage three							
AREQ 310	Architectural Design	The architectural design of service and public buildings, including objectives, appropriate	At the end of the lesson, the student can design several public and service buildings with different uses, and prepare	AREQ 312	History of Iraqi Architecture I	Study of the thought of the architecture of the	At the end of the lesson, the student can understand the

		Mesopotamian civilization and a study of the factors affecting it during the different eras up to the fall of the Babylonian Empire.	Iraqi architecture in history and its different characteristics during the Warka, Sumerian, Akkadian, Ur, Babylonian, Kishite civilizations, etc.			terms of architectural presentation and the ability to link it with design.	program.
Stage four							
AREQ 313	Interior Design	Introducing students to the concepts of interior design and identifying the main and secondary elements of this concept and how to design them.	At the end of the lesson, the student can understand the terminology of interior design and identify the main and minor elements of this concept and how to design them.	AREQ 410	Architectural Design	Increasing and developing the student's ability to plan and design, and raising students' knowledge of urban design principles	At the end of the lesson, the student can work on the functional program for large urban projects, as well as the possibility of dealing with urban content, with its different uses.
AREQ 323	Landscape Design	Introducing the student to the concept of open space, its levels, methods, and elements of its design, with the application of this in selected projects.	At the end of the lesson, the student can understand the standards and levels of open space, methods, and elements of its design with the possibility of applying this in selected projects.	AREQ 415	Housing	Introduce the student to the concept of housing. Definition of the concept of occupancy rates, the definition of the housing unit program. A statement of the concept of housing style and its types. Introducing how to initiate the design of the residential complex. Definition of schematic patterns of the road network. A statement of the foundations and controls for setting the housing program and the concept of housing policy.	At the end of the class, the student can know what is meant by the term housing, occupancy rates, and the definition of the housing unit program. A statement of the concept of housing style and its types. Introducing how to initiate the design of the residential complex. Definition of schematic patterns of the road network. A statement of the foundations and controls for setting the housing program and the concept of housing policy.
AREQ 315	Sanitary Services	Introducing the student to the inlets and outlets of pure water and sewage pipes, methods of calculating the consumption of buildings, and methods of designing their paths.	At the end of the lesson, the student can understand the inlets and outlets of pure water and sewage pipes, methods of calculating the consumption of buildings, and methods of designing their paths.	AREQ 424	Air-Conditioning Services	Introducing the student to the cooling and heating loads and the types of	At the end of the lesson, the student can understand the cooling and
AREQ 314	Computer	Introducing students to the importance of the 3D MAX program in	At the end of the lesson, the student can design using the 3Dmax				

		devices used, in addition to calculating the required load for certain models of spaces.	heating loads and the types of devices used, in addition to calculating the required load for certain models of spaces.			research curriculum, the characteristics of the sciences, the stages of development of the knowledge ladder, what science is, and what its characteristics are.	scientific research, the characteristics of science, the stages of evolution of the ladder of knowledge, what science is, and what its characteristics are.
AREQ 412	Islamic Arab Architecture	The course aims to enhance the student's knowledge of the history of Arab-Islamic architecture and the most important functional patterns and basic elements of it.	At the end of the lesson, the student can know the history of Arab-Islamic architecture and the most important functional patterns and basic elements of it.			To define the student for what constitutes the scientific methodology in research, what is meant by logic, its forms, and the types of fallacies in research.	Introducing the student to the postulates on which the scientific methodology is based in research, what is meant by logic, what are its forms, and the types of fallacies in research.
AREQ 417	Architecture and Climate	Introduce the student to a broad information base of the basic concepts of the interrelationship between the natural environment and architecture.	At the end of the class, the student may know a broad information base for the entire basic concepts of the reciprocal relationship between the natural environment and architecture.			Introducing the student to the meaning of the terms hypothesis, theory, concept in the research and what are its benefits. Introduce the student to the stages of formulating a research problem (general and specific).	Introducing the student to the meaning of the terms hypothesis, theory, concept in the research and what are its benefits. Introduce the student to the stages of formulating a research problem (general and specific).
AREQ 413	Urban Design	Introduce the student to urban theories and their various orientations, how to deal with the urban fabric, and the mechanisms of application of the strategies of these theories and various conservation methods.	At the end of the course, students can learn about urban theories, their different orientations, how to deal with the urban fabric, and the mechanisms for applying these different theories and conservation methods.				
AREQ 414	Design Methodology	To inform the student of the purpose of studying the scientific	At the end of the course, a student may know the curriculum of				
				AREQ 416	History of Architecture II	1/ Describe and explain the main influences on architecture throughout history. 2/ Follow the development of architecture throughout history. 3 / Explain the basic characteristics	At the end of the class, the student can diagnose the basic architectural styles and features and identify the most important architectural examples of that style.

		of each style in architecture.				between cognitive systems theories and architecture theory, and discussing the most important postmodern theories, currents, and schools.	architecture theory and the relationship between theories of knowledge systems and architecture theory, and discuss the most important postmodern theories, their currents, and schools.
Stage five							
AREQ 511	Architectural Design	The student is left with the opportunity to express all the values through his intellectual and design proposals for the chosen project, in which we confirm that it is one of the real projects proposed by the various state departments and has a clear approved curriculum, or to be presented by the professors to solve a specific problem or a project that is environmentally distinct or topographically or has quantitative requirements bearing a high-level official character, or a project dedicated to solving a problem or crisis posed on the architectural scene.	At the end of the lesson, the student can learn how to express through his intellectual and design proposals for the selected project, in which we confirm that it is one of the real projects proposed by the various state departments and has a clear approved curriculum, or that it is proposed by the professors to solve a specific problem, or an environmentally or topographically distinct project, or with quantitative requirements bearing a high-level official character, or a project dedicated to solving a problem or a crisis on the architectural scene?				
				AREQ 522	Specification and Estimation	The student acquires sufficient skill in estimating the costs of the various engineering projects, the materials used in them, the time required for their completion, the precise details of construction items, and the international specifications for them.	At the end of the class, a student can acquire sufficient skill in estimating the cost, time, and global specifications of different engineering projects and materials used in them, and the exact details of the construction vocabulary.
				AREQ 512	Profession Practice	Introduce the legal duties and rights of the architect.	At the end of the class, the student may know the legal duties and rights of the architect.
AREQ 513	Theories of Architecture	Introducing contemporary architecture theory, dealing with the historical background of architecture theory and the relationship	At the end of the class, a student can know what contemporary architecture theory means, address the historical background of	AREQ 521	Philosophy of Architecture	It deals with the theoretical and historical background of philosophy in architecture and the most important trends and intellectual propositions in the modern European, Greek, or Islamic philosophical field, Arab	At the end of the course, the student can understand the theoretical and historical background of philosophy in architecture and deal with the most important intellectual trends in modern European, Greek, or

3. Results

The results of the research, following the application of the two-track comparison between student performance Criteria (SPC) adopted at the NAAB and those approved at the Department of Architecture Engineering - Al-Nahrain University, were divided into two parts:

3-1 It can be deduced from reviewing the comparison between the two tracks for each academic subject and the percentage of the learning outcomes as a criterion for the student's performance of the five-stage curriculum as follows:

The first stage:

Table 2 shows the results extracted from Table No. (2) in the percentage of what has been achieved of students' performance Criteria according to (NAAB) in the Department of Architecture - Al-Nahrain University / the First stage.

First stage	Number of (SPC) to be verified according to NAAB	The number of (SPC) achieved in the Department of Architecture - Al-Nahrain University.	Percentage of (SPC) achieved: (achieved)/(total)	Percentage as an outcome of achieved (SPC) compared to the NAAB.	The percentage of commitment of the first stage to (SPC) according to (NAAB) was (21.6%)
Study vocabulary					
English	3	0	(3) / (0)	%0	
computer programming	8	1	(8) / (1)	%12	
Mathematics	3	1	(3) / (1)	%33	
building materials	21	3	(21) / (3)	%14	
Architectural design	19	7	(19) / (7)	%36	
Architectural drawing	7	1	(7) / (1)	%14	
Free drawing	7	2	(7) / (2)	%28	
Architecture evaluation	15	4	(15) / (4)	%26	

The second stage

Table 3 shows the results extracted from Table No. (2) in the percentage of what has been achieved from the students' performance Criteria according to (NAAB) in the Department of Architecture - Al-Nahrain University / the Second stage.

Second stage	Number of (SPC) to be verified according to NAAB	The number of (SPC) achieved in the Department of Architecture - Al-Nahrain University.	Percentage of (SPC) achieved: (achieved)/(total)	Percentage as an outcome of achieved (SPC) compared to the NAAB.	The percentage of commitment of the second stage to (SPC) according to (NAAB) was (17.12)
Study vocabulary					
Arabic	2	0	(2) / (0)	%0	
Architectural design	23	6	(23) / (6)	%26	
Architectural drawing	5	1	(5) / (1)	%20	
computer applications	10	2	(10) / (2)	%20	
Free drawing	6	1	(6) / (1)	%16	
Engineering Management	19	6	(19) / (6)	%31	
building installation	20	3	(20) / (3)	%15	
Area	11	1	(11) / (1)	%9	

Stage three

Third stage	Number of (SPC) to be verified according to NAAB	The number of (SPC) achieved in the Department of Architecture - Al-Nahrain University.	Percentage of (SPC) achieved: (achieved)/(total)	Percentage as an outcome of achieved (SPC) compared to the NAAB.	The percentage of commitment of the third stage to (SPC) according to (NAAB) was (% 25.8)
Study vocabulary					
Architectural design	26	12	(26) / (12)	%46	
Construction	13	4	(13) / (4)	%30	
interior design	21	5	(21) / (5)	%23	
architecture history	15	6	(15) / (6)	%40	
computer applications	11	3	(11) / (3)	%27	
Building	28	3	(28) / (3)	%10	

Services					
building installation	20	2	(20) / (2)	%10	
urban planning	20	6	(20) / (6)	%30	
outdoor spaces	18	5	(18) / (5)	%27	

Table 4 shows the results extracted from Table No. (2) in the percentage of what has been achieved from the students' performance Criteria according to (NAAB) in the Department of Architecture - Al-Nahrain University / the third stage.

Fourth stage

Table 5 shows the results extracted from Table No. (2) in the percentage of what has been achieved from the students' performance Criteria according to (NAAB) in the Department of Architecture - Al-Nahrain University / the fourth stage

Fourth stage	Number of (SPC) to be verified according to NAAB	The number of (SPC) achieved in the Department of Architecture - Al-Nahrain University.	Percentage of (SPC) achieved: (achieved)/(total)	Percentage as an outcome of achieved (SPC) compared to the NAAB.	The percentage of commitment of the fourth stage to (SPC) according to (NAAB) was ((% 33.75))
Study vocabulary					
Architectural design	28	13	(28) / (13)	%46	
urban design	26	13	(26) / (13)	%50	
Islamic architecture	13	3	(13) / (3)	%23	
Housing	29	13	(29) / (13)	%44	
architecture and environment	17	2	(17) / (2)	%11	
Building Services	28	3	(28) / (3)	%10	
architecture history	15	6	(15) / (6)	%40	
design methodology	13	6	(13) / (6)	%46	

Fifth stage

Table 6 shows the results extracted from Table No. (2) in the percentage of what has been achieved from the students' performance Criteria according to (NAAB) in the Department of Architecture - Al-Nahrain University / the fifth stage.

Fifth stage	Number of (SPC) to be verified according to NAAB	The number of (SPC) achieved in the Department of Architecture - Al-Nahrain University.	Percentage of (SPC) achieved: (achieved)/(total)	Percentage as an outcome of achieved (SPC) compared to the NAAB.	The percentage of commitment of the fifth stage to (SPC) according to (NAAB) was (% 44.40)
Study vocabulary					
Architectural design	27	12	(27) / (12)	%44	
architecture theory	13	7	(13) / (7)	%53	
architecture philosophy	11	5	(11) / (5)	%45	
Guessing and specification	13	4	(13) / (4)	%30	
practicing a profession	20	10	(20) / (10)	%50	

3-2 there is interest in diagnosing the vocabulary which achieved higher and lower attuned to the student performance criteria (SPC) adopted in the NAAB program for Quality and accreditation, which was extracted from table No. (2), as follows:

3-2-1 stage one

The study subject (Architectural Design) and (Architectural Evaluation) achieved the highest percentage of attuned with the NAAB Program (36%), (26%) respectively, in all cases, they are clearly below success levels. While the (computer programming) and (building materials) achieved the lowest NAAB-compatibility ratio (12%), (14%) respectively, which requires a review of the reasons for this failure in the future to improve the quality of education and the dependency of the curriculum adopted for this level.

3-2-2 stage two

The two subjects (Engineering Management) and (Architectural Design) achieved the highest percentage of alignment with the NAAB Program (31%), (26%) respectively, in all cases, it is less than the success levels by a clear difference. While the subjects (Building Installation) and (Area) achieved the lowest percentage of alignment with the NAAB Program, with a percentage of (15%), (9%), respectively, which requires a review of the reasons for this failure in the future to improve the quality of education and the state of accreditation of the

approved educational curriculum for academic courses at this stage.

3-2-3 stage three

(Architectural Design) and (History of Architecture) achieved the highest percentage of alignment with the NAAB Program (46%), (40%), respectively, which in all cases is below the levels of success. While (Building Installation) and (Building Services) achieved the lowest percentage of alignment with the NAAB Program (10%), (10%), respectively, which requires reviewing the reasons for this failure in the future to improve the quality of education and improve the accreditation status of the approved educational curriculum for the courses at this stage.

3-2-4 stage four

(Urban Design) and (Architectural Design) achieved the highest percentage of alignment with the NAAB Program, with a percentage of (50%), (46%), respectively, which in all cases is below the levels of success. While (Building Services) and (Architecture and Environment) achieved the lowest alignment rate with the NAAB Program (10%), (11%) respectively, which requires reviewing the reasons for this failure to improve the quality of education and the accreditation status of the approved educational curriculum for this stage.

3-2-5 stage five

(Architecture Theory) and (Professional Practice) achieved the highest percentage of alignment with the NAAB Program (53%), (50%), respectively, and in all cases, it is below the levels of success. While (Building Services) and (Architecture and Environment) achieved the lowest alignment rate with the NAAB Program (10%), (11%) respectively, which requires reviewing the reasons for this failure to improve the quality of education and the accreditation status of the approved educational curriculum for at this stage.

3-3 The five-stage commitment ratio according to NAAB is only 28.4% for all stages. It can be inferred from Table 2 that there has been an escalation in NAAB alignment as the academic levels progress as shown in tables (3), (4), (5), (6), and (7).

4. Conclusions:

4-1 Research results have shown that subjects of a holistic nature that combine several subjects simultaneously in the same syllabus are more attuned to student performance criteria (SPC) according to the (NAAB). This is due to the complexity of the NAAB criteria, which originally set the level of performance of the student so that he is familiar with all the interrelationships of that academic term within the educational curriculum for that stage, which confirms the need to achieve integration between the academic vocabulary for all the educational curriculum of the department so that the curricula for the academic levels complement each other.

4-2 the (NAAB), the National Architectural Accrediting Board - the only agency for accrediting professional programs in the United States in the field of architecture Students, confirms that students from the third stage and above should be aware of the manifold links of the academic vocabulary of those stages, in which the research showed shortcomings, especially in terms of (building services) and (architecture and environment), where it is presented to the students as a fragment of its complex links with the rest of the academic vocabulary.

4-3- The percentage of commitment of the five stages to performance criteria according to (NAAB) did not exceed (28.4%) for all stages. This requires reviewing the Intended Learning Outcomes associated with each subject within the curriculum and comparing them with the standards set by the NAAB to increase the level of alignment with the criteria of that international institution for quality and accreditation.

4-4 The increase in NAAB compatibility with the escalation of academic levels is encouraging and evidence of the department's pursuit to achieve quality, even if this was in the last three academic stages, this

has been derived from table 2, there has been an increase in the rate of alignment with NAAB criteria with the progress of the academic stages as shown in tables (3), (4), (5), (6), (7).

5. Recommendations

5-1 The output of higher education reflects the strength of the education system and the extent to which society is developed or delayed, and the output of any system represents the basic purpose of its existence. Accordingly, the research recommends reviewing the targeted learning outcomes from each approved subject within the curriculum in the department and the rest of the architecture departments in the country to try to activate the student's performance criteria determined by international quality and accreditation institutions to keeping pace with developments in the field of education and to identify the most important and accurate standards adopted to serve the most important academic output which is a student of the Department of Architecture.

5-2 Attention to the principle of continuous improvement in all areas related to the quality of education to ensure that the weaknesses detected are addressed and that the strengths achieved are upgraded to keep pace with continued scientific progress.

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