



UPDATING CURRICULA IN HIGHER EDUCATION INSTITUTIONS: THE PATH TOWARDS ACHIEVING SUSTAINABLE DEVELOPMENT GOALS

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Abstract

Education is considered one of the most important achievements that citizens can acquire to succeed in life, and it is a fundamental requirement for achieving the Sustainable Development Goals (SDGs). Therefore, most higher education institutions have paid considerable attention to updating curricula due to its positive impacts, which include elevating and advancing societies. Additionally, they aim to instill in their members a sense of responsibility toward achieving the SDGs, recognizing that the environment in which they live is a safe haven and a genuine refuge that must be preserved and protected. Accordingly, curricula have dedicated substantial space to topics of educational and pedagogical value, addressing learners' needs, interests, and skill development across various fields.

However, curricula in some Iraqi higher education institutions still do not include subjects aligned with learners' interests and capabilities, nor do they meet the community's needs. As a result, they have not been able to achieve these principles, focusing instead on topics that students are required to study solely to progress from one academic level to another.

Hence, the researcher considered it necessary to explore the updating of curricula in Iraqi higher education institutions as a pathway to achieving the SDGs, which are emphasized both presently and in the future. This aims to redefine the roles of instructors and students, connect educational institutions with production and service sectors, and embody the integration of education with real-life applications and acquisition of work skills, as these are factors that contribute to the development of the curriculum concept.

The study aims to update curricula in Iraqi higher education institutions as a means to achieve the SDGs. The researcher employed the descriptive method using survey studies on a sample of faculty members from Al-Rasheed University College, totaling 58 instructors. After presenting, analyzing, and discussing the results across the four domains of the scale (social, health, environmental, cultural, and scientific) and their 71 items, the researcher reached the following conclusions:

1. Most of the updated curriculum domains and items contribute to achieving the SDGs.

Higher education institutions help support and encourage the transfer of advanced technologies suitable for achieving the SDGs through curriculum updates.

The study recommended the following:

Updating curricula according to their domains and items to achieve the SDGs in the face of current and future challenges.

Establishing infrastructure to finance and implement curricula that enable students to collaborate in achieving the SDGs.

Integrating the SDGs into environmental, social, cultural, and scientific domains to promote public health.

Keywords: Curriculum, Development, Educational Matters, Learning Environment.



1. Introduction to the Research

1.1 Research Background and Significance

Education is considered one of the most important achievements that a citizen can attain to succeed in life, and it is a fundamental requirement for achieving the Sustainable Development Goals (SDGs). Consequently, most higher education institutions have paid significant attention to updating curricula due to their positive effects, which include elevating societies and promoting progress and development. In addition, curricula play a crucial role in fostering a sense of citizenship, belonging, and community participation among individuals, thereby contributing to the achievement of the SDGs.

Modern curriculum approaches emphasize the learner's active engagement, vitality, and participation in the educational process as the primary focus and target. They advocate for adopting innovative teaching strategies that necessitate reconsideration of curriculum design as a pedagogical tool. Within the systems approach framework, the educational process is viewed as an integrated system with inputs, processes, and outputs, where all components interact and complement each other to influence the overall learning outcome.

Educators agree on the importance of curricula in shaping responsible citizens by contributing to the education and development of young people, helping them maximize their potential as individuals and members of society. A curriculum represents carefully planned scientific, cultural, social, and artistic experiences prepared and delivered by educational institutions, either individually or collectively, to achieve comprehensive growth and modify behavior in line with intended educational goals.

Higher education curricula aim to instill in staff their role in achieving SDGs, emphasizing the environment as a safe and vital space that must be preserved. Accordingly, curricula dedicate extensive attention to educational content that meets learners' needs, aligns with their interests, and develops their skills across various domains, following the guidelines of the Ministry of Higher Education and Scientific Research for current and upcoming years.

The significance of this research lies in updating curricula as a means to achieve the SDGs, ensuring alignment with the requirements of each academic stage across scientific and humanistic disciplines, in harmony with global trends and Iraq's capabilities. This approach supports transforming traditional practices into sustainable development and advancing Iraq to the level of developed countries.

1.2 Research Problem

Most countries, both globally and in the Arab world, continuously review their educational curricula to ensure their practical application through modernized curricula that align with global developments in all aspects of life. This enables staff to enhance their capabilities in implementing curricula in accordance with SDG objectives.

However, curricula in some Iraqi higher education institutions still lack subjects that match learners' interests and abilities or meet societal needs. As a result, they have failed to achieve these principles, focusing instead on topics that students must study merely to progress academically. This approach discourages critical thinking, as students become passive recipients of knowledge, while instructors are the sole planners and organizers whose guidance must be followed without student input.

Therefore, the researcher explored the updating of curricula in Iraqi higher education institutions as a pathway to achieving SDGs, aiming to redefine the roles of instructors and students, and link educational institutions



with productive and service sectors. This integration connects education with real-life skills and fosters work competencies, which are critical factors for curriculum development.

1.3 Research Objective

- To update curricula in Iraqi higher education institutions as a pathway to achieving Sustainable Development Goals.

1.4 Research Scope

- **Human Scope:** Faculty members at Al-Rasheed University College.
- **Temporal Scope:** From October 1, 2024, to January 2, 2025.
- **Spatial Scope:** Al-Rasheed University College – Tarmiya, Baghdad, Iraq.

1.5 Definition of Terms

1. **Updating:** Introducing new data and information into the curriculum or correcting some parts; updating implies change and renewal (Al-Rubaie, 2016).
2. **Curriculum:** A pedagogical plan that includes elements such as objectives, content, learning experiences, teaching, and assessment, derived from philosophical, social, psychological, and cognitive foundations related to the learner and society. It is applied in educational settings both inside and outside the institution to contribute to the comprehensive development of the learner's intellectual, emotional, and physical aspects and evaluate the extent of achievement (Saada Ibrahim, 2004).
3. **Sustainable Development:** Development that meets the needs of the present without compromising the ability of future generations to meet their own needs (Al-Rubaie & Magdy, 2021, p.7).
4. **Sustainable Development Goals (SDGs):** A call for all countries—poor, rich, and middle-income—to work toward prosperity while protecting the planet. These goals recognize that eradicating poverty must go hand in hand with strategies that build economic growth and address social needs, including education, health, social protection, employment, climate change, and environmental preservation.

2. Research Methodology and Field Procedures

2.1 Research Method

"The two researchers employed the descriptive method using survey studies due to the nature of the research problem, aiming to construct the measurement tool and study the case.

2.2 Research Population and Sample

The research population consisted of 58 faculty members from Al-Rasheed University College for the academic year 2024–2025, limited to Professors and Associate Professors. The pilot sample included 8 faculty members (13.79%), selected randomly. The main application sample included 40 faculty members (68.97%), while 10 participants (17.24%) were excluded due to non-response.

2.3 Scale Items

The measurement tool consisted of 71 items distributed across four domains:

- Social domain: 21 items
- Health domain: 16 items
- Environmental domain: 15 items
- Cultural and scientific domain: 19 items

As detailed in Table (1).

Shows the Number of Items for Each Domain of the Scale

العدد الكلي	Domains	ت
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21	Social Domain	1
16	Health Domain	2
15	Environmental Domain	3
19	Cultural and Scientific Domain	4
71 Total Number of Items		

The items were evaluated using three options: **Acceptable (1 point), Good (2 points), and Excellent (3 points)** by the application sample, which consisted of 40 faculty members. Thus, the highest score each item could receive was **120**, while the lowest score was **40**.

2.4 Pilot Study

The researcher applied the scale to the pilot sample, which consisted of 8 faculty members, on **November 15, 2024**.

2.5 Main Study

The main study was conducted on the application sample, consisting of 40 faculty members, on **November 19, 2024**.

2.6 Statistical Tools

The SPSS system was used to conduct the research and analyze the data.

3. Presentation, Analysis, and Discussion of Research Results

Table (2): Scores of the Items for the Curriculum Update Scale According to the Perspective of Sustainable Development Goals

Score	"Domains and Items of the Curriculum Update Scale According to the Perspective of Sustainable Development Goals"	Sequence
1. Social Domain"		
90	"The student contributes to fostering a spirit of tolerance, love, and brotherhood among their peers	-1
76	"The student participates with peers in voluntary work for the needy, in cleanliness campaigns for places of worship, the elderly, orphanages, and general sanitation efforts	-2
82	The student contributes by writing essays on the impact of social values in developing the behavior of individuals and society	-3
75	The student adheres to compassion and solidarity in interactions with others	-4
78	country and society through words and actions.	-5
72	The student emphasizes the importance of societal solidarity as a fundamental support for solving community problems. 6	-6
80	The student rejects injustice, tyranny, and racial and sectarian discrimination among members of society.	-7

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84	The student provides services to the elderly and recognizes the importance of respecting elders and benefiting from their experience.	-8
83	The student acquires life skills (communication, teamwork, upholding rights, performing duties).	-9
82	The student learns about the main features of the country and citizenship from all aspects and respects different cultures.	-10
85	The student acquires ethical values through practicing educational and cultural traditions.	-11
76	The student practices their rights and duties according to constitutional provisions.	-12
80	The student contributes to ensuring fair and comprehensive social rights for all and promoting them throughout life	-13
82	The student helps achieve equality among peers and empowers them to do so. .	-14
78	The student contributes to promoting comprehensive and sustainable social development and providing a decent life for all.	-15
82	The student contributes to providing access to justice and building effective, accountable institutions inclusive of students and society at all levels.	-16
75	The student seeks equality of opportunities within society.	-17
75	The student helps encourage the establishment of peaceful and inclusive communities for sustainable development	-18
73	The student adheres to laws and regulations in daily life.	-19
72	The student participates with peers in public services for the community.	-20
80		-21
Second: Health Axis		
80	The student contributes to eliminating hunger, ensuring food security, improving nutrition, and promoting sustainable health.	-1
85	The student helps raise health awareness and increases attention to the concept of preventive medicine.	-2
80	The student is encouraged to practice first aid for wounds, burns, and fractures.	-3
72	The student participates in creating posters or instructional panels that promote health.	-4

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80	The student, along with peers, engages in community awareness on how to maintain public health.	-5
72	The student contributes to improving the quality of healthcare services and ensuring full access for peers to these services.	-6
72	The student helps ensure a healthy life and promotes well-being for all age groups.	-7
82	The student contributes to developing physical abilities through sports activities to enhance their health.	-8
75	The student participates in providing first aid services.	-9
80	The student accepts bodily and physiological changes as a natural aspect of growth and health.	-10
80	The student is keen on maintaining mental and physical health.	-11
84	The student reinforces the importance of engaging in physical and sports activities to enhance the efficiency of the body's functional systems.	-12
78	The student performs sports activities to preserve the health of muscles and joints.	-13
75	The student strives to abstain from smoking, as it helps improve the components of their physical health.	-14
82	The student avoids performing sports activities immediately after eating to maintain body safety.	-15
80	The student contributes to learning how to perform a set of exercises to develop elements of physical fitness.	-16
Third: Environmental Axis		
78	The student spreads environmental awareness among community members.	-1
82	The student seeks to reduce emissions from polluting sources and prevent random burning.	-2
88	The student strives to understand the environment, its components, characteristics, natural phenomena, and ways to preserve the environment and its resources.	-3
84	The student uses environmentally friendly technology to manage environmental threats, particularly solid waste.	-4
83	The student engages in appropriate environmental planning for lakes and shores.	-5
81	The student contributes to ensuring and enhancing the inspectional and regulatory role in environmental protection and building the necessary capacities in advanced environmental monitoring.	-6
78	The student works on organizing awards and competitions to raise the level of environmental awareness and environmental management among institutions and citizens.	-7

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87	The student contributes to studying issues related to environmental pollution and	-8
75	The student develops awareness that humans are part of the environment, influencing it and being influenced by it.	-9
82	The student contributes to forming groups to spread environmental culture among community members.	-10
90	The student helps identify positive approaches to protect the environment from pollution.	-11
88	The student masters the use of materials that do not harm the environment.	-12
87	The student seeks to understand the benefits of living in a healthy surrounding environment.	-13
86	The student participates in practicing a set of activities to maintain a safe and clean environment.	-14
77	The student contributes to creating artistic models that help preserve the environment.	-15
Fourth: Cultural and Scientific Axis		
85	The student contributes to fostering creativity among community members.	-1
82	The student seeks to support and encourage the transfer of advanced technologies suitable for sustainable development in Iraq.	-2
78	The student participates in attending scientific conferences and contributing to projects related to the environment with educators.	-3
80	The student encourages talented individuals and inventors, establishes scientific teams and clubs, and provides them with financial support.	-4
88	The student strives to review and improve curricula applied at different educational stages to make them more stimulating for thinking and enhancing participants' intelligence.	-5
82	The student aims to implement educational training programs across all educational levels on the importance of Arab and global cultures and how to develop them.	-6
78	The student contributes to generating energy from waste and utilizing it.	-7
78	The student seeks to preserve and invest in cultural and religious heritage to achieve sustainable development.	-8
85	The student encourages the development of a high capacity for creative thinking and a love for innovation.	-9
82	The student is keen on using the scientific method in solving problems (personal and collective).	-10
80	The student seeks to understand how to efficiently utilize modern technology in daily life.	-11



85	The student is committed to innovation and creativity in cultural and artistic festivals.	-12
80	The student participates in scientific innovation using materials from the environment.	-13
80	The student, along with their team, implements sustainable development projects that serve their community.	-14
75	The student discusses with peers local and Arab environmental issues and the latest achievements related to them.	-15
77	The student contributes to establishing resilient infrastructure, promoting inclusive and sustainable industrial development, and encouraging innovation among peers.	-16
83	The student encourages peers to participate in cultural and scientific events, focusing on showcasing talents for the benefit of their town.	-17
81	The student uses modern technologies in interacting with peers.	-18
84	The student participates in organizing seminars on recent changes and their impact on positive and negative behavior.	-19

The paragraphs in Table (2) include 71 items related to the scale's axes, which serve as a pioneering reference for implementing requirements to achieve sustainable development goals. Curriculum requirements are a fundamental element for human and social stability and development, representing an ongoing comprehensive or partial evolution of curriculum axes. Hence, they are integral to sustainable development objectives. "Social, environmental, cultural, and scientific issues facing countries worldwide represent some of the strongest challenges humanity has confronted throughout history, arising from human interaction with the surrounding environment and its available resources. This necessitates reshaping the relationship between humans and their environment and increasing awareness of this relationship, which aligns with sustainable development goals" (Al-Rubaie & Magdy, 2021, p. 45).

Environmental scientists define development in terms of environmental dimensions and the need to protect it from all types of pollution. Considering these diverse perspectives, it can be concluded that development encompasses multiple dimensions: economic, social, environmental, health, scientific, cultural, and many others. Development strategies must balance all these dimensions to achieve sustainable development.

Regarding environmental protection, prevention is far cheaper and more effective than treatment. Most countries aim to assess and mitigate potential damage from new infrastructure investments through foresight and informed decision-making, considering environmental costs and benefits when designing energy strategies. Consequently, the environment is now an active component within economic, financial, social, commercial, and environmental policies (Salmi Rashid, 2006, p. 115).

Sustainable development relies on a set of principles forming its pillars to achieve strategies that meet the needs and welfare of current generations without compromising the rights of future generations. These principles include:

- Efficiency in resource use.



- Flexibility.
- Precaution.
- Justice.
- Polluter-pays principle.
- Participation.
- Inclusion.

Educational leaders in Iraq must recognize that modern, qualitative curricula are gateways to comprehensive development. The success of sustainable development depends on curriculum quality and leadership efficiency because higher education relies on its staff, who are essential tools for social, health, environmental, cultural, scientific, and economic development—priorities in strategic national planning.

The scale's axes and their items are all significant and compatible with curricula at all educational levels. Experts agreed that these axes are purposeful and aligned with sustainable development goals. Table (2) indicates that:

- **Social Axis:** Comprising 21 items and achieving a score of 79.048%, focuses on improving social welfare, participation in decision-making affecting community life, emphasizing justice and equality, and creating equal opportunities for citizens lacking access to natural resources and social services. It also enhances individuals' ability to utilize available energy to achieve freedom and well-being.
- **Health Axis:** Comprising 16 items with a score of 78.56%, focuses on health, safety, and quality. Questions addressed the practical application of sustainability concepts in healthcare facilities and their compatibility with healthcare outcomes. Awareness of comprehensive sustainability and its benefits has increased over time.
- Sustainable development objectives, established by the International Governmental Group and consisting of seventeen goals, apply universally and address a wide range of sustainability issues impacting global health and welfare.

Most curricula across all levels aim to improve healthcare services, protect natural resources, and promote rational and optimal use of agricultural land and water resources. Curriculum designers must update content in line with scientific and technological advances, focusing on:

1. Conserving water and energy used in agriculture and industry.
2. Encouraging green economy and development integration into curricula and student culture.
3. Supporting social, health, environmental, cultural, and scientific institutions to enhance growth.

The Food and Agriculture Organization (FAO) emphasized that development entails managing and protecting natural resources while guiding technological and institutional changes to sustainably meet human needs for present and future generations. Curricula accommodate diverse societal intellectual and social currents, addressing cultural and educational issues. Effective curricula reflect societal understanding and incorporate philosophical and pedagogical orientations that guide implementation, monitoring, and evaluation to improve student health and resource conservation.

Sustainable development integrates environmental, social, and economic elements to prioritize natural health. Sustainable healthcare involves complex interactive approaches for maintaining and improving human health within an ecologically, economically, and socially sustainable framework without causing undue impacts on vital systems. This comprehensive approach unifies strategies under sustainable healthcare to improve human and environmental health simultaneously, clarifying sustainability in practical terms for healthcare facilities and accelerating progress through clear laws, mandates, incentives, and implementation processes.

- **Environmental Axis:** Comprising 15 items, achieved the highest score (83.07%). It focuses on natural resources (water, energy, agriculture, biodiversity) as the backbone of sustainable development



through resource management, quantity and quality optimization, and balancing economic development with environmental preservation for future generations. Sustainable development aims to:

1. Rationally use finite resources to preserve them for future generations.
 2. Respect the environment's limited capacity to absorb waste.
 3. Precisely determine the quantity of each finite resource to be used based on its real economic value.
- **Cultural and Scientific Axis:** Comprising 19 items with a score of 81.21%, positively impacts state and individual income and improves living standards by integrating diverse cultural and scientific knowledge in higher education curricula, the cornerstone for genuine development. Higher education's primary goal is human development within society, addressing intellectual, ethical, political, economic, and cultural dimensions, preparing individuals to adapt to societal changes while promoting lifelong learning, critical thinking, and innovation. Updated curricula stimulate talent, observation, knowledge expansion, and practical experience to align students' capacities with sustainable development objectives.

Conclusions:

1. Most curriculum axes and items support sustainable development goals.
2. Curricula encourage peaceful, inclusive communities to achieve sustainable development.
3. Curricula enhance health and environmental awareness, improving healthcare and environmental services.
4. Higher education institutions support transferring advanced technologies by updating curricula.
5. Curricula combat harmful societal habits in line with sustainable development goals.
6. The social axis is crucial for democracy, health, education, population growth, and social integration.
7. Curricula provide students opportunities for observation, thinking, understanding, exploration, innovation, and knowledge expansion.
8. The environmental axis is prioritized due to its focus on environmental protection from all forms of pollution.

Recommendations:

1. Update curricula according to their axes and items to achieve sustainable development goals and address current and future challenges constructively.
2. Provide new curricula supporting sustainable development at all levels and adaptable to diverse social environments.
3. Establish infrastructure to fund and implement curricula enabling student collaboration toward sustainable development.
4. Ensure curricula develop individuals capable of societal reform and sustainable development application.
5. Prepare educational leaders to guide students toward integrating into society through educational means shaping their human nature.
6. Design curricula to develop students' critical thinking, skills, and readiness according to sustainable development requirements.
7. Foster student responsibility, teamwork, and respect for sustainability by linking personal values and behaviors to sustainable outcomes.
8. Enhance student awareness of responsibilities toward minimizing developmental pressures on the environment, natural resources, and society.



9. Integrate sustainable development goals within environmental, social, cultural, and scientific axes to promote public health.

References and Sources

1. Adeeb Abdel Salam: *Dimensions of Sustainable Development*, article published online, 13/12/2012.
2. United Nations: *Annual Report of the Secretary-General*, New York, 2001.
3. International Union for Conservation of Nature (IUCN): *Report on the State of the Global Environment* (1950).
4. Arab Scout Organization: *Scout Curricula for the Scout and Guide Stages*, 1st ed., Cairo: Alam Al-Kutub, 2010.
5. Salmi Rashid: *The Impact of Environmental Pollution on Economic Development in Algeria*, PhD Dissertation in Economic Sciences, Management Department, University of Algiers, 2006.
6. Saadah Ibrahim & Ahmed Abdullah: *The Contemporary School Curriculum*, Dar Al-Fikr for Printing and Publishing, Amman, 2004.
7. Sanaa Dweikat, 2018, online source.
8. Mahmoud Dawood Al-Rubaie: *Contemporary Educational Curricula*, 1st ed., Dar Safaa for Publishing and Distribution, Amman, 2016.
9. Mahmoud Dawood Al-Rubaie, Hassan Shaker Magdy, & Ali Al-Sayegh: *Management Science and Leadership Art*, Dar Al-Manhajiya for Publishing and Distribution, Amman, 2018.
10. Mahmoud Dawood Al-Rubaie & Hassan Shaker Magdy: *Education and Learning for Sustainable Development*, Dar Safaa for Printing and Publishing, Amman, 2023.
11. "WHAT IS SUSTAINABLE DEVELOPMENT?", <https://www.accion.com>, Retrieved 17-06-2018. Edited.
12. "What is sustainable development", <http://www.sd-commission.org.uk>, Retrieved 17-06-2018.