# THE REALITY OF EDUCATION SECTOR IN JORDAN IN LIGHT OF THE SUSTAINABLE DEVELOPMENT GOALS

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#### Abstract

The study aimed at analyzing the reality of the education sector in Jordan in light of the sustainable development goals. To achieve this goal, the study used the descriptive analytical approach to define the seventeen sustainable development goals and how their historical development until they were set in 2015, focusing on goal number 4 related to quality education. The study also used content analyze approach to analyze the strategy of the Jordanian Ministry of Education 2018-2022 to verify its suitability to the goal of quality education, to verify the extent to which the provisions of that strategy are implemented on the ground, and to indicate the obstacles to that application, if any. The study revealed that the National Strategy for Education in Jordan 2018-2022 is consistent in its mission and vision with achieving the fourth goal of the sustainable development goals related to quality education, and that despite the improvements achieved in the education system in Jordan, there are remaining obstacles that challenge the reform of this sector in order to pave the way for its practice in a sustainable manner. After identifying a number of these obstacles, the study proposed a number of recommendations that would raise the readiness of the educational sector in Jordan to achieve the goals of sustainable development, such as Increase the capacity of the Jordanian Ministry of Education to improve the performance of teachers, motivate them to improve student learning, and support safe learning environments, including for children with disabilities, and supporting families in the poorest areas to enable them to enroll their children in education.

**Keywords:** sustainable development goals, sustainable education, the Jordanian Ministry of Education, the Hashemite Kingdom of Jordan.

#### **1-INTRODUCTION**

Sustainable development is a global call takes into account the social, economic and environmental dimensions; in order to make good use of the available resources to meet the needs of individuals while preserving the right of future generations. Since the seventies of the twentieth century, the world has realized the need to improve the living conditions of all individuals without increasing the use of natural resources beyond the endurance of the planet. After many academic efforts and international conferences, the Sustainable Development Goals were set in 2015 and their seventeen goals fell within three main dimensions: economic growth, conservation of natural resources, and social development.

In the social field, it is necessary to look at education in the light of the renewed vision of sustainable human and social development that is both equitable and sustainable. This sustainable vision must take into account the social, environmental and economic dimensions of human development and the different ways in which education is related; So that empowering education is what builds the human resources that we need to be productive, continue learning, solve problems, create and live together and with nature in peace and harmony. For this purpose, the current study aims at analyzing the reality of the education sector in Jordan in light of the sustainable development goals.

# 1-1 Problem of the Study

Many studies indicate an existence of a high awareness of the need to achieve the fourth goal of sustainable development goals related to quality education. Al-Zaydat (2022) indicated that there is a high awareness of the principals of Jordanian private schools in achieving the fourth goal of the sustainable development goals. Al-Sharman & Al-Fursan (2020) indicated that the role of the school administration was high in achieving the dimensions of sustainable development. This was agreed upon by the Semin (2019) in term of that cooperation and organized work among school principals in the city of Sivas in central Turkey affects the adequacy of education positively. Aydin & Keles (2021) indicated that the awareness of teachers before serving in different branches of the Faculty of Education in universities located in the eastern Anatolia region 2019 was high especially for teachers of science, primary education, mathematics, pre-school and social studies. This was proven by Gonzalez et al. (2020) with regarding a high awareness among teachers of the fourth goal of sustainable development and their desire to integrate education for sustainability into their educational practices.

This high awareness of both the school administration and the teachers is due to the official support by the Ministry of Education whose strategies must include achievable goals for integrating sustainability into education. Based on this, the problem of the current study revolves around answering a major question: **What is the reality of the education sector in Jordan in light of the sustainable development goals?**. According to this question, the study will analyze the strategic plan for education in Jordan 2018-2022 to verify the extent to which it includes the fourth goal of sustainable development goals, and to reveal any obstacles to implementation on the ground, if any.

# **1-2 Significance of the Study**

The significance of this study stems from the importance of sustainability, and its focusing on preserving resources for future generations, especially the resources on which the services sector depends, in addition to the fact that these resources may be limited or scarce in the first place.

The importance of this study comes from the importance of education, which is the path to self-development and to the future for societies; as it unleashes various opportunities and reduces inequalities, and it is the cornerstone on which enlightened and tolerant societies are based and the main engine for sustainable development, this is the reason why it is included in the 2030 sustainable development goals.

In light of the scarcity of studies that dealt with this subject, it is expected from the results of this study to discover the gap between theorization and application, and to identify the obstacles to the application of sustainable education in Jordan, which may benefit the relevant authorities through the recommendations that the study will propose in taking the necessary measures to sustain education for the benefit of students, their families and society.

### **1-3 Questions of the Study**

The study will try to answer the following questions:

1. What is the concept of sustainability, its elements and objectives?

2. To what extent does the strategic plan for education in Jordan 2018-2022 include sustainable development?

3. Are there any obstacles to sustain education in Jordan?

### 1-4 Methodology

The study will use the descriptive analytical approach to define the seventeen sustainable development goals and how their historical development until they were set in 2015, focusing on goal number 4 related to quality education. The study will also use content analyze approach to analyze the strategic plan for education in Jordan 2018-2022 to verify its suitability to the goal of quality education, to verify the extent to which the provisions of that strategy are implemented on the ground, and to indicate the obstacles to that application, if any.

### 2- LITERATURE REVIEW

Sustainable planning is one of the most important pillars of development; as it constitutes a key factor in the

development process, which must be continuous and systematic (Alcamo et al.,2020). The term sustainability had a great importance; it is exist in all areas and fields of life; as it is based on reliance on limited resources to ensure that they will not be exhausted and remain for future generations (Bali & Ranganathan,2021).

# 2-1 Sustainability Concept

Sustainability concept is also linked to social, environmental and economic responsibility, for which criteria have been set to measure indicators of commitment to that responsibility by companies and government and private institutions (Barbier & Burgess,2017). Sustainability means a capacity and willing to maintain some entity, outcome or process over time (Breuer et al.,2019). Many scholars have defined sustainable development as a manner meets the needs of the current generation without compromising the ability of future generations to meets their own needs and wants (Kolk,2016; Littig & Griebler,2005).

Sustainable development is an effort at guaranteeing a balance among economic growth, environmental integrity and social well-being. This reinforces the argument that, implicit in the concept of sustainable development is intergenerational equity, which recognizes both short and the long-term implications of sustainability. According to (Taylor,2016), this is can be achieved by the integration of economic, environmental, and social concerns in decision-making processes. However, it is common for persons to treat sustainability as synonyms and analogues, but the two concepts are distinguishable. Ukaga et al (2011) mentioned that sustainability is the endpoint of the process of sustainable development. Casadevall & Mensah (2019) reinforces the point by arguing that, while sustainability refers to the process for achieving this state.

Singh (2016) mentioned that SD term has emerged from a series of Summits and Conferences, where influential persons have tried to come to an agreement on how to tackle the "burning issues" of the 21<sup>st</sup> Century, such as poverty, increasing inequality, environmental and human health degradation.

Many efforts on both academic and practical levels led to the establishment of the UN Environment Program. Fifteen years after the Stockholm Summit in 1987, the Minister of the Environment of Norway, Mrs. Brundtland set up the eponymous special committee to look at the issue of development and its impact on the environment. The Brundtland Commission has published a report entitled "Our Common Future", which for the first time defined: sustainable development as the development that meets the needs of today's generation without limiting the ability to meet the needs of future generations (AI-Khasawneh,2015). This report linked environmental protection for the first time to the issue of economic development and social wellbeing and prosperity and began consolidating sustainable development (Karnib,2017). In 1992, twenty years after the Stockholm Summit, the UN held its World Conference on Environment and Development in Rio de Janeiro, Brazil. The main result of Rio was the preparation of a Report, known as "Agenda 21", which refers to the obligations and goals of the International Community to achieve a better life and the goals of sustainability for the 21<sup>st</sup> century (Mainali et al.,2018).

Agenda 21 includes 40 chapters that cover all issues related to the triptych Economy-Society-Environment, from the fight against poverty to the issues of development cooperation and the need to create appropriate institutions (Kumar et al.,2018). In 2002, the World Conference on Sustainable Development was held in Johannesburg, South Africa, culminating in the Stockholm Conference in 1972 and the Rio Conference in 1992. Both conferences were very important. The first stressed the importance of the environment and the second affirmed the relationship between environmental protection and economic and social development (Kroll et al.,2019; Moinuddin,2017).

# 2-2 Sustainable Development Goals 2030

The 2030 Agenda for Sustainable Development was adopted at the 70<sup>th</sup> General Assembly of the United Nations, in 2015, with the Resolution "Transforming Our World: The 2030 Agenda for Sustainable Development" (United Nations, A/RES/70/1, 2015). 2030 Agenda is the most ambitious global agreement the UN has ever reached, as it is an action plan for Persons, the Planet and Prosperity. 2030 Agenda promotes the integration of all three dimensions of sustainable development – social, environmental, and economic – into all sectoral policies, while promoting interconnection and the coherence of policy and legislative frameworks related to the Sustainable Development Goals. 2030 Agenda is an action plan for Persons, the Planet and Prosperity, which seeks to strengthen world Peace and implement it through the Partnership of all countries and stakeholders. These five thematic objectives constitute the core of the "2030 Agenda" that sets 17 Sustainable Development Goals (SDGs) and 169 targets and 213 measurable indicators form a global action plan. The purpose is to eradicate poverty and achieve sustainable development on a global

scale by 2030, with no one left on the sidelines (Mohieldin, 2017).

These are specific goals for the next 15 years, which focus on human dignity, regional and global stability, ensuring the "health" of our planet, just and resilient societies and prosperous economies. They are global and general implementation goals with an implementation schedule until 2030. They create implementation commitments for all countries, developed and developing, considering the different national realities, levels of development, national policies, and priorities (www.dosweb.dos.gov.jo). It is worth reviewing these goals (www.unpp.org) with focusing on the fourth goal that ensures the qualified education.

**Goal 1: No poverty**: by providing social protection for all, access to economic resources, and reducing the vulnerability of the population to climate-related disasters and disasters. Social and Economic

**Goal 2: Zero Hunger:** by taking all means to stop wasting and stunting in children under five or overweight and obese, in addition to doubling agricultural productivity and incomes of small farmers, ensuring sustainable food production systems and improving the quality of land.

**Goal 3: Good health and wellbeing:** by ensuring healthy lives and promoting well-being for all human being at all ages with no discrimination.

#### Goal 4: Quality education

Access to education is a supportive pillar for achieving human development and social and economic development. Despite the fact that enrollment rates indicate remarkable progress towards increasing access to education at all levels. However, the sustainable development goals are also concerned with the quality of education based on the contribution of education to reducing inequality between groups of society and reducing poverty rates.

Education in its various stages and types is the main driver of sustainable development, and the direct supporter of human resources, which is the cornerstone of this development. For this purpose, the fourth goal of the Sustainable Development Goals has been allocated to quality education. This goal emphasizes "ensure inclusive and equitable quality education for all, and promote lifelong learning opportunities for all. Based on this, countries have begun to place education as a necessity within their strategic plans; Education is the key to individual and social development that must be equitable and of high quality throughout life (UNESCO, 2020).

The fourth goal of sustainable development related to quality education is to ensure the provision of equal opportunities for education to ensure a comprehensive perspective of lifelong learning, and to ensure the universalization of pre-primary, primary and secondary education, and ensuring the provision of equal opportunities that promote lifelong learning opportunities for young people and adults, inclusion, equity, elimination of gender disparity, and securing more equitable access at all levels of education, vocational training, and education for people with disabilities (Ismail, 2015).

The transition to environmentally sustainable societies depends mainly on education; It is the guide that directs the attention, formulates values and participates in the development of concepts, tools and skills that may be used to stop or limit of unsustainable practices. Education may have a negative impact on development if it reinforces practices negativity such as excessive consumption of natural resources. Hence, we must focus on directing education towards the application of principles and sustainable development standards.

UNESCO describes high-quality education as education that achieves the acquisition of relevant knowledge and skills relevance, promotes stable emotional development, and conveys the core values of the United Nations. These values include respect human rights, democracy, peace, freedom and tolerance, as well as cultural diversity, environmental responsibility and justice social and economic participation. It can be said that education for sustainable development and citizenship education does exactly that, and focuses on different areas through its application in education that helps people live in a peaceful way and ecologically responsible (UNISCO,2021).

Quality Education ensure that all girls and boys receive free, equitable and quality primary and secondary education, leading to achieving appropriate and effective educational outcomes in 2030, ensure that it is available to all girls and boys in pre-primary education; so that they are ready for primary education in 2030, ensuring equal opportunities for all girls and boys to obtain good and affordable technical and higher education, enable them to occupy a decent jobs in future.

**Goal 5: Gender equality:** by establishing the principles of equality for women and girls in access to education, health care, decent work, and representation in political and economic life and decision-making.

**Goal 6: Water and sanitation:** This goal focuses on water quality, sustainable management and hygiene, as well as stressing the situation of the most vulnerable populations who suffer from scarcity of clean water, poor quality and poor sanitation are factors that negatively affect food security and livelihoods tests and lead to increased hunger and malnutrition.

**Goal 7: Affordable and clean energy:** The possibility of universal access to clean energy is considered a necessity of life, whether for job opportunities, security, climate change, food production, income increase and economic strengthening, or the protection of ecosystems. For that, the 2030 Sustainable Development Goals have focused through the seventh goal, the importance of obtaining modern energy services necessary for development, and achieving a significant increase in the share of renewable energy in the global energy mix.

**Goal 8: Decent work and economic growth:** which meets the aspirations of human beings to obtain employment opportunities that are suitable to their abilities and with fair wages, and to enjoy all rights, privileges and gender equality, in addition to ensure equal pay for work of equal value for all employees including women and persons with disabilities.

**Goal 9: Industry, Innovation and Infrastructure:** by investing in good quality, reliable, sustainable, and resilient infrastructure including transport, irrigation, energy and information and communication technology to support economic development and human well-being, with a focus on equitable and affordable access for all.

**Goal 10: Reduced inequalities:** This goal came due to the growing disparity in income and wealth in many countries, which means that there are restrictions on development and opportunities available to humans, especially poor persons. This goal focuses on ensuring equal opportunities through the adoption of legislation and the adoption of policies that ensure the improvement of life conditions for all persons in a sustainable manner.

**Goal 11: Sustainable cities and communities:** Good living requires access to housing, basic services, safe and sustainable transportation, green spaces, cultural places, good air and protection from the effects of climate change. This goal addresses the reduction of the environmental impact of cities by preventing pollution or managing waste.

**Goal 12: Responsible Consumption and Production:** by replacing the methods practiced by societies in the processes of consumption and production with methods that apply the concept of sustainability in order to improve the quality of life and well-being, which can be reached by achieving a balance between growth and economic development and between protecting the environment and ensuring the sustainability of natural resources, and this goal is based on the concept of reducing Environmental and social impacts resulting from the production of goods or services, and stresses the development of policies for sustainable consumption and production.

**Goal 13: Climate Action:** This goal requires the provision of clean and renewable energies, sustainable management and restoration of healthy ecosystems such as forests, soils and wetlands, while at the same time helping local communities and countries to adapt to a certain level of climate impacts that are currently unavoidable.

**Goal 14: life below Water:** This goal is concerned with marine ecosystems, and calls for the reduction of pollution, the restoration of fish stocks and the practice of sustainable fishing in accordance with the framework set by the United Nations Convention on the Law of the Sea.

**Goal 15: Life on Land:** This goal deals with regulating and protecting terrestrial ecosystems, promoting their sustainable use, combating desertification, halting land degradation and halting biodiversity loss, replanting forests to combat climate change, and combating illegal trade in protected species to preserve them from extinction.

**Goal 16: justice and Strong institutions:** This goal focuses on reducing all forms of violence and stabilizing security by strengthening the rule of law and human rights, which are essential to the development process.

**Goal 17: Partnerships for the goals:** This goal deals with enhancing North-South regional cooperation in science, technology and innovation and improving coordination between existing mechanisms, especially at the UN level. Goal 17 stresses that in order to strengthen the means of implementation and revitalize the global partnership for sustainable development, the collection of data and monitoring and accountability of the SDGs are crucial. Member States are called upon to enhance capacity-building support to developing

countries, including least developed countries (LDCs) and small island developing states (SIDS), which would significantly increase the availability of high-quality, timely and reliable data that is also disaggregated by disability.

### **3- ASSESSMENT OF SUSTAIN EDUCATION IN JORDAN**

Jordan Vision 2025 stipulates on placing the Jordanian citizen at the center of the development process, as a prosperous and resilient Jordan depends on the well-being of its citizens. Active people who enjoy strength, a sense of belonging, live in a safe and stable community, in a dynamic and globally competitive society served and supported by effective government (Jordan Vision 2025).

Jordan vision 2025 coincides with the fourth goal of sustainable development related to quality education in terms of raising the enrollment rate in pre-school education from 60% in 2014 to 90% in 2025, increasing the gross enrollment rate in vocational education from 12.13% in 2014 to 40% in 2025, increasing spending on research and development from 52.0% in 2014 to 75.1% in 2025, and keep pace with the international rankings to include at least 5 Jordanian universities among the list of the best Jordanian universities among the 500 universities around the world in 2025 (Jordan Vision 2025).

Jordan has paid attention to education as a basic human right, and as an element of developing human resources and increasing their participation to achieve comprehensive development. Paragraph 3 of Article 1 of the Jordanian Constitution stipulates that the state guarantees work and education within the limits of its capabilities (Jordanian constitution,1952: 3/1).

The education sector in Jordan has developed to keep pace with the growing demand for education services on the one hand, and to keep pace with developments in information and communication technology on the other hand. This development was represented by the adoption of an educational development plan since 1990, and a project to develop education towards a knowledge economy in 2003 with the aim of expanding the pre-school education stage, improving the educational environment, developing curricula, improving the school environment and the necessary infrastructure for using technology in the general education stage, in addition to setting strategic plans for the development of higher education and improving its quality through the independence of universities, the development of governance and institutional performance, and the encouragement of scientific research, ensuring the quality of the outputs of higher education, harmonizing its outputs with the labor market, and strengthening the relationship between universities and research institutions on the one hand, and the productive, service and industrial sectors on the other hand in the field of scientific research and development (Al-Khasawneh, 2015).

The illiteracy rate has decreased in Jordan, the enrollment rate in basic education has increased to 95.3%, the enrollment rate in secondary education has increased to 75%, with the exception of vocational secondary education, to which enrollment is decreasing, especially among females; as job opportunities for graduates of vocational education are less than the opportunities available for graduates of academic education, in addition to the prevailing beliefs that vocational education is inferior to academic education in terms of status and educational attainment (UNESCO,2020).

The strategic plan for education 2018-2022 is based on the objectives of the human resources development strategy, which aims to "empower the Kingdom achieving the goals of sustainable development, which will be reflected in the development in the various economic, social and environmental fields. It will ensure for present and future generations the ability to develop the capabilities and skills necessary to ensure social well-being through work. After analyzing the Strategic Plan for Education in Jordan 2018-2022, it becomes clear that it diagnosed the reality of education in Jordan, and identified areas and priorities in line with the sustainable development goals, especially the fourth goal. This can be seen by the strategy vision presented by reaching a pioneering, affiliated, participating educational community committed to values. Its approach is science and excellence, leading to universality, and providing equal opportunities to obtain high-quality education that enables the learner to think scientifically, critical creative, team working, lifelong learner, and endowed with skills and values; to be an active citizen belongs to his homeland, contributing to the advancement of the world and humanity (The strategic plan for education in Jordan 2018-2022).

Despite the efforts made to develop education in Jordan, there are a number of challenges facing the education sector in Jordan, which impede the implementation of the sustainable development goals in a comprehensive manner. These challenges are (Maqdadi, 2017; Unicef, 2020; Alamro, 2021):

1. The high percentage of rented schools, and the high percentage of double-shift schools; As a result of the increased demand resulting from the natural increase in the population and forced migrations from neighboring countries, which constitute 12.3% of the total students in the basic education stage.

2. Weakness of the financial capabilities required to provide an appropriate and stimulating educational environment in some regions, where the budget of the Ministry of Education constitutes 11% of the government budget.

3. The need to take into account children with disabilities; by providing their own lanes and other facilities.

4. Failure to provide preventive maintenance for many schools; due to the lack of a special program for this purpose.

5. The problem of poverty that forces children to drop out of school and join the labor market.

6. Lack of early childhood development opportunities, with only 13% of children aged 3 to 4 years attending kindergarten (KG1), and only 59% of children aged 5 to 6 years attending kindergarten (KG2).

7. The number of female students in secondary schools is more than the number of male students. Boys are more likely to drop out of school due to poor academic achievement, violence, bullying and the need to work.

8. Underperformance among students that may be related to the quality of teachers, violence in schools, the availability of good school environments, and the student-teacher ratio.

9. Learning outcomes in Jordan are poor, particularly at the primary and secondary levels. Where 70% of second and third grade students read without understanding. Students still perform very poorly on international standardized tests, including mathematics and science.

10.Weakness in the ability of education to adapt to knowledge, technology and educational developments, and to respond to the challenges of the times and the requirements of development in Jordan.

11. The teacher's financial and living conditions deteriorated, which led to them to look for another job to provide them and their families with a decent life. Their social status also declined, and they lost their prestige as a teacher and educator. This led, and sometimes leads to attacks by students and their parents, and the loss of their rights.

### CONCLUSION AND RECOMMENDATIONS

The history of the Jordanian educational system is the history of reforms par excellence, but at the same time it is the history of the difficulties of implementing them. Most of the successive reform efforts on that system began in the early 1990s, defining the national mission for education, and developing a comprehensive strategy that was included in the economic and social transformation plan and the public education plan for the period 2003-2008. It also launched an ambitious program for the entire region, the Education Reform Program for a Knowledge-Based Economy, for a period of ten years. This program sought to reorient educational policies in line with the needs of a knowledge-based economy, improve the physical learning environment in schools, and reinforce previous reforms. This was followed by the launch of the National Strategy for Education in Jordan 2018-2022, which is consistent in its mission and vision with achieving the fourth goal of the sustainable development goals related to quality education.

Despite the amazing improvements achieved in the education system, there are remaining problems that challenge the reform of this sector in order to pave the way for its practice in a sustainable manner. After identifying a number of these obstacles, the researcher proposes a number of recommendations that would raise the readiness of the educational sector in Jordan to achieve the goals of sustainable development, including the following:

1. Increase the capacity of the Jordanian Ministry of Education to improve the performance of teachers, motivate them to improve student learning, and support safe learning environments, including for children with disabilities.

2. Changing the stereotype of students and their families about non-academic education to encourage enrollment in this sector.

3. Enhancing the system of providing kindergartens through comprehensive stations for licensing kindergartens, ensuring quality, and building the capacities of teachers and service providers.

4. Supporting families in the poorest areas to enable them to enroll their children in education.

5. Opening new kindergarten classes in refugee camps and in community centers across Jordan and mainstreaming play-based and child-centered learning into curricula and teacher training.

6. Reducing the number of rented schools, and directing spending to build model schools that include

science laboratories, resource rooms, and accessibility for students with disabilities.

7. Train teachers to provide comprehensive educational services.

8. Include the sustainable development goals in the curricula and courses, provided that they contain applied activities in the areas of implementation of those goals.

9. The Jordanian Ministry of Education circulates initiatives aimed at introducing sustainable development goals.

10. Formation of a "Sustainable Development" committee within the Jordanian Ministry of Education to follow up initiatives and activities related to the sustainable development goals.

11.Allocate an award for the best school that implements initiatives to achieve the fourth goal of sustainable development goals related to quality education.

12.Conducting more research and academic studies on the reality of the education sector in light of the sustainable development goals.

### **REFERENCE LIST**

- Al amro, Fouad, (2021), Education in Jordan: Hopes and Challenges, www.al-adab.com.
- Alcamo, J.; Thompson, J.; Alexander, A.; Antoniades, A.; Delabre, I.; Dolley, J., & Scharlemann, J. P., (2020). Analysing interactions among the sustainable development goals findings and emerging issues from local and global studies, Sustainability Science, 15(6).
- Al-Khasawneh, Muhammad, (2015), The National Assessment of Sustainable Development, the Arab Report on Sustainable Development, the Jordanian Ministry of Planning, Amman.
- Al-Qamizi, Hamad. (2015). The role of the content of science curricula in developing concepts of sustainable development among Middle school students in the Kingdom of Saudi Arabia. The Egyptian Journal of Scientific Education, 18(2).
- Al-Sharman, Munira, & Al-Fursan, Muhammad (2020), The role of school administration in achieving the dimensions of sustainable development in Jordan from the teachers' point of view, International Journal of Educational and Psychological Studies, 8 (2).
- Al-Zaydat, Maysoon, (2022), The role of private school principals in achieving the fourth goal of the sustainable development goals from the point of view of teachers in Amman, Unpublished Master's thesis, Middle East University, Amman, Jordan.
- Aydin, S. & Keles, P., (2021), Teachers candidates Awareness of sustainable development, Shanlax International Journal of Education, 9(1).
- Bali Swain, R., & Ranganathan, S. (2021), Modeling interlinkages between sustainable development goals using network analysis. World Development, 138.
- Barbier, E. B., & Burgess, J. C, (2017), The Sustainable Development Goals and the systems approach to sustainability, Open-Assessment E-Journal.
- Breuer, A.; Janetschek, H., & Malerba, D., (2019), Translating Sustainable Development Goal (SDG) Interdependencies into Policy Advice, Sustainability, 11(7).
- Casadevall, S. & Menash, J., (2019), Sustainable development: Meaning, history, principles, pillars, and implications for human action: Literature review, Cogent Social Sciences, 5(1).
- Gonzalez, E.; Fontana, R. & Azcarate, P., (2020), Education for Sustainability and the sustainable development goals pre-service teachers perceptions and knowledge, sustainability, 12(8).
- Ismail, S., (2015), Equity and Education, International Encyclopediaof the Social & behavioral sciences, 2(7).
- Jordanian Constitution 1952 and it's amendments.

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- Karnib, A. (2017). Mapping the direct and indirect interlinkages across the sustainable development goals A qualitative nexus approach, International Journal of Development and Sustainability, 6(9).
- Kolk, A. (2016). The social responsibility of international business from ethics and the environment to CSR and sustainable development. Journal of World Business, 51(1).
- Kroll, C.; Warchold, A.; & Pradhan, P., (2019), Sustainable Development Goals (SDGs): Are we successful in turning trade-offs into synergies? Palgrave Communications, 5(1).
- Kumar, P.; Ahmed, F.; Singh, R. K.; & Sinha, P. (2018). Determination of hierarchical relationships among sustainable development goals using interpretive structural modeling. Environment, Development and Sustainability, 20(5).
- Littig, B., & Griebler, E. (2005). Social sustainability: a catchword between political pragmatism and social theory. International Journal of Sustainable Development, 8.
- Mainali, B.; Luukkanen, J.; Silveira, S., & Kaivo-oja, J. (2018), Evaluating Synergies and Trade-Offs among Sustainable Development Goals (SDGs) Explorative Analyses of Development Paths in South Asia and Sub-Saharan Africa. Sustainability, 10(3).
- Miqdadi, Omar, (2017), sustainable development and its future in Jordan, www.ammounnews.net
- Mohieldin, M., (2017), The sustainable development goals and private sector opportunities, EAFIT University of Medellín.
- Moinuddin, M., (2017), Sustainable development goals interlinkages and network analysis: A practical tool for SDG integration and policy coherence. Institute for Global Environmental Strategies.
- Semin, F., (2019), Competencies of principals in ensuring sustainable education Teachers views, International Journal of Evaluation and research education, 8(2).
- Singh, S., (2016), Sustainable Development: A Literature Review, The International Journal of Indian Psychology, 3(3).
- Taylor, S. J. (2016). A review of sustainable development principles, Centre for environmental studies, University of Pretoria, South Africa.
- The Royal Jordanian Court, (2021), Jordan Vision 2025.
- The strategic plan for education in Jordan 2018-2022.
- Ukaga, U.; Maser., C., & Reichenbach, M. (2011), Sustainable development: principles, frameworks, and case studies, International Journal of Sustainability in Higher Education, 12(2).
- UNESCO, (2020), Education Monitoring Report, www.unesco.org.
- Unicef, (2020), Education quality and comprehensive education for every child, www.unicef.org.
- United Nations Development Program in Arab countries, www.undp.org
- United Nations, A/RES/70/1, 2015.
- www.dosweb.dos.gov.jo