

PHILOSOPHY OF UNIVERSITY EDUCATION AND FUTURE STRATEGIC REQUIREMENTS (GOALS AND SKILLS)

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Abstract

The research problem arises by asking the following questions:

1. What is the philosophy of university education in Iraq and its strategic vision for future requirements in the areas of “goals and skills”
2. What future requirements in the areas of "educational goals and skills" are imposed by the technical and cognitive revolution on university education systems?
3. What problems do Iraqi university education suffer in achieving future requirements in “educational goals and skills?”
4. What is the proposed vision for achieving Iraq’s Vision 2030 in “Educational Objectives and Skills?”

The research achieved Iraq's Vision 2030 after realizing the most important principles and values contained in the strategy of the Ministry of Education, including the aspiration for an educational system committed to values, provides sustainable, innovative, and high-quality learning opportunities for all, promotes knowledge society building and conforms to global standards while ensuring quality education for all, and ensuring levels of high-quality public education that meets the needs of the labor market) technical and vocational education and training.

Develop a high-quality educational system that encourages broad participation through various efficient and effective educational pathways, ensuring the provision of technical and vocational education and training for excellence in teaching, learning, scientific research, and community services that will achieve a comprehensive renaissance.

Keywords: higher education, strategic requirements, goals and skills, reform, modernization

Second: Research objective

The current research aims to know the following:

1. The philosophy of higher education in Iraq and its future vision, especially in the field of “goals and skills”
2. Requirements of the future strategic philosophy of higher education imposed by the cognitive and technical revolution (4).
3. Submitting a proposed vision in accordance with Iraq's Vision 2030 for Reform and Change.

Third: The research problem, questions, and methodology

The current research includes the following:

First: the research importance

Higher education is a powerful and necessary tool for building a civilized, educated, and peaceful Iraqi society. It produces and disseminates in-depth knowledge about various areas of life, giving a broader perspective to the world. Higher education is no longer a luxury for societies and individuals, but a necessity for survival. It is one of the most important tools in society for reform and allows students to acquire skills and abilities to adapt to each new or modern to accommodate everything new to meet both the current and future needs of individuals and the community in the field of production and services (Ibrahim: 2000, p. 231). It not only believes in the abilities that graduates acquire in the labor market but also in the continuous education of all graduates in diverse specialized fields, it is these graduates who possess comprehensive knowledge. This is knowledge that encompasses technology and information knowledge. Today's universities are the most important sources of comprehensive and high-level knowledge production for development. Changes on the global scene, including globalization, have created opportunities and risks. On the positive side, the role of higher education in building knowledge economies seems to have increased significantly more than before. Certainly, higher education is a central point in creating intellectual capabilities that help produce knowledge and benefit from it, as well as pushing for post-education practices through continuing education, its institutions, and activities, which have become necessary to modernize and develop comprehensive knowledge. A positive development is the emergence of new patterns of higher education institutions and new pathways of competition, perhaps the most important of which are private universities that are working to change their working methods and performance so that they can benefit from the opportunities offered by the information revolution (Al-Ansari 2012: p. 1).

The role of higher education its various research institutions, and its scientific and cultural roles are essential in reforming and changing development and achieving its goals at the individual and community levels. It also has a significant impact in eliminating customs and traditions that hinder the process of cultural and human development. It also can modify behavior patterns, value systems, and social and educational trends in a manner commensurate with development trends in society, because the mission of higher education is to produce balanced professional, social, and personal education that facilitates the integrated personal and cultural growth of the individual and prepares learners for the future, and for the information society, the technology society that has become like a raging volcano for all societies and are difficult to control except by masterful, educated minds that are suited to this field, its goals and cultural knowledge. Based on the foregoing, this research will focus on addressing the philosophy of university education and the future strategic requirements of "goals and skills", as it is the key to developing and reforming education and future change to achieve sustainable development goals (Al-Naeli: 2017, p. 1).

To make a significant impact on aspects of social life. This impact may be represented by the formation of industry and the development and sustainability of modern development through the acquisition of new skills, the spread of education, and modern means of communication. Higher

education is an active tool in modernizing and developing society because it is the system that disseminates knowledge, information, and modern values that work to dismantle the ties of society's traditional culture, which hinder its progress and cognitive and cultural development. Education provides the skills, competencies, and experiences that help to participate effectively in advancing the process of modernizing and educating society. Besides, learners are usually the community's link to the outside world and knowledge centers. Therefore, it is necessary to focus on the principle of change and reform, adopt its strategies, and create a more educational environment that allows education through developing the goals and skills of education through design and discovery, and the use of information technology to support the development of intelligence and the ability to solve problems (Abdul Hamid: 2006, p. 388) and developing productive skills and capabilities that respond to the goals of developing the learner's productive capacity in accordance with the requirements and needs of the labor market and to serve the goals of sustainable development in society. Based on its policy in managing the scientific research file and its priorities in the areas of development and qualification, the Ministry of Higher Education and Scientific Research announces the launch of a program to develop scientific research skills for graduate students in Iraqi universities, starting from the academic year 2023/2024. (Ministry of Higher Education and Scientific Research: 2023, p. 1)

Today's university education in Iraq is undergoing a profound transition that has achieved qualitative and quantitative leaps in higher education. The Ministry has introduced radical changes to reach a new structure for universities that is compatible with labor market trends through a set of programs, procedures, and short, medium, and long-term plans to include several axes, the most prominent of which are seven axes: admission, absorption, harmonization, quality, financing, scientific research, scholarships, and strategic planning. The Ministry and universities have dealt with the issue of quality from two important dimensions:

The first: raising the internal efficiency of universities by ensuring the quality of university education inputs.

Second: Supporting the establishment of centers of scientific and research excellence in universities.

To further develop the higher education system, it is necessary to prepare a future strategic plan for university education for the next 25 years (Kazim: Platt, p. 2).

The importance of research and its justifications are thus illustrated by the following aspects:

1. Higher education has a major role and objective in Iraq's reform, development, and modernization. This is at the top of its priorities. All financial, human, technical, cognitive, scientific, and other advanced requirements must be provided to achieve its objectives.
2. The philosophy of higher education, which leads and directs educational institutions with all their curricula and staff, must be built on the goals and skills of critical thinking and a culture of creativity because living in the third millennium and what the requirements of the Industrial Revolution (4) and its effects impose require that every individual be armed with a thinking, critical, and creative mentality. This is done by abandoning indoctrination

and relying on modern strategies and programs in teaching and developing cognitive and metacognitive skills.

3. Iraq's development and educational vision for “2030” requires intensified research and scientific efforts by researchers and scientific cadres to develop effective solutions and treatments to achieve goals for achieving quality, sophistication, modernity, openness, and multiple learning methods and types to achieve a society of permanent learning and knowledge.
4. The future strategic requirements are included in the national report by the Education Transformation Committee for the year in Iraq (2022). It is the aspiration for a value-committed education system that provides sustainable and innovative learning opportunities for all, of high quality and promotes the building of a knowledge society, consistent with international standards "(Republic of Iraq: 2022-p. 1). The strategic vision for the year 2023 also affirms the aspiration of the philosophy of higher education in Iraq and its vision to enhance the role of educational institutions for community participation, build systems that promote scientific and creative thinking, and ensure the quality of outputs to meet the needs of the labor market and contribute to the building of a diversified knowledge economy consistent with the requirements of sustainable development in a manner that takes into account the overall vision of the country's social and economic development, the education laws of the Republic of Iraq and the provisions of the Iraqi Constitution (Republic of Iraq: 2023, p. 98). It needs a study that shows the proposed concepts in the areas of goals and skills, and this will be clarified in the research questions.

The research problem:

The problem of the current research is represented by several indicators, including that the higher education institution in Iraq has a philosophy, goals, programs, content, and administrative and organizational policy that suffers from weakness and decline in educational outcomes that are not commensurate with the labor market, especially in goals and skills in a global society that is growing and developing cognitively and technically in all fields. Several studies have shown that there is a gap between the work environment and educational curricula as a result of Iraq's weak role in higher education in providing students with effective communication and digital skills depending on the requirements of the twenty-first century (Al-Himyari: 2023, p. 28). Higher education institutions have continued to suffer from a self-imposed cultural blockade since the beginning of the 1990s, as they have not seen change and reform as necessary for the sustainability and fulfillment of their mission. The good intentions of university leaders do not find room or opportunities for implementation. The majority of their teaching staff do not have the knowledge, ability, or desire to bring about change, and their desire to possess the knowledge to bring about change collides with many obstacles, most of which are the lack of sufficient funds, an appropriate training program, or clear insights into training and capacity-building (Al-Rubaie: 2016, p. 2016). It also faces a technological and cognitive challenge called the Industrial Revolution and cognitive technology (4), and its requirements, such as the foundations and infrastructure that must be available in the institution of higher education, and its modernization in response to the

requirements of change and reform witnessed by all institutions of the Arab and international world, and whose development vision has been made clear in future development visions that seek progress and prosperity that were approved by all member states of the United Nations in (2015) to eliminate poverty, reduce inequalities, and establishing more peaceful and prosperous societies by the year 2030. These goals are also known as the 'Global Goals' (United Nations: 2015) because higher education institutions, research centers, and service institutions are supposed to have an advanced level of knowledge, science, research, and technology to achieve the goals of the 2030 Sustainable Development Plan, and they represent a comprehensive framework for ending extreme poverty, combating inequality and injustice, and protecting the planet. This ambitious plan has been signed by all United Nations Member States in recognition of the existence of significant challenges that have persisted despite decades of growth and progress, compounded by rapid changes at an unprecedented pace, to the extent of existential crises. The adoption of the 2030 Agenda and the Sustainable Development Goals was a victory for multilateralism (United Nations 2019, p. 2).

The problem of research is highlighted in the following questions:

1. **What is the philosophy of university education in Iraq and its strategic vision for future requirements in the areas of “goals and skills”**
2. **What are the future strategic requirements in the areas of “educational goals and skills” imposed by the advanced technical and cognitive revolution (4) on university education systems?**
3. **What problems do Iraqi university education suffer in achieving future strategic requirements in the areas of "Educational goals and skills"**
4. **What is the proposed vision for achieving Iraq’s Vision 2030 in the areas of “educational goals and skills?”**

Following are the answers to the research questions:

1. What is the philosophy of university education in Iraq and its strategic vision for future requirements in the areas of “goals and skills”

The concept of philosophy in general is the vision and a set of rules and laws that govern the educational process with its internal and external organizational dimensions, which the scientific, administrative, and technical leaders in the Ministry of Higher Education and Scientific Research must possess and believe in to build a future strategy for higher education. Thus, the Ministry emphasizes in its philosophy the cultural values derived from the authenticity of heritage, and the present realities for the achievement of general trends, derived from cultural, intellectual, political, and economic sources on which it is based and reflects the content of various variables that surround the educational system and society and have a negative and positive impact on it. The first of these sources is the Constitution, Article 33 of which stipulates the following principles:

1. Education is a fundamental factor for the progress of society and a right guaranteed by the state, and it is compulsory.
2. Education is free and a right for all Iraqi citizens at all levels.

3. The state encourages scientific research for peaceful purposes to serve humanity and foster excellence, creativity, innovation, and various manifestations of progress.
4. Private and community education is guaranteed and regulated by law. (Republic of Iraq, 2005, p. 9).

Given these constitutional principles, many efforts have been made by specialists to formulate an educational philosophy for higher education institutions, including the Higher Education and Scientific Research Conference held in Erbil in 2007 on the philosophy and future vision of university education in Iraq, which raised several questions fifteen years ago and that higher education must have a specific philosophy and goals derived from a clear philosophy (Saleh: 2007, p. 1).

The staff of the Ministry of Higher Education and Scientific Research, represented by several ministers, advisors, experts, researchers, administrative and technical staff, and those interested in higher education, intellectuals, and opinion-makers from inside and outside Iraq, worked to provide a philosophical vision of the goals of higher education, its procedures, work mechanisms, and the system of laws, instructions, and decisions that do not deviate from the framework of the quality of work and its Iraqi, Arab, and international standards. It has been shown through follow-up and reading that the philosophy of higher education in Iraq after 2003 is to open a wide door to admission to universities, especially private ones, without regard to the needs of the state and the market in terms of scientific and humanitarian specializations. It is no secret that this philosophy is adopted by the majority of countries in the world, but to a reasonable extent, and under specific conditions, and not in the manner in Iraq, which suffers from inflation in the number of graduates without planning or understanding!! The problem lies in the fact that this philosophy of education is for education, not for employment. Those who were able to understand it in Iraq are only a small group. The Ministry of Higher Education, since 2003, has not succeeded in conveying this philosophy and message to graduates in particular and to other Iraqis in general, which has transformed education from being an opportunity for individuals to progress, culture, and education to a problem on the shoulders of the state. The evidence for this statement is that when a graduate - regardless of his degree, competency, grades, or method of graduation - is unsuccessful in government employment and is forced to work in the private sector in any job, everyone believes that the state has committed a crime as if the graduate and the holder of the degree are not permitted to work except in government jobs (Al-Yasiri: 2019, p. 1).

Thus, the higher administration of higher education was keen to ensure that educational institutions, universities, and scientific and research centers rise to the level of ambition to keep pace with the progress achieved globally. In its current strategy, the Ministry has adopted a set of directions and objectives to promote higher education by emphasizing the importance of achieving (sustainable human development) and strengthening (quality requirements in higher education) according to national standards that are compatible with internationally approved quality standards to solve the problem of graduate unemployment and invest in their abilities and energies.

Based on the foregoing, the strategy included a purposeful executive action plan to be implemented during the years (2009 - 2013), within a timetable that set out the actions, activities, and actors

responsible for the implementation of each work, and the time set for implementation in the light of indicators and expected results taking into account the provision of education opportunities for all and meeting the current and future needs of Iraqi society, consistent with development goals and plans to qualify graduates to meet these needs, through the formulation of policies, and to identify the necessary actions to provide the appropriate environment for this development through the foundations derived from the philosophy and vision of the Ministry. The strategy (2009 - 2013) addressed a set of main topics related to:

- Foundations and mechanisms for admission to universities/bodies.
- Curricula and study programs (content, methods, and techniques).
- Foundations and mechanisms of international accreditation and quality control.
- Encouraging creativity and excellence in scientific research.
- Developing the capabilities of university competencies at all levels.
- Community service in all fields. (Al-Issa: 2021, p. 2)
- Building a conscious human being armed with science and knowledge and capable of creativity and dealing with contemporary developments in a meaningful way that respects diversity, differentiation, and dialogue between cultures.
- Creating the appropriate environment to enhance the capabilities of workers in higher education, leading to the development of the Ministry and its scientific and research institutions.
- Building a sophisticated knowledge society based on value content and dealing with modern developments and challenges.
- Trying to provide decent life requirements for workers in the higher education sector is commensurate with their vital role in serving society, especially university professors/bodies.

In 2014, the Ministry of Higher Education and Scientific Research promulgated several laws aimed at, inter alia, regulating the work of the Ministry of Education and Scientific Research to develop the Ministry's performance, and its formations, and increasing their effectiveness to suit the expansion of its universities and bodies and the need to keep pace with scientific and technical progress. The laws stipulate a set of articles, which are:

1. Article 2

Creating quantitative and qualitative changes in the scientific, technical, and cultural movement and directing educational and research institutions to achieve continuous interaction between thought and practice towards achieving authenticity, scientific sobriety, interacting with human experiences and expertise, and adopting international scientific quality standards and higher levels of educational development to build new generations that carry the banner of science and knowledge as an effective and influential force in society.

2. Meeting Development Needs Plans in Knowledge Branches and Community Development Requirements.

3. Expanding and strengthening cooperation ties to contribute to creating the educational infrastructure with scientific institutions in the world (Iraqi Documents: 2014, p. 8). The Ministry seriously considers a set of fundamentals within the framework of the general directions of its philosophy, which are considered influential in the process of higher education and aim to activate all activities related to leading the requirements of higher education and scientific research. These are:

1. University environment: Developing the university environment through:

- Moving towards decentralization of university administration within the framework of the Higher Education Law.
- The university is a safe, sanctified, and independent campus.
- Strengthening the status and role of the university professor.
- Scientific and value building for university students and enhancing the spirit of citizenship.
- Justice and equality in treatment.

2. Sustainable human development

- Preparing accurate specifications for faculty members and higher education staff.
- Sustainable development of university teaching scientific and research capabilities.
- Precise graduate specifications (conforming to global quality standards).

3. Education software technology

- The trend towards higher education technology.
- Establishing specialized universities, colleges, and scientific departments linked to the sciences.
- Modernizing teaching methods and means according to the principles approved in sober universities.
- Developing university libraries and supporting the trend towards the electronic library.

4. Scientific Research: Theoretical and applied scientific research is the basis for the progress of peoples and nations, and therefore it must be given an important role as it is the main foundation in the development of higher education to achieve scientific development and cultural consolidation (Republic of Iraq: 2005, p. 10).

5. Civilizational dimension:

- Taking into account the specificity of the Iraqi cultural reality.
- Emphasizing the importance of the Arab-Islamic scientific heritage.
- Paying attention to the safety of the Arabic language and communicating with other languages.

6. Private education

- Follow up with private universities and colleges to ensure that their requirements are consistent with the policies and directions of the Ministry and the needs of the labor market.
- Emphasizing that private universities and colleges move towards integration and not similarity in scientific and humanitarian specializations with official universities.
- Believing in the importance of higher education and scientific research as an important integral link to the educational system.
- Emphasize that expenditure on higher education and scientific research is the best kind of human and material investment for its effective participation in the building, development, and advancement of society.
- The proportionality between the social, scientific, and cultural returns and the outputs of the higher education and scientific research sector with what is spent on its inputs in general.
- Linking education strategies, policies, programs, curricula, services, and research activities to the needs of society, solving its problems, its comprehensive development, and meeting the requirements of the labor market, as well as the need to focus on the three main functions of higher education: education, scientific research, and community service.

Thus, it becomes clear that the basic function of universities and higher education institutions is teaching, scientific research, and public service to society through real interaction. These are the same main tasks of higher education institutions in Arab countries as approved by UNESCO.

Evidence in the past decade has proven that higher education and scientific research participate in eradicating poverty, achieving sustainable development, and making progress in achieving internationally agreed development goals, including the third-millennium development goals and education for all (Bakhit 2011, p. 10).

In 2023, the National Strategy for Education and Higher Education was issued, which included the vision, mission, and strategy for the coming years within the general vision of laying the foundations of an effective development state with societal responsibility. This vision was summarized in the aspiration for an educational system committed to values, providing sustainable, innovative, and high-quality learning opportunities for all, and promoting the building of a knowledge society that complies with global standards.

To achieve this goal, the mission of the National Education Strategy is based on:

Promoting educational institutions for community partnership, and building systems that enhance scientific and creative thinking, ensure the quality of outputs to meet the needs of the labor market, and contribute to building a diversified knowledge economy that is consistent with the requirements of sustainable development. This strategy focused on a set of values that represent its vision, mission, and future work, which are:

1. Belonging and citizenship, leading to global citizenship.
2. Respect diversity and accept others.
3. Justice.
4. Transparency.
5. Integrity and impartiality.
6. Community partnership
7. Compatibility with the needs of Iraqi society and sustainable economic development.
8. Excellence and providing high-quality services.
9. Teamwork.
10. Academic freedom.
11. Competitiveness.
12. Lifelong learning and continuous development of education service providers. (Ministry of Higher Education and Scientific Research: 2023, p. 28-83).

To achieve the goals of the strategy emanating from its vision and mission, its strategy approved ensuring the provision of quality education for all, at all levels of public education as well as ensuring the provision of high-quality technical and vocational education and training (TVET) that meets the needs of the labor market (technical and vocational education and training). Developing a high-quality educational system that encourages broad participation through multiple efficient and effective educational paths to achieve excellence in teaching, learning, scientific research, and community services will achieve a comprehensive renaissance in Iraq (Ministry of Higher Education and Scientific Research: 2023, pp. 82-83). The above-mentioned goals, principles, and laws represent the theoretical aspect of the philosophy of higher education and scientific research. One of the most important problems of higher education is the wide gap between higher education planning and economic and social planning, the lack of harmony and complementarity between higher education planning and general education planning, and the absence of a clear scientific policy that regulates higher education and scientific research to direct resources and invest available capacities according to priorities. It is not enough to allocate a specific portion of the annual budget for scientific research only, it is necessary to study and know the best and most successful methods to benefit from these investments in our prevailing political and social environment. Why are we searching, for whom are we searching, and what are the foundations and pillars of this research? Scientific policies are unable to give convincing answers or set meaningful goals and objectives for scientific research in general in various fields. Also, the Iraqi government is still almost incapable of determining appropriate methods and working mechanisms to achieve these great ambitions in building a future and a scientific generation capable of meeting the needs of its vital existence and fulfilling the requirements of accelerating and developing life. Therefore, it is natural - and in this situation - that confusion and chaos prevail in the scientific community (Al-Haidari: 2011, p. 52). It is necessary for the state's philosophy in dealing with scientific research, developments in science and technology, its modern techniques, and available knowledge to be determined by the following principles:

- A nation's need for knowledge is equal to its need to survive.
- Adapting the use of technology and scientific trends in light of national circumstances.
- Interest in development as an applied field for developing scientific ideas and technology.
- The possession of independent political decision-making, the availability of high economic capabilities, and a national cadre that understands technology are essential factors in transferring technology and employing it in educational institutions (Al-Haidari: 2011, p. 64), especially in the field of goals and skills, which are as follows:
 1. Objectives (education objectives and future strategic requirements, by which we mean a set of directions and programs related to training, empowerment, capacity development, and workshops and courses that benefit the teacher and the learner).
 2. Skills (meaning the set of activities, knowledge, experiences, and personal abilities that a person must have to be able to accomplish a specific job. The most prominent skills that a person can have are (researching and investigating information, planning, etc.).

2- What are the future strategic requirements in the areas of “educational goals and skills” imposed by the advanced technical and cognitive revolution (4) on university education systems?

In the context of the technical and cognitive revolution called the Fourth Industrial Revolution, education must be prepared to change with this technological transformation. Higher education needs to invest in this transition and emphasize workable changes in the education system. Higher education institutions need to promote initial awareness of Education 4.0 among students as well as trainers by organizing training, workshops, seminars, and conferences to enhance the progress required at that time. Accordingly, there is a great need to change the mindset or culture of teachers towards the use of classroom technologies (Wafsa: 2020, p. 1). Today we live on the verge of the fourth industrial and technological revolution, which will radically change the way we live and work, which requires the necessity of responding and adapting. This response must be comprehensive and integrated and include all sectors that represent the pillars of society and its various functional sectors, public and private, and its educational and academic institutions. Education is the royal gateway to entering this era, which represents the greatest challenge in the twenty-first century to advance the nation and enhance its progress and development. In preparation for this revolution, with its opportunities and risks, this must be done in light of an integrated and interconnected conceptual structure. The values and capabilities required to be developed must be formed anew, according to a new intellectual framework that establishes an organic relationship between humans and the applications of the Fourth Industrial Revolution (Wafsa: 2020, p. 1)

The requirements of the cognitive technical revolution (4.0) in the areas of “goals and skills” can be summarized as follows

First: Objectives

1. Strategic entrepreneurship and its objectives, and this requires

1. The a need for exceptional leaders from policymakers, business leaders, managers, and individuals as they are the nucleus of the future that will shape society and the economy, adopt strategy and experiments, manufacture prototypes, develop flexible monitoring tools, and coordinate future knowledge development processes necessary to achieve learning quality.
2. Focus and be open to the future, develop a special knowledge system that takes into account the developments around us, and acquire new expertise and skills for workers to create some kind of competition in the future.
3. Develop a comprehensive path to address changes through strategic planning based on a cross-sectoral vision through continuous systematic observation, effective objective assessment, and adjusting of outputs to match those in other countries in the manufacturing field using various new technologies.
4. Working diligently to establish the work system and regulatory environment necessary to benefit from the gains of the Fourth Industrial Revolution, in addition to investing in digital infrastructure such as broadband communication, as well as establishing legal frameworks, enacting laws, directives, and public policies (Dahlan: 2020, p. 21).

3- More personalized learning requires:

1. Education in light of Revolution (4.0) is individual for each student and his own pace of learning. Having a personalized teaching method will have a greater impact on students to achieve their results easily with artificial intelligence and computing, and there are many tools available that adjust the entire teaching process according to the needs of the individual learner and the pace of learning. On the other hand, faculty members will be able to easily identify students' strengths and weaknesses and provide immediate feedback.
2. Enabling learning anywhere, anytime with an e-learning toolkit that promotes distance and self-learning is the cornerstone of Education 4.0. This type of learning also promotes the concept of Active Blended Learning (ABL), where students actively engage in learning outside the classroom and master practical and experiential learning and provides a clear path for students by making tools and technologies accessible in their learning environment. This means that students will be able to choose the tools and techniques through which they want to gain knowledge.
3. Easy and accurate assessment of teaching and learning. There are several online and offline assessments. Students are also evaluated on projects, assignments, and field work (Ali: 2005, p. 263).
4. Have data at hand: Education 4.0 offers the greatest journey around student learning using data analytics and reporting. Statistical analysis allows faculty to know exactly where students are standing and direct them appropriately. Fourth-generation universities rely on modern technological devices to develop the process of effective teaching, and training, such as computers, augmented reality technology, virtual reality technology, and some wearable devices such as Smart glasses, watches, and fitness bracelets, many of which

interact with smartphones and tablets through several applications that connect them, and these devices can make the educational process more interactive. Augmented reality technology also helps to improve the user's sense of and interaction with the physical world and to prepare digital citizens capable of investing in mobile device and computing technologies and various technologies of the Fourth Industrial Revolution. This is done in a technical environment to improve the quality of teaching, learning, and training anywhere and at any time. This imposed a trend to change the method of learning, including cloud computing, which may disrupt current university education systems, as it contributes to learning faster and more efficiently. It also contributes to developing students' skills and preparing them for the new labor market, promoting local innovation while providing the strongest incentives, and sharing resources across different institutions (Rizk: 2021, p. 10).

5. Digital transformation: This means using digital transformation applications in all fields and moving services into innovative businesses that rely on these emerging technologies, aiming to connect all means of production to enable their interaction in real-time. The Fourth Industrial Revolution requires governments and competent parties, including education personnel and social partners, to assist the private sector, employers, and individuals who are facing the huge amount of changes accompanying this revolution. Government support is very important to benefit from this digital transformation. Also, it helps them face the upcoming knowledge explosion associated with new technologies, which prepares workers for these changes and makes them more prepared for the future after they have been trained to adapt to specializations far from theirs and have acquired new skills that can enhance cooperation, such as empathy, active listening, and mindset (Khalil: 2020, p. 3).

Fourth-generation universities rely on modern strategies in effective teaching and learning such as digital communication, cooperative learning, project-based learning, e-learning, and blended learning, as the virtual environment provides great educational value in the process of easy access to knowledge at lower costs. Besides, enhancing interactive participation, improving learning, and providing self-learning opportunities, direct learning contributes to the development of analytical expressions, problem-solving, and the development of social and creative skills. Therefore, new technologies should be introduced into the university education system instead of fighting them, and it should benefit from free, flexible open educational platforms in which a large number of universities participate. Virtual learning also enables assessments to be conducted several times until the required competency is acquired or a new skill is acquired, in addition to being able to learn at any time throughout life and contributes to improving the quality of education. Artificial intelligence allows the emergence of online analyzes for faculty to determine the best path for learning based on student behavior. These analyzes allow the design of programs to enhance individual learning paths for students with different levels of academic knowledge and learning motivation (EY & FICCI, 2017, p.44).

6. Directing scientific research towards real problems to solve and innovate solutions provided to contribute to supporting and developing the surrounding institutions (Hischi, 2018, 8-9). Technological developments are the most important driving forces for scientific research and development, as technology-based research comes in multiple forms, including: using mobile devices to improve the accuracy of data acquisition, using advanced big data analytics to identify the required statistical patterns, and invest artificial intelligence technologies in information collection, organization and knowledge discovery (Xing & Marwala, 2017, p. 7). 4G universities represent an open environment, the center of a range of communication, research, and development projects that include the work of students and faculty members, as well as a large class of beneficiaries and participants from abroad. 4G universities operate a platform or infrastructure to conduct a wide range of research activities (such as research, or development projects), both individual and institutional, creating opportunities for communication and integration. Through this generation of universities, complete reliance will not be placed on faculty members only, but there will be different work groups from multiple specializations based on solving different problems in all fields. The university will be a smart park, as it will rely on integrated cognitive technology, which helps increase human intelligence through computer technology and hybrid thought, and this technology also contributes to the formation and support of collective or cooperative intelligence (Lapteva, and Efimov, 2016, 2692).

What is the proposed vision for achieving Iraq's Vision 2030 in the areas of "educational goals and skills"?

1. Achieving a philosophical vision for higher education that includes a set of strategic principles, including goals, perceptions, principles, and values, to preserve the Iraqi identity of the student, promote Arab and Islamic culture and values that are open to the world, and adopt an approach of continuous change and reform at a pace consistent with developments in the technical, knowledge, and information world.
2. Developing the student's general culture and interest and urging him to follow economic, social, political, and other developments in their advanced methods and forms and helping him to enter the virtual world and digital content to enhance the cultural, heritage, and civilizational stock.
3. Leaders and officials of higher education institutions must believe in the positive role of communications and information technology tools in improving the quality of education and its outcomes to bring about fundamental, comprehensive change and reform of lifestyles at all levels, a change that aspires to achieve the digital society model in light of what is known as the knowledge economy, and democratic transformation to enhance transparency and achieve governance.
4. Deepening the student's attitudes and abilities by adhering to the principles of reason and its results, so that it becomes a method for discovering facts and the basis of scientific

thinking with its analytical, inductive, deductive, and critical dimensions, in keeping with the technical and cognitive revolution.

5. Developing the student's abilities and aptitudes for creativity, invention, discovery, and innovation through integration and participation in digital content and benefiting from its methods and tools in learning and developing personal capabilities and life activities by promoting a societal culture based on spreading the philosophy of education in which it believes, which is that: (Education is primarily for education, not for recruitment), and ensuring the necessity of absorbing graduates whenever possible, and creating job opportunities appropriate to their specializations, whether in the government or private sector and focusing on giving priority to the qualified and distinguished.
6. Encouraging sound scientific research and providing a safe and free scientific, technological, and incubating environment to reach real, fruitful results, nurture researchers, creators, and those with creative and brilliant ideas as a commitment from the state towards its scientists, innovators, and their competence, and to develop laws and instructions that obstruct scientific research.
7. The belief is that education is a means of social, economic, political, and religious reform and cultural change in society, and through it, all obstacles that hinder cultural development and cultural and cognitive development can be removed. Education is considered the correct curriculum and the basic source of all these developments, with its curricula, its training staff, and its important institutions, which need support, development, and change from all institutions of society. Education and its approach work to motivate individuals to achieve progress and make souls more up-to-date and prepared to accept the cultural change and technological development taking place in society by introducing technological means into study and scientific life until individual minds become modern and compatible with the information and communications revolution that has begun to sweep all countries of the world, as education cannot do without the information and communications revolution because they are the most secure means in scientific life.
8. Educational institutions, with all their curricula and staff, must be built on critical thinking skills and a culture of creativity because the third millennium requires that every individual be armed with a thinking, critical, and creative mentality by moving away from indoctrination methods and relying on modern strategies in teaching and developing cognitive and metacognitive skills.

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