

Public Disclosure Authorized

National Education Strategy for Iraq 2022-2031

Foreword

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Executive Summary

This document, the national Education Strategy for Iraq 2022-2031 or also referred to as Iraq National Education Strategy (INES) reflects on current challenges and presents a way forward for the education sector in Iraq.

Chapter 1 introduces the purpose of the INES and describes its development process. Chapter 2 provides key information on the context followed by an analysis of the education sector (chapter 3). Chapter 4 outlines the strategy's vision, mission, and core values. Chapter 5 describes sector priorities and key programmes. Chapter 6 provides the cost and financing framework for the INES and is followed by chapter 7 which outlines the M&E and coordination and implementation framework of the INES.

The INES 2021-2031 forms part of a government-wide effort to improve the quality and efficiency of public services provided to reach all Iraqis. To contribute to this transformation, the education system is guided by an ambitious vision for the education sector in Iraq:

To aspire towards an education system that is committed to values, provides sustainable and innovative learning opportunities for all, of high quality, promotes building a knowledge society, and conforms to global standards.

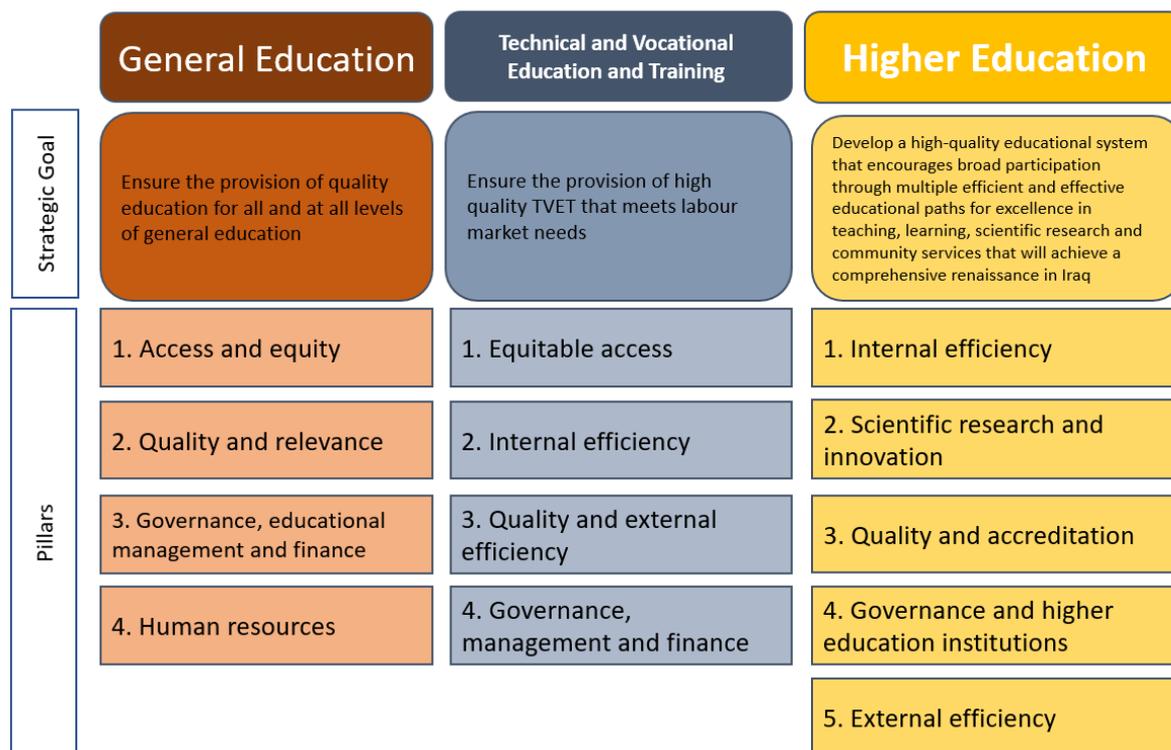
To this end, the National Education Strategy's mission is to:

Strengthen educational institutions for community partnership, and building systems that promote scientific and creative thinking, ensure the quality of outputs to meet the needs of the labour market, and contribute to building a diversified knowledge economy in line with the requirements of sustainable development.

The INES has been formulated considering the overall socio-economic development vision of the country, education laws of the Republic of Iraq including the provision of compulsory and fee-free basic education and its international commitments in education according to the Sustainable Development Goal 4 (SDG 4). It emphasises:

- Equitable access to quality and inclusive education,
- providing young people with the skills required in a 21st century knowledge society, which allow them,
- to contribute to sustainable economic and social development of Iraq.

To achieve the above-mentioned vision, the education sector, led by the Ministry of Education and the Ministry of Higher Education and Scientific Research, in close collaboration with line ministries, communities and external partners, aims to work towards strategic goals and related strategies organized in pillars and specific to General Education, TVET and Higher Education as outlined in the figure shown below.



Key themes across the three sub-sectors are:

- ensuring equitable access to education and training,
- improving quality and relevance of education and training and strengthening linkages with the labour market,
- improving the governance of education, including human resource development, educational planning, and management, and
- improving human resource and financial management, for better service delivery and greater value for money.

The identified strategies build upon and are consistent with recent policy, planning and programming decisions prepared by MoE and MoHESR. Within the overarching sub-sector strategic goals, the INES 2021-2031 puts emphasis on various cross-cutting factors, including gender, rural/urban divides, children, and youth affected by conflict and insecurity, as well as poverty. Proposed programmes address the vulnerabilities of children and youth in Iraq. The INES also proposes programmes aiming to address the effects of past and ongoing crises, including prolonged school closure due to COVID-19, displacement, destruction of education infrastructure, and psycho-social needs of learners. Furthermore, the strategy identifies concrete avenues for strengthening the resilience of the education system by institutionalizing crisis-sensitive planning and response.

The INES 2022-2031 is based on following key assumptions and projections:

Gradual improvement of key education parameters dependent on implementation of key sector reforms

Key reforms within the INES 2022-2031 are projected to start in 2022 with a gradual improvement of key education parameters in the first five years of the strategy. The assumption is that many regulatory and policy frameworks need to be put in place first before effective change such as in enrolment,

repetition, drop out etc. can be observed. Key regulations concerned with controlling teacher recruitment and ensuring efficient teacher allocation, as well as ensuring efficient use of investment expenditures for education infrastructure should be addressed in the initial phase of the strategy (2022-2025).

Macro-economic projections

Three parameters allow for the estimation of funds available for the education sector during the implementation of the INES 2022-2031: the evolution of the GDP for Iraq with an average increase of 3.3% up to 2031; the share of government expenditures as a share of GDP which is expected to remain at 35%; and the share of education as a percentage of total government which is expected to increase from almost 10% to 16% by 2031.

Based on these assumptions, the total public spending for education is expected to increase from around 11 trillion IQD in 2019 to around 19 trillion IQD in 2031 (in 2019 constant dinars), accounting for 5.6% of GDP.

Key education targets

The INES 2022-2031 defines several key targets as outlined below:

- Increase school readiness among pre-primary children by increasing enrolment from 10.7% GER (2018/19) to 30% by 2031, including through increasing the share of private provision of KG to 25%.
- Ensure universal completion of primary education by 2025 compared to around 83% in 2018/19.
- Ensure universal completion of intermediate education by 2028 from around 62% in 2018/19.
- Increase GER for preparatory education (academic) to reach 68%/66% (male/female) by 2031 from 47%/46% in 2018/19.
- Expand vocational education at preparatory level to accommodate a significantly higher number of students (GER 14%/13% by 2031 compared to 7%/3% in 2018/19) who can enter the labour market after completing grade 12 or access technical training in higher education, considering the needs of the national economy.
- Ensure a controlled expansion of higher education with 82% of academic preparatory graduates (compared to 100% in 2018/19) and 50% of Vocational preparatory graduates projected to enter universities and colleges by 2031, while keeping current levels of private provision at 25%.
- Improve teaching and supervision conditions by reducing class sizes in KG and primary education (from 64 to 30 at KG, from around 40 to 35 at primary), keeping class sizes of 35 students at secondary level but increasing class sizes at Vocational Schools to 30.
- Increase the number of students participating in non-formal education programmes from approximately 70,000 to 300,000; and
- Improve internal inefficiencies by regulating repetition, reducing the teacher class ratio, applying new teacher allocation regulations, and increasing the number of teaching hours.

Funding is also provided for the establishment of several programmes aiming at reducing disparities in access to education in terms of gender, disability, displacement, location, and poverty and improving the quality of education. This includes:

- Gradual increase of provision of school feeding to all pupils of public primary schools by 2030 and of the most vulnerable children attending pre-primary education (25% of all children attending KG by 2031)
- Provision of school grants as part of the school-based development programme to all public KG, primary and secondary schools from 2022 onwards. School grants are projected at a unit cost per student of 2,000IQD for primary and secondary schools and 6,000IQD for Vocational Schools. The unit cost is based

on number of students per school. School grants do not replace other operational non salary items such as textbooks, in-service teacher training, school feeding etc.

- Provision of textbooks in primary school (3 per student for G1-3, 7 for G4-6), intermediate level (5) and preparatory level (5) and a set of learning materials for vocational education.
- Provision of scholarships to reach 2% of all students in preparatory and 5% of all students in higher education.

Cost of the INES 2022-2031 and funding gap

Based on these assumptions, the total cost of the INES 2022-2031 amounts to around 140 billion Iraqi Dinars (in 2019 constant values) for the total duration of the strategy implementation. A significant increase in nominal terms takes place in pre-primary and vocational education which reflects the planned expansion of both sub-sectors. While operational expenditures remain the largest post of education spending, investment expenditures are expected to become an increasingly important part of public education spending increasing from 7% in 2022 to 10% of the total education expenditure in 2031 which is in line with the current infrastructure needs but also the quantitative expansion of the system expected in the coming years.

Due to the unfavourable economic environment caused by the COVID-19 pandemic, combined with longstanding system inefficiencies and the increased demand for resources to accommodate a rapidly increasing number of children and youth, the funding gap amounts to a total of almost 12 trillion Iraqi Dinars (2019 constant price). By 2026 the funding gap for operational expenditures will be closed. The funding gap for investment expenditures decreases from 2023 onwards though remains significant until the end of the strategy period with 28% of the total investment expenditures not funded. Major efforts are needed to fill the investment gap.

Chapter 1. Introduction

This document, the National Education Strategy for Iraq 2022-2031, also referred to as Iraq National Education Strategy (INES) outlines the vision of the Government of Iraq for its education sector for the next 10 years.

The education sector represents one of the three basic pillars of human development (along with health and the economy), and a fundamental pillar of the knowledge economy. Therefore, we find that the essence of the current global competition is an educational competition within the information technology revolution, and that the countries in which education occupies the forefront of the priorities of their concerns, and whose economy relies on knowledge and innovation in the production process, are able to achieve rapid leaps in various fields of comprehensive development, and advance their societies from the state of ignorance, poverty, backwardness and the spread of corruption to the ranks of developed countries. Although education constitutes the fourth goal out of a total of 17 sustainable development goals adopted by the United Nations General Assembly required to be achieved by 2030, achieving all these goals can only be done through the achievement of the fourth goal (the quality of education). The topic of "human development through education" also ranked first among five basic pillars in Iraq's priorities for the 2030 Sustainable Development Goals, along with good governance, a diversified economy, a safe society, and a sustainable environment.

Proceeding from the belief of the Government of Iraq that advancing the education sector and improving its level of sobriety and quality requires strategic planning so that it can be invested as a tool in achieving comprehensive development. The government took the initiative to build the first national strategy for education in 2009 with the participation of international organizations represented by UNESCO, UNICEF, and the World Bank. Its preparation took about three years, and it was approved by Cabinet Resolution No. (323) of 2012 and launched in December 2012. The Prime Minister's Office formed an executive secretariat for the strategy in November 2013, which prepared its work plan and a timetable for implementing the strategy's projects for the years (2012-2022). The strategy included (178) projects, including (63) projects for the Ministry of Education (MoE), and (115) projects for the Ministry of Higher Education and Scientific Research (MoHESR), as well as (11) projects proposed to be implemented by international organizations. Due to the security situation and financial conditions that the country was exposed to in 2014, the work of the executive secretariat was suspended, and MoE and MoHESR formed their own technical working teams to implement strategic programs and projects by harnessing available capacities of the two ministries.

After more than half of the strategy period, and in response to the proposal of the MoHESR and the initiative of the Prime Minister's Advisory Commission (PMAC), a Higher Committee was formed by Order (343) of 2018 by the Prime Minister's Office, headed by the PMAC and with the membership of representatives from the MoE, MoHESR, and Ministries of Planning and Finance. The Higher Committee was tasked to review and evaluate previous strategy projects with a specific focus on challenges faced in their implementation, and to prepare a new 10-year strategy, the National Education Strategy 2022-2031.

The INES takes into account the government's directions in the areas of strengthening national identity and decentralization, advancing the private sector, addressing unemployment, linking curricula and programs to the needs of the labor market, strengthening and developing the role of private education, and keeping pace with developments in information and communications technology, dealing with the

remnants of the terrorist ISIS and its destructive ideas, educationally and intellectually, as well as the financial conditions of Iraq.

The Supreme Committee has taken a series of measures to accomplish the tasks entrusted to it, which are summarized as follows:

1. Formation of three sectoral technical working groups (pre-university education sector, higher education and scientific research sector, vocational and technical education sector) in coordination with the relevant ministries, as well as a technical team from the Ministry of Planning, and a committee to drafting the strategy themes (names of members of committees and sectoral work teams listed in the annexes).

2. The contacts and discussions with international organizations resulted in obtaining financial and technical support from the World Bank, UNESCO and UNICEF, and a concept note was concluded with them in which the goals and principles were defined, the general framework for the strategy structure, the roles and responsibilities, and the timetable for achieving the strategic axes. UNESCO was assigned the task of coordinating between the various parties.

3. UNESCO assigned a team of experts for each sector, under the supervision of the UNESCO International Institute for Educational Planning (IIEP), to provide technical advice to the sectoral teams.

The preparation of the INES followed four key principles as outlined below:

- The national authorities will exercise leadership in the preparation of the Strategy. They will retain the main responsibility for its successful completion. Coordination for this work will reside with the Higher Committee for the Iraqi National Education Strategy, while the technical work will be undertaken by teams consisting of staff from the various ministries, supported by national and international experts.
- The preparation process is designed in a participatory way, to ensure that the various stakeholders are consulted, and that their views are considered. This is necessary to ensure that the Strategy is nationally owned.
- The successful implementation of this participatory process demands a clear definition of the responsibilities and the roles of the different stakeholders, the design of effective consultative mechanisms, and recognition of where final decision-making authority lies.
- The technical support provided by the international and national experts in the process of strategy preparation is conceived as a capacity development activity, in a spirit of mutual exchange and collaboration. Its final purpose is to strengthen the autonomy of the national authorities in designing and implementing a national education strategy.

The mechanism of action adopted in the preparation of the strategy is summarized as follows:

1. After agreeing on the roadmap, principles, and content of the strategy with the ministries involved and international organizations supporting the preparation of the INES, an Education Situation Analysis was prepared to identify the status of key education indicators as a basis for developing strategies that mitigate identified challenges and enhance opportunities.
2. An online workshop was conducted in September 2020 to present and discuss key results from the Education Situation Analysis and to kick off the preparation of problem and objective trees per sector which would become the basis for policy discussions.
3. Between October 2020 and January 2021, each sector group held regular discussions to identify policy directions and priority programmes.

4. The sector groups provided the required data and information and prepared a draft of the pillars for each sector in the light of the vision of the concerned ministry.
5. In February 2021, a face-to-face workshop brought together technical staff and policymakers from the MoE, MoHESR and MoP as well as key partners to discuss identified policy directions and priority programmes and to strengthen alignment between general education, TVET and higher education.
6. The Iraq Simulation Model supported continuing policy discussions to set targets and cost the INES. A policy Note summarizing key policy targets per sector and associated costs was shared in July 2021 and formed the basis for final discussions held during a face-to-face workshop held from 12-16 September 2021 in Erbil.
7. The "in person" workshop in Erbil took place in the presence of the Supreme Committee and representatives of the MoE, MoHESR, MoP, international organizations, and the Drafting Committee. The workshop allowed for final policy discussions and the finalization of the Iraq Simulation Model. Scenario 3 which outlines an optimistic, yet realistic development of the education sector was adopted by the attending ministries as the final scenario to be presented in the INES. Furthermore, discussions on the M&E framework helped to finalize a results matrix which will allow education stakeholders to monitor achievements and progress made towards set targets.

Important lessons were drawn from the preparation process and specifically the review of the outgoing National Education Strategy, which can be summarized as follows:

1. Political, security and administrative stability is one of the most important requirements that must be met to implement future strategic programs and projects.
2. The proper planning of the resources and the required financing is crucial to determine the extent of the possibility of implementation. Therefore, reliance on government funding only may constitute an obstacle to the success of any subsequent strategy due to its instability, which calls for diversifying sources of funding such as international grants and self-financing of some projects, as well as rely on operating budgets instead of investment as much as possible.
3. It is very appropriate for future strategies to include planning scenarios and contingency plans to be implemented in the event of facing any emergency or unstable situation, which requires that the strategies be characterized by high flexibility and the ability to continuously modify.
4. It is preferable that there be a cross-ministerial working team (executive management) specialized in implementation planning, supervision and follow-up activities, and that coordination with higher government agencies is comprehensive and facilitating to ensure the implementation of any future strategy.
5. Reconsidering some of the prevailing legislation, laws and instructions that may stand in the way of the proper implementation of the strategy.
6. The need for the strategy to be realistic and far from subjective ambitions, and to consider the circumstances of the country and the available capabilities.
7. The necessity of training the staff responsible for implementation, supervision and follow-up on planning, implementation, and control processes.

Chapter 2. Context

In the past, the education system in Iraq was long viewed as a model of education in Arab countries. Today, Iraq faces numerous external and internal challenges to rebuild its education system. This chapter outlines the context in which the education sector in Iraq works.

2.1 The Geographical Framework

The 19 governorates of Iraq and the autonomous region of Kurdistan constitute the Republic of Iraq. Iraq is bordered in the south by the Arab Gulf, Kuwait, and Saudi Arabia, in the east by Iran, in the north by Turkey, and in the west by Syria and Jordan. Topographically speaking, Iraq is divided into four regions: the alluvial plains of Mesopotamia, of the Tigris and Euphrates rivers; the mountains in the north and east; and the desert in the south and west, which represents more than 40 percent of the country.

2.2 The Constitutional Framework (The Legislative Context)

After the transition of the political regime in 2003, the Iraqi Constitution of 2005 was issued. It placed education at the heart of development in Iraq and a basic factor for the progress of society. Article (16) of this constitution stipulates that “equal opportunities are a guaranteed right for all Iraqis, and the State shall guarantee taking the necessary procedures to achieve this.” Article 29 confirms the right of children over their parents to upbringing, care and education, and the prohibition of all forms of violence and abuse in the family and school. Also, Article 34 of the Constitution states that “Education is a basic factor for the progress of society and a right guaranteed by the State and shall be mandatory at the primary stage. The State shall guarantee combating illiteracy, and free education in its various stages shall be a right for all Iraqis. The State shall encourage scientific research for peaceful purposes in a manner that serves humanity, foster excellence, creativity, innovation and various aspects of genius, and private education shall be guaranteed and regulated by law”.

This constitutional framework establishes a strong foundation for the education and higher education sectors on which the development of education plans and strategies can be based. Iraq’s Vision for Sustainable Development (2030) considered that building a quality and comprehensive education system is a national priority for building human beings (Ministry of Planning, 2019).

2.3 The Economic Framework

Iraq's economy is not well diversified, with oil providing about half of Iraq's GDP and more than 90% of government revenue. Iraq highly depends on imports of basic commodities. The economy suffered from stagnation because of the war with ISIS in 2014, the increase in military spending and the drop in oil prices, which negatively affected job opportunities.

Less than half of Iraq's population is economically active. The public sector, the largest employer, remains the preferred sector of employment, as it absorbs about 4 million employees and provides about 43 percent of all job opportunities in Iraq. The government controls mining, services, and banking. It has a predominant role in construction and manufacturing, and in the purchase, sale and import of some commodities. While the role of the private sector in the economy is underdeveloped and primarily informal, it is not currently considered as an attractive employment option because it does not provide workers with privileges and protection. According to 2019 data, 57.81% of all employees in Iraq work in the service sector, compared to about 19% in the agricultural sector. The

figure below shows the estimated distribution of employment in Iraq by economic sector from 2009 to 2019.

Figure 1. Share of total employment per sector, in %, 2009-2019



Source: [Statista](#)

Unemployment rates are at almost 8.9% and youth unemployment is rather high, as is the case in the rest of the Middle East countries, reaching 16.6% of all youth aged 15-24 (UNDP, 2020). The construction, hospitality and agricultural sectors employ the largest proportion of young people.

The Iraqi government approved the 2018-2022 five-year plan for national development with a view to promoting the economic reality and raising the growth rate to 7%, achieving economic reform, providing an enabling environment for investment, and enhancing the role of the private sector to address the most prominent economic challenges facing Iraq, which are represented in the deterioration of the investment climate and the imbalance in the production structure and balance trade and the structure of the public budget, the rise in public debt, the underdevelopment of the banking system, the expansion of the disorganized economic sector and the limited role of the private sector. The plan depends on oil revenues as the most important financial resource for the national economy with a rate of 84.1% of the total projected revenue.

Between 2019 and 2020, the GDP at current basic prices declined from 277.9 trillion dinars to 198.8 trillion dinars, and the average per capita share at current basic prices for the same period declined from 5.7 million dinars to 4.951 million dinars because of the economic crisis, the spread of the Covid-19 pandemic, and the drop in global oil prices.

2.4 Population Framework

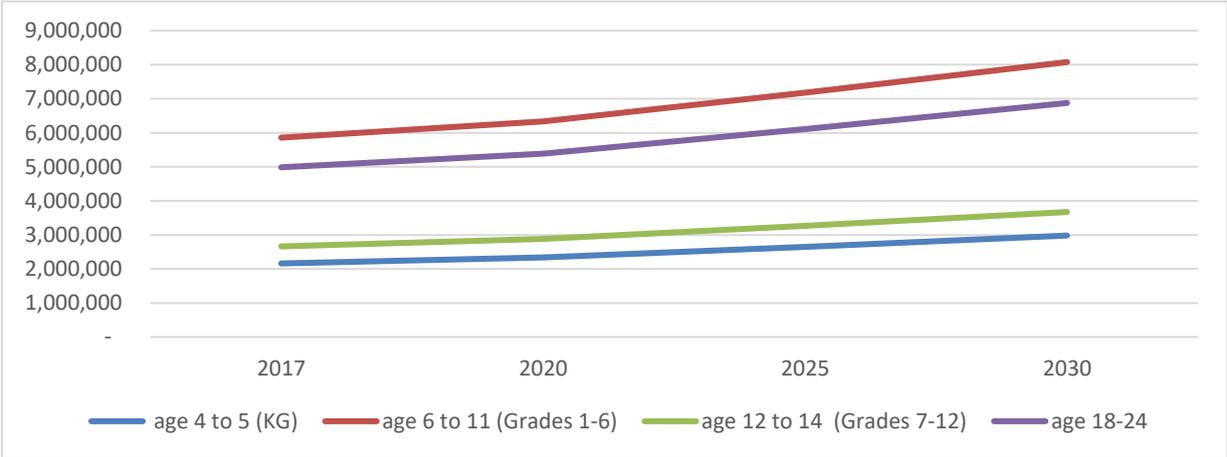
The last available population census for Iraq dates to 1997. Therefore, the population figures used in this document are based on projections that do not take into consideration conflict-related deaths and population displacement inside and outside the country. Accordingly, the population of Iraq is expected to reach 40.2 million¹ in 2020. Around 69 percent of the total population lives in urban areas. With an annual population growth rate of 2.5 percent for the period 2015-2020, Iraq's population is young, as 38% of the population is under the age of 15 (UN DESA, 2020). The gender (male/female)

¹ The shown population data are projections provided by the Ministry of Planning. The United Nations Department of Economic and Social Affairs placed the estimate at 39.3 million for 2019. Source: <https://population.un.org/wpp/>

ratio is (1.02) according to 2018 estimates. The population distribution rates clearly vary among governorates, as the largest portion of the population lives in Baghdad, the capital, reaching (21%), followed by Nineveh (10%) and Basra (7.6%). Muthanna Governorate records the lowest percentage of the population, which amounts to (2%) only.

The total population of Iraq is expected to reach more than 51 million in 2030. The percentage of the working population will rise, and the dependency ratio will decrease from 156 in 2020 to 134 in 2030. Moreover, the number of the population of the age of general and university education (between 4 and 24 years old) will rise by 7 million to represent 49% of the total population, from about 18 million in 2017 to an estimated 25 million in 2030 (UN DESA, 2020). The Iraqi Ministry of Planning expects that the population will reach more than 51 million people in 2030 (including 24 million children and youth of school age, accounting to 48% of the population, and 19 million children of general education age (between 4-17 years) at a rate of 39%, 5 million people, who constitute 9%, of the age of university education (18-21) years, which constitutes a major challenge for planners and decision-makers in the sectors of education, higher education and scientific research, due to the great pressures posed by these numbers on the educational system and its required provision of infrastructure, human and financial resources to provide educational services of the desired quality.

Figure 2. Current and projected school-age population by education level, 2017-2030

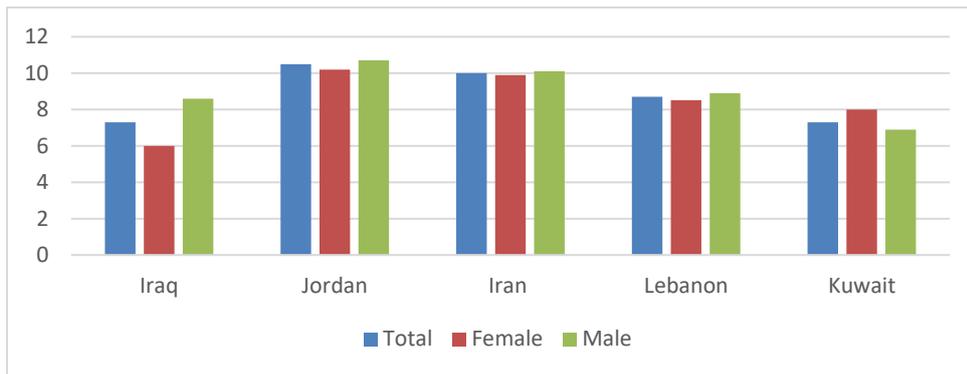


Source: Authors based on Ministry of Planning data

2. 5 Social Framework

Iraq ranks 120th in the Human Development Index, with a value of the Human Development Index of 0.689. A rate of 8.6 percent of the population lives in multidimensional poverty (UNDP, 2020). The literacy rate in Iraq is only 43.7 percent. The average number of years of education is 7.3 years (6 years for females and 8.6 years for males). This average is relatively low when compared to some other countries in the region, as shown in the following figure.

Figure 3. Average of years of education in regional countries, 2018 or latest year



Source: UNDP, 2020

The contribution of women in the workforce is also low as it is only 12.4 percent of women aged 15 years or over are economically active (UNDP, 2020), and a significant proportion of them work in public sector services such as education, social work, and health sectors. The agricultural sector is regarded a major employer of female workers. Women's participation in work is expected to rise because of the increased support for women's right to work among the young generation.

Child labor in Iraq is considered informal work, completely unregulated, and is often defined as occasional in war, displacement, and poverty, especially after the ISIS insurgency in 2014. It mainly includes a segment of youth aged between 10 and 30 years. Child labor still represents a human rights problem across the country. The sixth version of Multiple Indicator Cluster Survey (MICS) 2018 showed that child labor continued to rise considerably in Babylon, Erbil, Kirkuk and Maysan, and it is high among boys and in rural and among out-of-school students, but it declines with the increase in family wealth and higher education levels of the mother (WFP, 2019, Iraq Socioeconomic Atlas).

Cultural and social norms influence the decisions of the Iraqi society concerning children's education according to their view of the importance of education for both, girls, and boys. In addition, disability remains a stigma, and therefore children with special educational needs may not have access to education (UNICEF, Strategic Program Note, 2019).

2.6 The Security & Political Framework (the Humanitarian Context)

Despite the great political transformation that Iraq experienced after 2003 and the adoption of a democratic constitutional system, the surrounding internal and international circumstances still constitute a persistent threat to security and political stability. After the waves of violence witnessed by Iraq in the years 2006-2008, the following years witnessed relative stability and an improvement in the general security and political conditions, but they soon faded due to the attacks of ISIS terrorist groups in mid-2014, which caused several provinces to be out of Iraqi government's control and led to the displacement of millions of people, more than half of them fall into the different age groups of education.

By 2017, the Iraqi government could regain all the governorates that were controlled by ISIS, which led to a noticeable improvement in the security and political reality. However, by mid-2019, Iraq once again suffered from civil unrest and peaceful popular protests calling for the improvement of basic services, reduction of unemployment rates among youth, and reform of the electoral, constitutional and security sector. On the regional level, tensions escalated after the withdrawal of the United States from the Iranian nuclear agreement (Joint Comprehensive Plan of Action) in May 2019 and the occurrence of a series of escalating actions which led to insecurity and violence on Iraqi soil.

Displacement due to insecurity

The unstable security conditions led to unprecedented displacements and migrations in Iraq, which placed an abnormal pressure on the State's resources and the progress of the educational process. The statistics conducted by the High Commission for Human Rights in Iraq, data from the Ministry of Migration and Displacement, and the UN Displacement Tracking Matrix indicated that the total number of internally displaced persons in all governorates until 7/1/2018 was about 7.5 million. According to the Displacement Tracking Matrix issued by the International Organization for Migration in Iraq in May 2018, the number of internally displaced persons amounted to 2 million. The number of displaced persons decreased to less than one million after the liberation of the areas from the control of ISIS and the return of most of the people to their areas. Up to April 2020, about 1.4 million persons have been internally displaced and 4.7 million persons have returned to their places of origin. Insecurity, lack of social cohesion and livelihoods, and destroyed or damaged houses have impeded people's ability to return to their homes (UN Office for the Coordination of Humanitarian Affairs, 2020).

Figure 4. The Number of Displaced Persons and Returnees Over Time, 2014-2020



Source: IOM Displacement Tracking Matrix (March-April 2020)

Impact of Instability on Education

The structural challenges facing the educational sector have been exacerbated by the impact of the 2014-2017 conflict with ISIS, and the subsequent large-scale population displacement. A percentage of 50% of all school buildings were destroyed or damaged in the governorates controlled by ISIS. Moreover, explosive remnants of war left in schools threaten the lives of students and teachers and already claimed the lives of six children in 2018. The war frightened millions of people as many of the students and teaching staff suffer the trauma of violence, homelessness, and loss. Furthermore, the policies of ISIS in schools and universities also led to targeting the values of education, national identity and affiliation to society and the State, which resulted in the cracking of the society system, especially the concept of citizenship among Iraqi individuals. The Iraq Education Cluster estimates that the total number of displaced children is 775,000 displaced persons living inside and outside the camps, and that about 150,000 children are in host communities, and there are about 98,000 Syrian refugee children. Eight governorates host the largest number of children in need of education services: Nineveh, Anbar, Saladdin, Kirkuk, Diyala, Sulaymaniya, Erbil and Dohuk (Iraq Education Cluster, 2019). All these displaced persons are vulnerable and need educational assistance. The rehabilitation of schools has been one of the priorities of the liberated areas stability restoration program, which was adopted by the government with the assistance of the United Nations and the support of the international community in meeting the needs of restoring stability and the safe and sustainable return of the displaced persons to their cities.

As for university students, a number of universities, colleges and institutes were attacked by the terrorist ISIS Organization, which caused the largest displacement among students, whose number at that time reached 101.980 distributed among 84 colleges and institutes in addition to three private colleges. A special operations room was formed to address the cases of displaced students and rehabilitate the liberated universities.

The multiple humanitarian crises, which lasted for several years in Iraq, are now changing their direction as the current post-conflict environment redirects the humanitarian context into long-term planning with a focus on the need for permanent solutions.

2.7 Risks and Natural and Health Crises

Iraq faces a variety of risks and natural hazards due to its geographical location, its diverse climate, and unpredictable harsh weather conditions such as heat and irregular rainfalls that can lead to drought and/or floods. This has subjected Iraq to the negative effects of climate change, as drought spells/floods affect 2.4 percent of the population, followed by earthquakes, especially in the border region between Iran and Iraq. The last earthquake occurred in 2019 and caused considerable damage.

Climate change models show that floods will affect people living five meters below sea-level (The Center for International Earth Science Information Network (CIESIN)/Columbia University, 2013). Therefore, in the long term, Basra will be under water by 2050 (The New York Times, 2019), in addition to the resulting loss of land and more social and political instability in the region.

Covid-19 Crisis

The spread of the Covid-19 pandemic led to a complete lockdown of the country. In April 2020, about 1,500 cases of Covid-19 were reported in the country although limited testing capacity may hide higher numbers. Schools, universities, and training institutes were closed in March 2020.

The Covid-19 pandemic and its social and economic impact have exposed the population in Iraq to new risks, in addition to the existing vulnerabilities, and placed an additional burden on the public sector which is already vulnerable. Since oil represents 92% of the country's exports, the drop in oil prices has plunged the country into a financial and economic crisis. As the Iraqi government struggles to pay the salaries of six million public sector employees in the country, millions of workers in the private and informal sector lost their jobs and livelihoods due to the Covid-19 crisis.

Consequently, millions of Iraqis will fall below the poverty line as the epidemic continues. In the country, 2.3 million IDPs and 4.8 million returnees are affected particularly by the difficulties associated with Covid-19. (REACH, 2021) The devastating impact of the pandemic has been proven to be detrimental to students whose education and training have been greatly affected by the prolonged school closures. Chapter Three provides more information on the effects of Covid-19-related measures on education.

2.8 Technical Framework

The rapid population growth, the explosion of knowledge, and the effects of Covid-19 highlighted the need to develop education, apply information, communication and Internet technology in training and education, and work to provide their equipment and train teachers in a manner that enhances the role of information technology in providing quality education to contribute to providing the outputs of

education and higher education with the skills and capabilities required for the twenty-first century and achieving sustainable development.

There is also a need to pay attention to developing scientific research through capacity-building and raising the rate of expenditure on it. The rate of expenditure on research and development in Iraq did not exceed (0.04) of the GDP in 2017, which is lower than the global average expenditure rate (2.23), and less than the rate of expenditure on scientific research in countries such as the United Arab Emirates (0.96), Turkey (0.88), Saudi Arabia (0.82), South Korea (4.23), Japan (3.14) and USA (2.74).

Chapter 3. Analysis of the education situation in Iraq

This chapter presents key aspects of the education system in Iraq, including the education structure and sector performance in pre-primary, primary, secondary education, TVET and higher education. This includes schooling indicators, indicators related to quality and management of education and training, and issues related to inclusion, internal efficiency, and external efficiency. It is a synopsis of the full Education Situation Analysis which was conducted from March to July 2020.

Education data used in this chapter stem from the annual school census prepared by the Central Bureau of Statistics, Directorate of Educational and Social Statistics, the Multiple Cluster Indicator Survey for Iraq (MICS 6) 2018, and various humanitarian and development partner reports. The 2017/18 annual statistical abstract is the first full dataset following the ISIS crisis, covering all 19 governorates. Data that was made available after finalization of the ESA is considered in this chapter to the extent possible. Analysis provided in this chapter does not cover the province of Kurdistan, namely the governorates of Erbil, Sulaymaniyah and Dohuk.

The tables below provide a snapshot of key education information, including number of schools, number of teachers and number of students per education level and school age population projection, age 4 to 24 up to 2031.

Table 1. Number of schools, teachers, and students enrolled in the public education system, as of 2017/18 and school-age population projection, age 4 to 24 up to 2031

2017/18	Pre-primary	Primary	Secondary	University
	719	14,901	6,630	35
	5,952	271,597	153,506	42,907
	202,937	6,197,870	2,910,816	743,825
	Age 4 to 5	Age 6 to 11	Age 12 to 17	Age 18 to 24
School-age population projection by 2031	2.7 million	7.2 million	6.2 million	3.6 million

Source: CSO 2018

In a nutshell, Iraq is facing a “human capital crisis fuelled by a learning crisis” (WB, 2021). A child in Iraq, can expect to complete only 6.9 years of schooling. Actual learning, however, is reduced to only 4.0 learning-adjusted years of schooling (LAYS) by age 18. Prolonged school closures due to the COVID-19 pandemic is likely to reduce LAYS even further (WB, 2021). Education service delivery and education quality are marked by high inefficiencies, some of which are explained in this chapter.

3.1 Structure and key features of the education system in Iraq

The education system in Iraq is managed by two ministries, the Ministry of Education (MoE), and Higher Education and Scientific Research (MoHESR). The MoE is responsible for supervising education for the pre-primary (KG) stages – without the nursery level which is supervised by the Ministry of Labor and Social Affairs (MoLSA) – primary education, secondary academic education, secondary vocational education (Vocation Schools in grade 10-12) in addition to education in fine arts institutes, institutes for the blind and deaf, and the Open Education College that awards a bachelor's degree to teachers. The MoE provides alternative and non-formal education in form of three programs, the Accelerated Learning program, the Literacy Center and the Youth Schools. Learners at risk of or already out of school benefit from these programmes.

Pass rates at the end of the preparatory level determine student's post-secondary pathway. Graduates of the literature stream can qualify for higher education studies in education (either at university or the Education College), literature and other social sciences subjects. Students who opt for biology at the preparatory secondary level qualify for medical specialities, pharmacy, sciences and veterinary studies and graduates of the applied sciences track qualify for engineering colleges and other science colleges. The successful trainees at Vocational schools have the possibility to progressing to a Technical college or a University of Technology, however, due to capped numbers, a very small percentage of vocational education graduates enter to tertiary technical education in the polytechnic universities and technical universities.

Education provided by the MoE across all stages is free of charge, but only primary education is compulsory in Iraq.

The MoHESR supervises the provision of education in university institutes and colleges, except for the Open Educational College. Higher education technical programs are offered in technical institutes (2 years, Diploma) and colleges (4 years, B.A.). Higher education provided at public universities is free of charge in all disciplines, including subsidized residence in university dorms for students from other governorates. This does not apply to students enrolled in parallel and evening programmes where partial contribution is paid by students at public universities.

The following figure shows the structure of the education system in Iraq.

Figure 5. Structure of the education system in Iraq

Official Age	Level								
23	University	University education				Technical Education (Polytechnic University & Technical Education)			
22									
21									
20									
19									
18		Faculties of Sciences		Faculties of Humanity		Technical colleges (4 years)			
						Technical Institutes (2 years)			
17	Preparatory	G12	Biology	Applied	Literature	Vocational Schools Agriculture/Industrial/Commercial/IT/ Applied Arts			
16		G11							
15		G10	Sciences						
14	Intermediate	G9							
13		G8 Intermediate level							
12		G7							
11	Primary	G6							
10		G5 Primary Level							
9		G4							
8		G3							
7		G2							
6		G1							
5	Kinder- garten	KG 2							
4		KG 1							

Source: Authors, 2021

3.2 Enrolment Analysis

Compared to other countries in the region, Iraq tends to achieve lower levels of GER except for primary education in which Iraq shows the highest GER. Enrolment in pre-primary education in Iraq is the lowest among the five comparable countries shown below.

Table 2. Gross Enrolment rates in the Middle East, 2017 or most recent, in %

	Iraq العراق	Kuwait الكويت	Jordan الاردن	Saudi Arabia السعودية	Egypt مصر
GER Pre-primary	11	62	27	21	29
GER Primary	121	92	81	100	106
GER Secondary	67	98	63	118	88
GER higher education (undergraduate)	22	55	33 (2019)	71 (2019)	39

Source: CSO 2018, UNESCO UIS 2018 or as indicated.

Pre-primary education

Between 2009 and 2017, schooling indicators have steadily progressed with the most significant growth rate for pre-primary education with a GER of 11% in the academic year 2017/18. The high level of growth can be attributed to a catch-up phenomenon with extremely low levels of enrolment (7%)

in 2009 and particular interest by the private sector covering 15% of the total KG enrolment. Despite this growth, enrolment in KG1 and 2 remains low. This may be due to high levels of economic inactivity among women² and lack of awareness among parents on the importance of registering their children in ECD centres. Supply-related issues include inadequate infrastructure and lack of KG teachers.

Primary education

Enrolment at primary level has also increased between 2009 and 2017, reaching 121% in 2017 from 105% in 2009. Despite the primary gross intake rate at grade 1 of 122% as shown in the figure below, not all children access primary education. High GERs result from out-of-age children returning to school to catch up on missed schooling opportunities during the war against ISIS and significant numbers of under- and overage students. Even though primary education is mandatory as per the Iraqi Constitution, only 82% of pupils complete the primary cycle (Primary Completion Rate), following dropouts. Therefore, **universal primary completion has not yet been achieved in Iraq**.

Secondary education

Enrolment at secondary level also witnessed considerable growth. Lower secondary enrolment stands at 86% though enrolment rates at upper secondary remain fairly low at 46% in the academic year 2017/18. Completion rates at the end of upper secondary more than tripled with 38% in 2017 compared to 12.8% in 2009 (ESA report, 2020). Improved schooling coverage can be attributed to increased supply through government investment in post-primary education, awareness of the importance of secondary education among communities, and parents' interest in better employment opportunities for their children.

Table 3. Schooling coverage indicators, by sub-sector, 2009/10 and 2017/18, in %

National	2009/10	2017/18	Growth Rate 2009-2017
GER Pre-primary education	7	11	57
GER Primary	105	121	15
GER Intermediate	66	86	30
GER Preparatory (total, including VSs)	33	46	39
GER Preparatory Vocational Schools	--	2.1	--
Access rates Higher education	--	93% (2020)	--

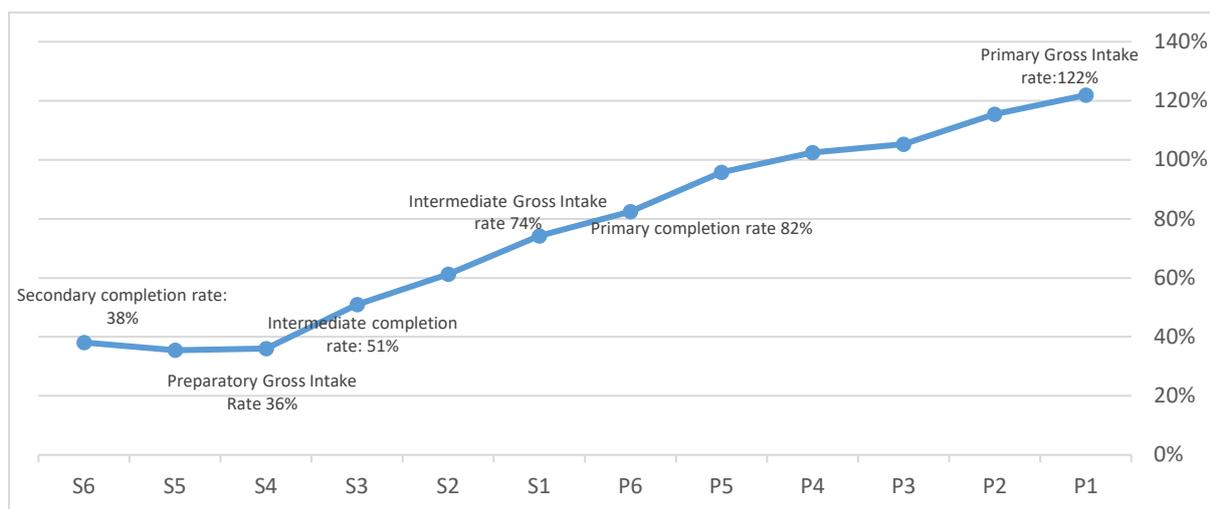
Source: CSO 2018, authors' computations.³

Access rates for intermediate education stood at 74% and at 36% for preparatory education. Only 38% of students of one cohort of students reached the end of the preparatory education cycle in 2017/18 as shown in the graph below.

Figure 6. Transversal schooling profile, primary and secondary, 2017/18 (gross access rate, %)

² The Multiple Indicator Cluster Survey 6 (CSO, KSO, Ministry of Health, UNICEF, 2018) indicates that close to 87% of women in Iraq are economically inactive (not working or not looking for work) and 78% are housewives.

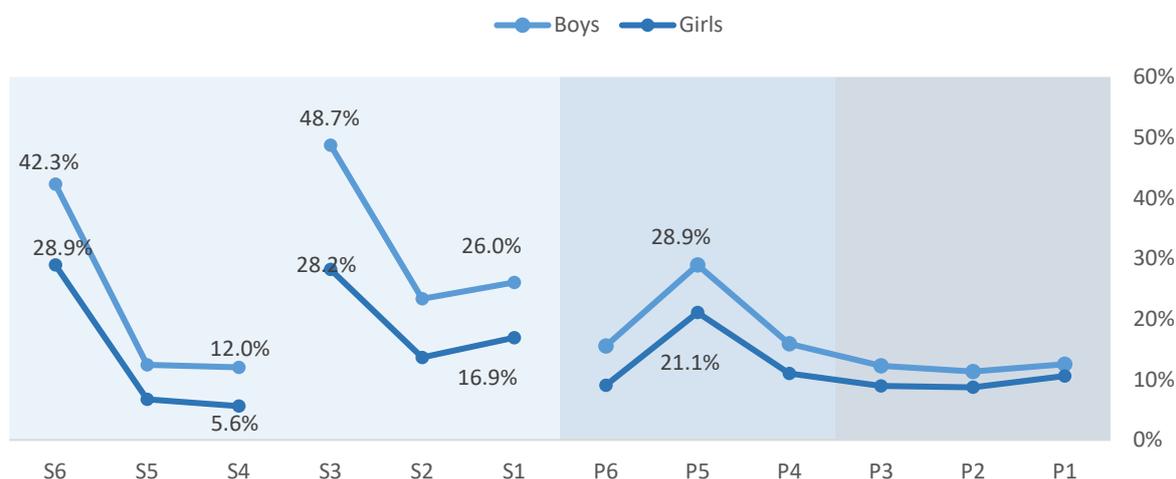
³ Calculations are based on population estimates provided by the Ministry of Planning which apply a constant growth rate of 2.6% to 2.7%. When using UN population data, schooling coverage indicators improve slightly as lower population growth rates are applied.



Source: CSO 2018, authors' computations.

There are two key concerns for the education system in terms of enrolment and completion. Firstly, **repetition levels have increased significantly since 2014/15**. As of 2017/18, the share of repeaters stood at 13.9% for primary, at 27% for lower secondary and at 20.6% for supper secondary. All values are far from the national target which is 3% (National Development Plan, 2018-2022). The figure below shows that repetition levels peak for grade 5 with 25% of all pupils repeating one year before the primary education certificate examination⁴, then again in the last year of lower secondary (S3) with 41% of students repeating and in the final year of upper secondary (S6) with a repetition rate of 37%.

Figure 7. Share of repeaters by education level, per gender, 2017/18 (in %)



Source: CSO 2018, authors' computations.

Secondly, **despite the decline in the share of out of school children (OOSC) since 2011, the total number remains with 2,039,436 students age 6 to 17 significant**. Girls constitute one third of all out of school children (MICS 6). As of 2018, more than 400,000 students at primary age in Iraq were out of

⁴ MoE staff indicated that high repetition rates at grade 5 are mostly since this is the first grade in which written exams are taken. MoE staff also mentioned that anecdotal evidence suggests that teachers nudge underachieving learners into repeating one year before taking the primary leaving examination to increase their chances of success.

school and almost 500,000 of lower secondary age. More than 1 million learners of upper secondary age are out of school though the data does not consider any involvement in TVET programs.

Non-formal education

Non-formal education is provided in all governorates but remains insufficient regarding enrolment. The *Accelerated Learning program* provides a fast-track second-chance opportunity for learners age 12-18. The schools provide a three-year course of study that condenses the six-year primary curriculum into half the time. Upon completion, students receive a formal certificate and (if they are still within the age of schooling) can enrol in secondary school. As of 2017/18, 33,149 students were enrolled in this program across 351 schools.

The *Adolescents Schools or Schools for Youth* for learners age 10 to 15 enrol overage learners who did not start primary education before the age of 10. As of 2019, 10,507 learners attended 80 Adolescent schools. The youth program squeezes the six-year basic education cycle into four years. The number of Adolescent Schools has decreased considerably since 2009/10 due to the increase of accelerated learning programs.

Literacy and Adult Education Centers welcome learners age 18 and plus and are the largest provider of non-formal education with 72,242 students and 983 centers across the country. The program is divided into two levels: basic and complementary. Each level runs seven months, and when completed, provides a certificate that is equivalent to the fourth-grade certificate in formal education. Textbooks comprise math, Arabic language, and general education (MoE, UNESCO, 2011).

Vocational Education (VE)

Post-primary vocational education does not meet the quantitative needs of the substantial youth population nor does it meet the qualitative requirements of the labour market.

As of 2017/18, only around 50,000 students were enrolled in Iraq's 314 Vocational Schools (VSs). The low gross enrolment rate of around 2.1% is due to continued low acceptance of TVET among the population and limited supply. In the academic year 2020/21, enrolment in Vocational Schools doubled, reaching more than 109,000 students, and resulting in a GER of 4.3%. Ministry staff explain the sudden substantial increase with regulatory changes which allows students in VSs to continue their education post-secondary. The MoE responded to the sudden increase in enrolment providing schools the right to offer evening/afternoon sessions and recruitment of unpaid volunteers. As the academic year 2020/21 however has taken place mostly online due to the COVID-19 pandemic, learning outcomes and continued trends in VS enrolment are yet to be observed.

University education

University education does not meet the quantitative needs of Iraq's young population despite a remarkable increase in the number of universities and enrolment over the past decade. As of 2017/18 there are 35 public higher educational institutions and 9 private universities.

Enrolment stands at more than 640,000 students as of 2020. 93% of students completing grade 12 enter public and private higher education institutions. With 3,470,411 Iraqis age 18 and 22, higher education accommodates around 18,500 undergraduate students per 100,000 inhabitants of this age group.

Gender disparities

As per the table below, in 2017/18, gender disparities are non-existent at Kindergarten and relatively low at the beginning of the primary education cycle with 95 girls for each 100 boys but widen significantly at intermediate level with 78 girls for each 100 boys. At preparatory level, the gender gap is reduced to 94 girls for each 100 boys. While girls start dropping out after primary at a higher rate than boys, enrolment of boys decreases significantly at preparatory level and almost levels with girls' access. Gender disparities disappear at the end of preparatory level with the same completion rate for girls and boys. Economic activities may prevent boys from completing preparatory education. Social practices such as early marriage and the unstable security situation has prevented many girls from accessing post-primary education.

In Vocational Schools, girls are underrepresented. Among 50,039 students pursuing agriculture, commercial, applied arts, IT, or industrial studies in 2017/18, only 11,830 students were female. Low female participation rate in VSs and great disparities across the governorates (9% female participation rate in Al Anbar versus 37% in Thi Qar) are linked to social and cultural perceptions of the role of women in technical and vocational occupations. Female participation for trainings offered by MoLSA⁵ with 66% much higher. Trainings offered by MoLSA are perceived as better suited for female students leading to occupations primarily held by women, such as sewing.

In technical universities run by the Ministry of Higher Education and Scientific Research, evidence suggests that the gender imbalance in the student body could be decreasing, with 43% female students enrolled in 2017/2018 compared to 29% in the previous years. Low levels of female students are indicative of prevailing cultural norms leading to men traditionally occupying technical jobs.

Female participation rates are much higher in academic universities and institutes with almost half of the students being female.

Table 4. Gross enrolment rates of school-age population in %, by gender and level, and gender Parity Index/Female Participation Rate, 2017/18

National	Male	Female	Total	Gender Parity Index
GER Pre-primary	11%	11%	11%	1
GER Primary	118%	125%	121%	0.95
GER Secondary	60%	73%	67%	0.83
GER Intermediate	75%	96%	86%	0.78
GER Preparatory	45%	47%	46%	0.94
	Male	Female	Total	Female Participation Rate
Number of students enrolled in MoE Vocational Schools, by gender	38,219	11,820	50,039	24% (30% in 2021)
Number of students enrolled in undergraduate studies, by gender (private and public)	425,615	377,136	141,549	47%

Source: CSO 2018, authors' computations.

Governorate-level disparities

National averages hide important governorate disparities. Analyses conducted at governorate level show the negative effects of conflict and insecurity on schooling coverage. In general, governorates

⁵ Students participating in MoLSA led trainings constitute only 19% of all TVET students.

affected by conflict and insecurity tend to display lower coverage rates as shown for Ninewa and Al Anbar. This is a consequence of disruptions in service delivery. High levels of population movement including displacement across governorates and returns, however, make it difficult to show an accurate picture of schooling coverage.

There are large regional discrepancies on the level of pre-primary education with highest coverage rates noted in oil-rich governorates where the private sector shows great interest in investing in pre-primary education. Access to primary education varies as shown in the map below from 159% in Salah al-Din to 97% in Kirkuk. Disparities prevail throughout the cycle. The lowest completion rates for primary were recorded for Ninewa (63%), and the highest for Salah al Din (97%). At secondary level, access rates vary between 59% (Kirkuk) and al Qadissiyah (97%). Completion rates settle at around 35-40% for most governorates. Also, repetition practice is not homogenous across governorates. The most pronounced disparity levels are recorded in 2017/18 at preparatory level, ranging from 3.4% in Salah al Din to 30.2% in al Muthanna.

Figure 8. Gross Intake Rates for primary grade 1 (left map) and secondary grade 7 (S1) (right map), 2017, in %

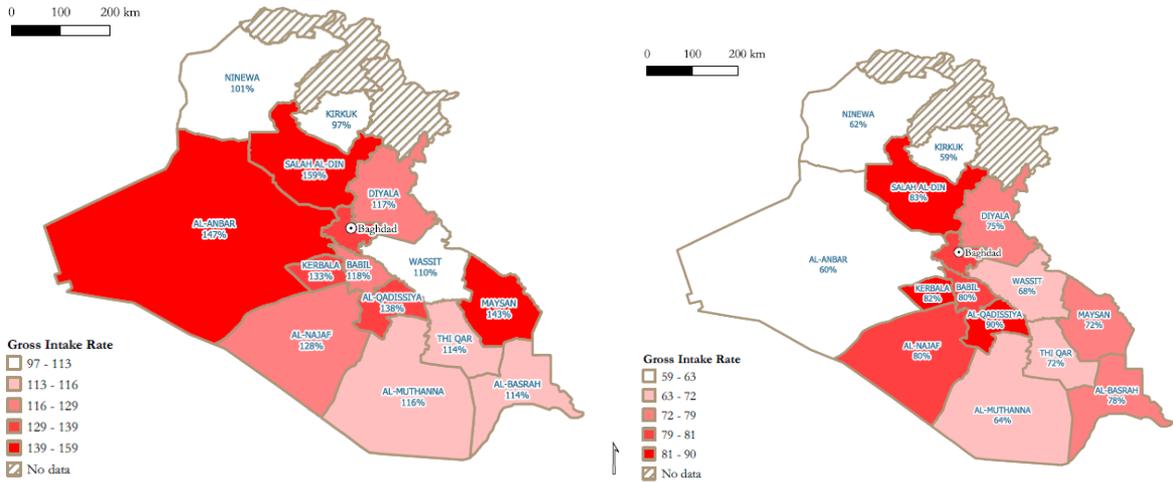
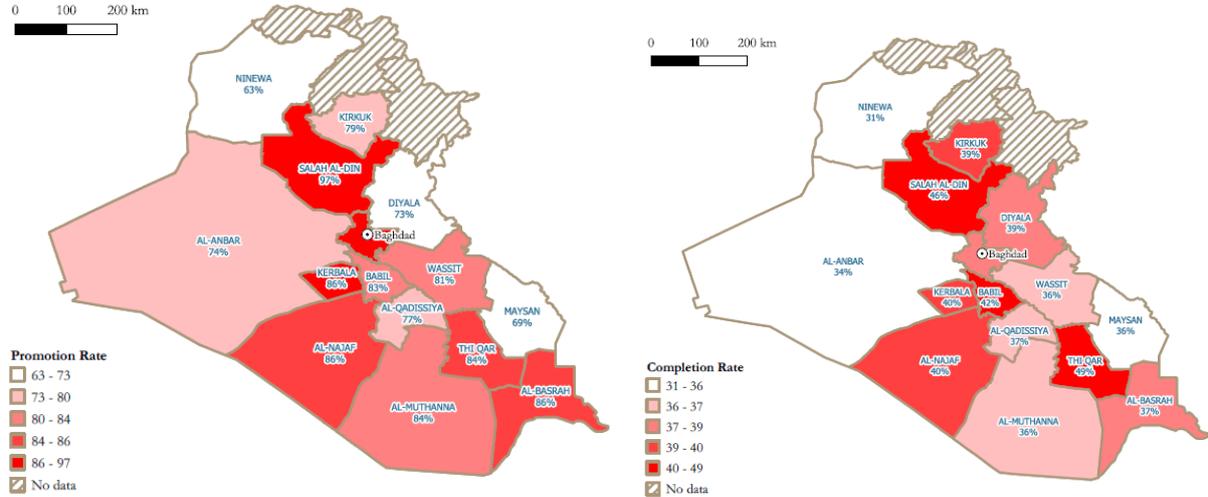


Figure 9. Gross Completion Rates for primary, grade 1 (left map) and secondary grade 1 (S1) (right map), 2017, in %



Source: CSO 2018, authors' computations

Even though the education system shows general high levels of under- and overage students, some governorates are particularly affected. Governorates affected by conflict and insecurity may have larger shares of overage learners given that they catch up after years of limited access to education. Overage learners are at increased risk of dropping out, adding to existing inefficiencies. Current education opportunities to catch up or re-join educational offers, specifically for displaced students are not sufficiently targeted at their needs.

Access to vocational training is also undermined by governorate disparities. Industrial and commercial VSs are unevenly distributed.

Barriers to access and completion in pre-university education

Several key factors influence the likelihood of children attending and succeeding in school: low levels of mothers' education, poverty, gender, and special needs. Conflict and insecurity remain also a key challenge for children and youth access education and training. On the supply side, the lack of schools poses the most significant challenge for education access and completion.

One of the most significant factors for children accessing education is the level of education of the mother. In 2018, children at primary age of mothers with pre-primary or no education were almost six times more excluded from school than children from mothers with upper secondary education or above (MICS 6). Among children at lower secondary age, the education level of mothers plays an even more significant role. In 2018, children from the richest households were 3.5 times more likely to go to school than their peers from the poorest households. Poor children and specifically poor urban children are disproportionately represented among OOSC. Almost half (46%) of OOSC at primary education level are from the poorest wealth quintile and therefore represent the highest share among OOSC.

Gender continues to play a role for education access and success. While boys are twice as likely than girls to go to school, boys are more likely to repeat.

The government of Iraq has committed to ensure education for all no matter their individual abilities. Educational care for children with disabilities is provided through institutes specializing in mental and physical disabilities as well as through the establishment of integrated classes for special education in mainstream schools though only 2% of mainstream schools provide classes for special needs education students⁶. As of 2017/18 there were 1,325 school hosting 15,683 learners with special needs. Despite this small progress, there is a significant shortage of educational and school facilities for special needs learners. The lack of effective regulation, unavailable or lack of suitable transport, limited number of teachers with Special Education Needs (SEN) qualifications, the limited number of diagnostic centers, overcrowded classrooms, limited teaching and learning materials, as well as stigma and embarrassment of parents due to having a child with disabilities, poverty and insecurity remain key barriers to education for learners with special needs.

Trauma, lack of resources and poverty are barriers for many displaced students, returnee, and refugee children. Where families are unable to return to their place of origin due to suspected ISIL affiliation,

⁶ Following the 10-year National Framework for Inclusive Education, the MoE works towards ensuring the inclusion of children with learning difficulties for grades 1 to 4 with additional support in form of resource rooms rather than special classes.

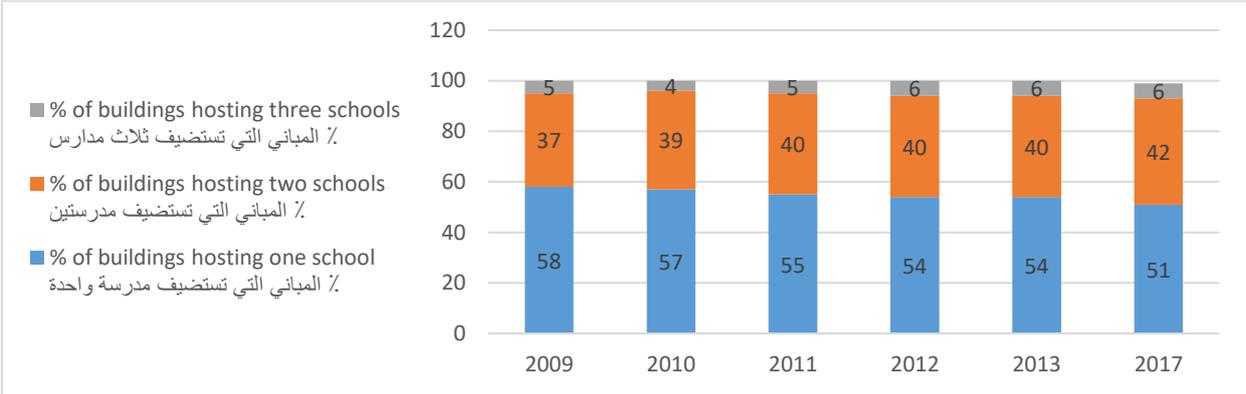
their children face obstacles to enter schools due to restricted access to the civilian documentation required for schooling (UNAMIS/OHCHR, 2020). When displaced students find their way to school, they face extreme overcrowding and limited school places (UNAMIS/OHCHR, 2020). Barriers to educational participation disproportionately affect adolescent girls due to social practices.

Lack of schools

Another key challenge to access is the blatant gap of school infrastructure. Due to a combination of population growth, slowed infrastructure investment and infrastructure damage since 2013⁷, there is a shortage of 8,147 school buildings as of 2017/18 (MoE). According to the Ministry of Education’s needs assessment, 15.5% of all school buildings are either completely or partially damaged due to terrorist operations. As of 2020, almost 400 schools across six governorates were occupied by IDPs, further limiting access to education among displaced learners. The lack of schools in the neighbourhood is for 30% of learners, age 6 to 11 the main reason for not enrolling in school (World Bank’s Rapid Welfare Monitoring Survey (2018). This applies particularly to girls and children living rural areas.

The MoE addresses the lack of school buildings through the multiple shift system. Almost half of Iraq’s primary and secondary schools share their building with either one or two other schools.⁸

Figure 10. Share of school buildings by single, double, or triple occupancy, 2009/10-2017/18 (in %)



Source: CSO 2017/18, Author’s computations

*Data for the academic year 2014/15 – 2016/17 are incomplete due to ISIS occupation and not shown in this graph.

3.3 Education quality

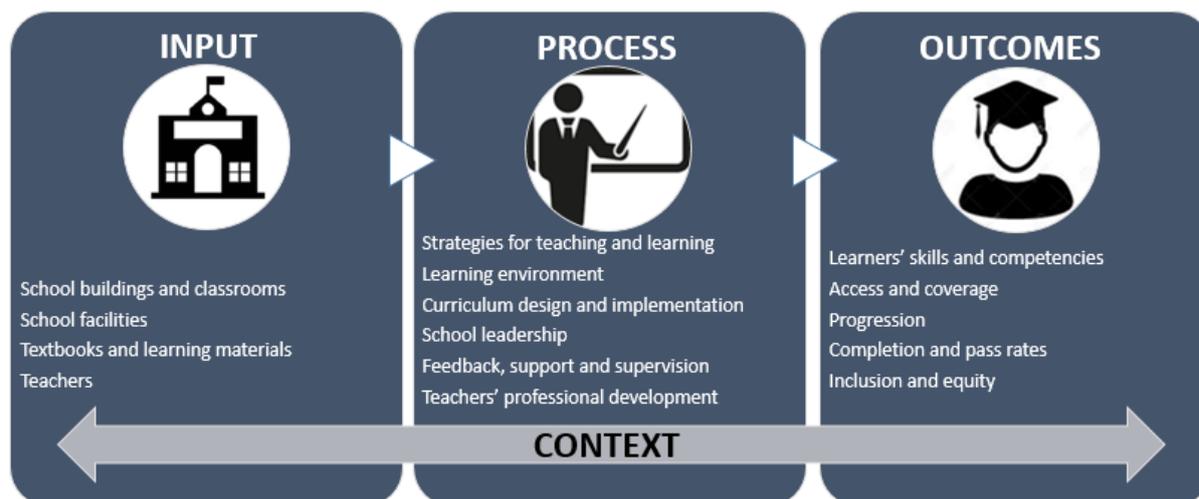
Quality in education is based on four interrelated areas. This includes input-related resources such as classrooms and facilities, learning materials and competent and motivated teachers. In addition, there is a range of process related factors that are critical for improved learning. These include factors like pedagogy and strategies for teaching and learning, curriculum implementation, structures for

⁷ The WB’s Damage and Needs Assessment of seven directly affected governorates (2018) concluded that 18% of education infrastructure was destroyed with a total cost of conflict damages estimated at 2.8 trillion dinars (USD 2.4 billion), with total reconstruction and recovery needs estimated at 5.4 trillion dinars (US\$ 4.6 billion).

⁸ The number of schools with multiple shifts has increased over the past years particularly for secondary education with an annual growth rate of 15.7% between 2013/14 and 2017/18, allowing the MoE to increase access to secondary education. A slightly lower, yet significant increase in double or triple shift schools can be noted for primary with an annual growth rate of 10.4%.

feedback, support, and supervision both, for pupils and teachers, school leadership and professional development for teachers. As shown in the figure below, contextual factors also play a key role in defining quality of education. In Iraq, this context is largely influenced by insecurity, displacement, and inadequate funding allocation for the education sector as well as results of the economic sanctions with negative impacts on attracting and ensuring a qualified and motivated teacher workforce.

Figure 11. Analytical framework for quality in education



Source: IIEP Learning Portal

Schools, classrooms, and facilities

In Iraq, the MoE responds to the lack of school infrastructure by resorting to the method of double and triple occupancy of school buildings. When buildings are shared by multiple schools, school management and administration teams are different for each school. When school buildings are shared by the same level of education (for example two primary schools sharing one building), lessons are run in separate shifts. This means that the school to which the building is assigned, popularly called the “owner”, starts lessons in the morning and only after the lessons are finished for the school “owning” the building, the second school starts lessons. In school buildings where more than one level of education is accommodated (for example pre-primary and primary) lesson can run concurrently. As of 2017/18, only 51% of all primary and secondary schools in Iraq had their own school building. 49% of all schools shared a building with either one or two other schools. The share of buildings hosting two and three schools has increased since 2009 with an annual growth rate of 2.5% and 3.8%, respectively while single occupancy has decreased by 0.6%. With an average school-size of just under 400 students, and with more than 50% schools sharing facilities in multiple shifts, “a shortage of educational infrastructure profoundly affects the ability to deliver quality education services” (WB, 2021).

Due to insecurity, the conditions of schools and classrooms are poor. In 2017/18, almost 16% of all schools were either partially or fully damaged due to terrorist operations and 45% of Iraq’s schools need maintenance. Most of these school buildings are situated in Thi Qar, Salah al-Din, Diyala, Baghdad, Najaf, Qadisiyah and Nineveh. In 2017/18, 6% of all primary schools and 9% of secondary schools were temporary structures and did not meet the national minimum construction standards. This includes mud, tent, and caravan schools. Many schools lack basic facilities and equipment. 19 %

of primary and secondary schools lack drinkable water, 27% lack sanitation and 17% of all school buildings do not have the necessary health facilities. While almost half of all primary schools (47%) have libraries, only 8% are equipped with computer labs. At secondary level, 51% of schools have libraries but only 39% have science labs and only 39% of secondary schools are equipped with computer labs.

Areas affected most by insecurity and resulting effects such as displacement have the lowest share of school facilities, both at primary and secondary levels. In 2019, the MoE introduced minimum standards for school infrastructure which aims to improve teaching and learning conditions, including in view of climate change related weather conditions.

Food insecurity and school feeding

Iraq faces declining levels of food production due to drought and effects of armed conflict, including displacement of farmers, and damage to irrigation systems. Around 60% of Iraq's rural population is exposed to food insecurity though several governorates⁹ are at an even greater risk (WFP, 2019). Areas that show high levels of food insecurity are also characterized by high levels of student absenteeism and dropout. Iraq's poverty alleviation programmes that succeed in reaching most vulnerable families through food rations fail to provide support for education (WFP, 2019). The National School Feeding Programme designed by MoE, MoH and WFP addresses this issue. In 2019/20, 330,000 primary students (approximately 18% of all primary students) received fresh and healthy school meals at the beginning of the school day. In 2020/21, 255,000 learners were reached across 872 primary schools. The Ministry of Planning's poverty and food security indicators are used to select beneficiary schools. COVID-19 related school closures and economic crisis are likely to have a negative impact on children's nutrition.

Class size

The significant lack in school buildings and shortage of teachers has led to increased class sizes within Iraq's multiple shift system. Especially classes in urban areas and in areas hosting displaced persons are overcrowded. The average student-section ratio is 48:1 for KG, 37:1 for primary and 42:1 for secondary though governorate disparities are significant with ratios as high as 82:1 in Basrah at pre-primary level. At primary level, several governorates have student-section ratios of more than the average 40 to 1 (Basra, Baghdad, Ninewa) and similar high ratios can be found at secondary level in Basrah (43:1), Baghdad (43:1) and Ninewa (44:1).

Safety in schools

Prolonged conflict, protracted displacement, economic crisis, and subsequent social and political tensions continue to expose learners, teachers and non-teaching staff to violence and hardship affecting their emotional, mental, and physical well-being and development. Violence against children in schools and at home is high (UNICEF 2015). 10% of all schools lack fencing, an important parameter to gauge learners' and teachers' security. Governorate disparities are significant.

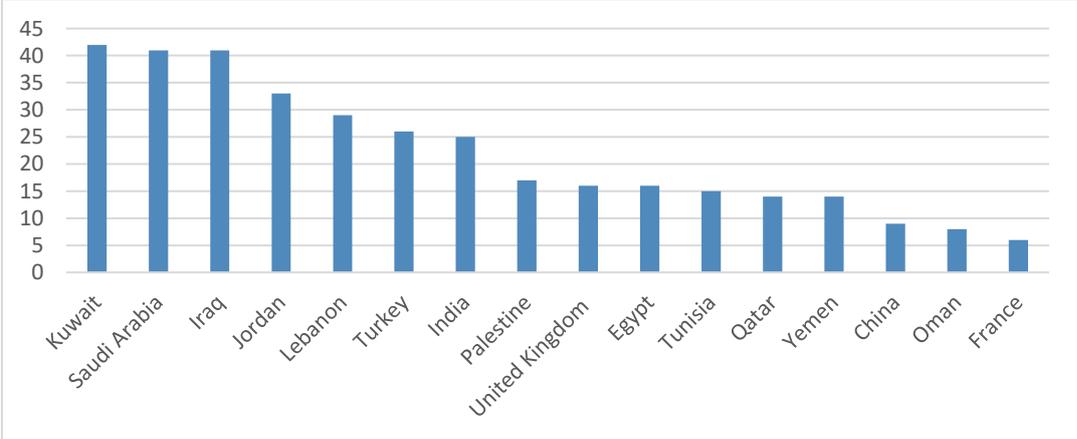
School calendar and instructional time

⁹ The percentage of people exposed to food insecurity is higher than 75% in the governorates of Najaf, Dhi Qar, Maysan, Sulaymaniyah, Dohuk, Muthanna, Qadisiyah and Karbala, while there is no data on the percentage of food security in the governorates of Anbar and Nineveh. (World Food Program - Social and Economic Atlas of Iraq, 2019).

With 137 days for primary and 151 days for secondary education, the school year in Iraq is considered the shortest academic year in the region. The theoretical length of a school day is four hours and 30 minutes. However, schools that host two or even three shifts reduce the instruction time to four hours and three hours and 30 minutes, respectively. Instructional time is on average 3.6 hours a day – too little to teach Iraq’ comprehensive curriculum (USAID, 2012). Reasons for too little instructional time are multifold. In case of insecurity or imminent emergencies, schools close to protect learners and staff. Also, student absenteeism at primary level (age 6-14) is particularly high in areas affected by insecurity such as in districts in Anbar province with absenteeism rates of 15% (WFP, 2018). Girls are on average more absent than boys. Teacher strikes and natural disasters further contribute to missed instruction time.

Between February 2020 and May 2021 schools were closed for 303 days due to the COVID-19 pandemic, making Iraq one of the countries with the longest school closure globally.

Figure 12. Duration of full school closures (in weeks) in selected countries, March 2020-March 2021



Source: UNESCO [Global Database](#), COVID-19, 2021

Despite the Ministry of Education’s response to the pandemic with the provision of blended learning offers (combining remote learning with in-person instruction), the impact on immediate and long-term learning losses, learning inequality and intergenerational earning losses remain to be seen.

Teacher qualifications

Based on the MoE teacher qualification law, as of 2017/18, approximately 28% of the teaching force does not meet the minimum qualification requirements at pre-primary level. At primary level almost 17% are not qualified, while all teachers at secondary level meet the required qualification. At Vocational Schools, 47% of the teaching staff are qualified below the bachelor’s level and most teachers (75%) have a technical qualification, meaning that most teachers have no long-term formal teaching qualification. Even though further studies on the quality of teaching in VVs is currently not available, the low level of qualification among teachers is likely to have implications on the quality of pedagogical practice in the schools. The relatively low level of academic qualification, however, is met by an experienced teacher population with 72% of the staff being over 40 years old. This can be explained by the fact that teachers are unwilling to leave secure jobs.

The current teacher training system lacks a strategic vision and appropriate financial resources to meet pre- and in-service teacher training needs. Teacher in-service training is provided by the Institute for

Training and Educational Development which is represented in the center and with 20 branches, distributed across all 14 governorates. The Open Education College of the MoE based in Baghdad provides continuous training for teachers to complete their B.A. The overall budget for teacher training within the general education budget is not set and insufficient and consequently dependent on external funds. There is no official body responsible for accrediting training programs and trainings lack follow up and evaluation to ensure relevance and quality of training programs. Teacher training institutes are poorly equipped, both in terms of human, financial and material resources. Teacher promotions are purely based on the number of years in service and not based on performance which impacts negatively on teachers' motivation or interest in improving teaching skills. There is a strong need to further decentralize teacher training to reach all teachers, including those located in areas affected by insecurity.

Moreover, the graduates of Faculties of Education are not necessarily hired by the MOE to work in schools, which has led to an uncertain job market for graduates of the Faculties of Education hence, discouraging enrolment in teacher education bachelor level programs.

In higher education, almost 17% of instructors held a PhD as of 2017/18. 92% of instructors teaching at public higher education institutions held a Masters-degree. Academic promotion of instructors depends on a point-based system based on academic criteria, such as the number of published research papers, academic position, research activities, academic activities, and social activities. However, there is no mandatory requirements for faculty members to hold a PhD degree. Promotion to higher management levels is based on years of experience and teaching performance, hence, there is currently no incentive scheme for teaching staff to invest in research excellence and academic promotion.

Curriculum, teaching practices and textbooks

The revised national curriculum framework (2012) addresses critical issues including civic education, social cohesion, safety, disaster risk reduction and environmental changes, though remains knowledge based rather than competency based. Many modifications were made to the school curricula only recently with varying degree of quality and have not been sufficiently implemented. Teacher training has not yet caught up with the revisions made to the curriculum which therefore remains only partially implemented.

Instruction is primarily teacher-centered and based on students' rote memorization despite the curriculum framework's emphasis on student-centered learning, active student participation and promotion of analytical and problem-solving skills. This is mainly due to the lack of teacher training in student-centered approaches and use of learning activities as well as a very short school day and year which forces teachers to focus on covering the curriculum.

Textbooks are not printed in sufficient numbers because of the significant reduction in the MoE's budget for textbook printing in recent years. In 2016, a decline of 50% in textbooks prompted families to buy costly textbooks at bookstores, adding a financial burden to families' tight budgets following the economic crisis.

With only 14% of VSs benefiting from an internet connection, any prospect of systematic online study or the use of internet resources in class are challenging. Almost all VSs have sanitation and drinking water but only 54% have libraries and these libraries are themselves poorly resourced with only 313 books each on average.

In general, vocational schools are poorly resourced with a shortage of and training materials which have not been updated for many years. Existing programmes are not competency-based, and in many cases parts of the curriculum can only be delivered in theory, due to lack of facilities, equipment and materials needed for any practical application. There is also little linkage with the private sector and a credibility gap with the skills, and therefore employability, of the graduating trainees. The Government of Iraq has been addressing these issues through its TVET reform programmes. During Phase 1 of the TVET reform programme, hundreds of teachers were trained in competency-based teaching methods. Curricula and teaching materials for 99 modules at levels 1-3 (suitable for vocational schools and Vocational Training centres) were developed, and some of these have been piloted in the MoE VS and in MOLSA VTCs.

In higher education, curricula are one of eight standards of the “accreditation of national institution standards” project for higher education institutions in Iraq. As such, they have been set and ratified and their implementation is supervised by the department of quality assurance. They are systematically assessed on basis of the Iraqi national standards. For each academic specialization, a council is also in charge of assessing institutional performance and academic performance, in accordance with international quality indicators. The council monitors the latest development in academic curricula in the university stage and review the academic programmes against labour market needs. Academic committees in each academic department are responsible for determining the number of subjects, hours, and requirements for obtaining academic degrees.

School inspection and educational supervision

Iraq has an established system with national guidelines for school inspection¹⁰ and educational supervision. Classroom-based observation and supervision is provided by school principals and educational supervisors¹¹. Performance assessment criteria for teachers, head teachers and educational supervisors are in place (British Council, 2020). Newly recruited teachers and low performing teachers receive four visits per year, teachers performing on average are visited three times and good teachers are visited bi-annually while excellent teachers are visited only once a year. In recent years, the frequency of supervision visits has improved with 95% of planned visits executed. 75% of teachers receive visits once every two to three months. External evaluation committees provide follow up actions. Challenges to ensuring frequent and quality supervision include the lack of access to certain regions due to insecurity and military operations, lack of specializations among supervisors, and failure to disburse transportation allowances for travel to reach remote schools. Despite an increase in supervisors (4,696 as of 2017/18) they remain inadequate in numbers, lack training and support.

Learning outcomes and transferrable skills for the labor market

In the past decade Iraq has not participated in internationally comparable systems of student learning assessments and relies therefore on alternative sources of education data.

¹⁰ School inspectors are selected and appointed by the General Education Directorates in the governorates.

¹¹ Educational supervisors are selected by the General Directorate of Educational Supervision in the Ministry based on a competitive process and receive subsequently specialized training.

According to the EGRA and EGMA undertaken in the academic year 2011/12 for grade 2 and 3¹² (USAID, 2012), students did not master the basics of literacy and numeracy. The assessments administered in a sample of primary schools showed overall poor results for most students at the end of the second and third grade of primary. Approximately one out of four second and third graders tested could not read with sufficient fluency to be able to understand the text. The pupils' limited mastery of letters contributed to very low scores in word decoding and oral reading fluency with 48% of students with a score of zero. 26% did not master proficient reading skills and 18% did not have sufficient reading comprehension skills. In contrast, students' listening comprehension was somewhat stronger with 89% of students succeeding.

National leaving examinations occur at the end of primary (grade 6), intermediate secondary (grade 9) and preparatory secondary (grade 12) level and show a significant decline in pass rates between 2009 and 2017. There is limited data available on educational achievement. The 2012 Early Grade Reading Assessment (EGRA) and Early Grade Mathematics Assessment (EGMA), showed that 53 percent of grade 2 students and 29 percent of grade 3 students in Iraq, after reading an age-appropriate text, could not

answer a single reading comprehension question. Reading Comprehension was the weakest in Iraq, followed by Egypt and Jordan. "Early learning gaps exist for nearly all students, not just for those who performed poorly. These struggles to build key foundational skills early in life linger on and contribute to high rates of illiteracy (44 percent) and unemployment (17 percent) among Iraqi youth" (WB, 2021).

Among displaced, refugee and returnee children, only 48% of the 14-year-old learners surveyed mastered basic literacy and numeracy skills and only 5% of 8 to 9-year-olds were able to read and solve math problems at the appropriate grade level while 45% of 8-year-olds were unable to identify at least four Arabic letters of ten required (UNICEF, 2019).

Prolonged school closures during the COVID-19 pandemic exacerbate the learning crisis in Iraq. A projection undertaken by The World Bank estimates that Learning-Adjusted Years of Schooling will decrease with an average learning loss of 0.9 years – from a baseline of 4.0 Learning-Adjusted Years of Schooling. This is due to school dropout and quality shortcomings of distance learning solutions during the COVID-19 pandemic (WB, 2021). Learning loss is likely to be more significant among the 7.4 million marginalized students at primary, secondary and tertiary levels who did not have the means to access remote learning provided by the MoE through its two online platforms 'newton' and 'e-parwarda' (OCHA, 2020).

Despite the variety of vocational courses offered in preparatory education, they do not meet labour market needs. Despite a high demand for IT literate staff in the job market, in 2017/18 there were only 10 Computer and IT VSs in Iraq teaching around 2,000 students. Enrolment in IT skyrocketed during the pandemic reaching 18,000 students in 2021. A Labour Market survey carried out in 2017 (UNESCO, 2017) revealed that the courses offered in the VSs do not equip enough students with the construction skills required in the construction labor market.

MoHESR follows up with university graduates and provides career guidance and counselling. 35 Career Development Centres have been established in Iraqi universities to develop senior students' and

¹² The sample of the study consisted of 54 schools with a total of 1,153 students in the following governorates: Anbar, Baghdad, Karbala, Maysan, Najaf and Wasit

graduates' skills to meet labour market needs. However, male students tend to monopolize job opportunities where opportunities for female students are limited.

3.4 Management of the education system

The education workforce constitutes around 20% of total public employees of which 12% are part of the pre-university workforce (WB, 2021:27). Education is no exception to mal practices in the public sector employment which is plagued by unchecked recruitment, indiscriminate hiring, and fraudulent payroll practices. The WB's PER 2021 notes that "between 2015 and 2019, the number of employees in the (...) ministries of education and higher education increased from 250 thousand to 772 thousand (187%). As of 2019/20 there are around 440,000 teachers in public educational institutions as shown in table 5.

On average, every second teaching position from primary to higher education level is filled by women.

Table 5. Teacher characteristics for all levels of education, 2017/18 and 2019/20

	KG	Primary	Intermediate	Preparatory	Vocational Schools	University & College
Number of teachers (Public) in 2017/18	5,952	271,597	95,040	58,466	11,245	42,925
% rural	2.9%	35.4%	25%		25.1%	----
% female	100%	65.9%	42.5%	46.4%	56%	45.3%
Number of teachers (Public) in 2019/20	6,190	268,312	68,321	34,362	10,741	50,701
% female	100%	56.7%	56.8%	47.8%	46.5%	

Teacher management

The teaching workforce in general education is composed of 485,207 teachers/trainers. Teacher class ratios at primary level stand at 1.7:1 as of 2018/19. This means that for every 10 teachers there are 7 teachers not allocated to a specific class. This might be due to high numbers of ghost teachers¹³ as well as human resource management practices that do not exclude staff on leave (such as for maternity or study leave) from the DoE's payroll. Furthermore, data from the Central Statistics Organization show that some teachers at primary level were hired for specific subjects, which creates additional inefficiencies. At the time of writing there was no exact information on the number of ghost teachers in primary education. Teacher class ratios at secondary stand at 2.2:1. High levels of teacher class ratios indicate high wastage of public resources.

At VSs, student-section ratios stood at 19 on average though ratios differ across specializations. Agricultural VSs have the lowest student-section ratio with 16 students per section on average while section classes are slightly bigger with 20 students per section at Arts VSs and VSs offering Computer and Information Technology courses.

¹³ While there is no exact data yet for ghost workers in the education sector, the Iraqi Parliament's Finance Committee detected 150,000 who earned dual salaries in the public sector in 2020 (Al-Masalah, 2020). The Committee previously estimated that the number of ghost workers ranges between 200,000-300,000.

In general, class sizes and student to staff and class ratios have remained constant over the last five years, showing no major changes. This is despite the increase in school numbers over the same period. Large class sizes can make it difficult to use certain teaching methods and to manage the classroom, and therefore negatively affect student learning. However, the number is only marginally bigger and within the possible for a skilled teacher to keep motivated. The number of students per school is slowly decreasing from 294 in 2014/15 to 215 in the last academic year, which must improve the ability of school administrations to supervise the student body. The situation with regard to libraries and workshops has also improved as extra facilities have been added over the five-year period bringing down the ratios of students to resources to 507 from 613 for Libraries and to 80 from 96 for workshops.

The ratio of students to teaching staff members in higher education has decreased in public universities, Student-teacher ratios are in 2017/18 slightly higher in the humanities department (13:1) compared to the science department (9:1). The average for OECD countries stands at 18:1 In private universities the ratio has increased in recent years, in both, scientific and humanities departments. Student-teacher ratios are in 2017/18 significantly higher in the humanities department (49:1) compared to the science department (19:1).

Despite the large teacher workforce, Iraq faces teacher shortages in rural and marginalized communities and increasingly relies on untrained volunteers to keep schools open especially in camps and returnee areas. The artificial teacher shortage is a result of multiple factors, including the inability to implement the Policy which requires teachers to serve a mandatory minimum number of years in rural or disadvantaged communities. Effective teacher allocation has been hampered by displacement of teachers due to insecurity; the allocation of female teachers for mixed schools in the intermediate and preparatory stages is challenging due to gender-restrictions at secondary level; and there is an excess of the number of graduates in specializations that the Ministry of Education does not need and a scarcity in the number of specializations needed.

In addition to the described inefficiencies, the most recent announced hiring freeze and change in retirement age from 63 to 60, has led the MoE to resort to hiring contract teachers among graduates of Faculties of Education and other Teacher Colleges which now includes a mandatory teaching period as part of the fourth year of Teacher College training to address the teacher deficits.

Non-teaching staff

At national level 28% of education staff is non-teaching staff (NTS), either working in schools, DoEs or at the central MoE. The share of NTS varies across governorates with the highest shares recorded in Ninewa (52%), followed by Missan (43%), and al-Anbar (37%).

In higher education, 50% of around 45,000 staff is non-teaching staff. High shares of non-teaching staff pose a significant financial burden on the education sector and contribute to internal inefficiencies.

Pupil teacher ratio

The inefficient allocation of teachers has led to an increase in the pupil teacher ratio over the past years with the most significant increase at primary level (from 18:1 in 2009/10 to 26:1 as national average as of 2017/18). Pupil teacher ratio at KG stands at 29:1 and at 18:1 at secondary level as of 2017/18.

In higher education, student-teacher ratios vary from 5:1 (Agriculture) to 27:1 (technical institutes) on average.

Education management and leadership at sub-central levels

Within the decentralization reform that started in 2005, education authorities at sub-central levels and schools carry out selected administrative, financial, educational, and legal functions¹⁴. Key challenges that remain at the organizational level include the lack of a decentralized financial system to secure basic operating expenses and the scarcity of material resources and other equipment, including computers, office equipment, transportation, and infrastructure. Roles and responsibilities of education managers at governorate and district education authorities lack clarity including in form of job descriptions and performance-based career progression structures. Educational planning, budgeting and management lacks clear guidance and coordination and communication mechanisms, including feedback loops to correct and improve planning and management processes are missing. The lack of transparency and accountability remains a key challenge.

Following a pilot in recent years the MoE has begun to upscale the School-based Management (SBM) approach to strengthen effective school leadership and community participation in school management. As of 2021, more than 1,500 schools were trained in the application of the SBM approach which brings together a series of practical approaches to improve learning outcomes and ensure a safe and healthy learning environment by including principals, deputy principals, teachers, community representatives and parents. To measure school performance, schools undertake a self-assessment against 25 defined standards.

¹⁴ This includes contracting and renewing contracts for temporary appointed staff, preparing training plans, approving transfer of employees, managing school canteens (administrative functions); preparation of operational and investment budgets, transfer of funds within the annual budget item lines, disbursement of student grants (financial functions); preparation of plans, school construction and maintenance, implementation of compulsory education law, investments in pre-primary education, strengthening the role of PTA, management of education information and data, school mapping, coordination and cooperation with NGOs, opening, closure, merging/separation and naming of the schools (educational functions); and accepting and managing contributions and donations and land acquisition for educational purposes (legal functions).

Chapter 4. Vision, mission, and strategic directions

4.1 Vision and mission

The INES 2022-2031 forms part of a government-wide effort to improve the quality and efficiency of public services provided to reach all Iraqis. This is reflected in the national development goal for Iraq's future as stated in the National Development Plan 2018-2022:

Establish the foundations for an effective development state with social responsibility.

To contribute to this transformation, the education system is guided by an ambitious vision. It has been formulated considering the overall socio-economic development vision of the country, education laws of the Republic of Iraq including the provision of compulsory and fee-free basic education and its international commitments in education according to the Sustainable Development Goal 4 (SDG 4). It emphasises:

- Equitable access to good quality education,
- providing young people with the skills required in a 21st century knowledge society, which allow them,
- to contribute to the sustainable economic and social development of Iraq.

This vision can be summarised as follows:

To aspire towards an education system that is committed to values, provides sustainable and innovative learning opportunities for all, of high quality, promotes building a knowledge society, and conforms to global standards.

To this end, the National Education Strategy's mission is to:

Strengthen educational institutions for community partnership, and building systems that promote scientific and creative thinking, ensure the quality of outputs to meet the needs of the labour market, and contribute to building a diversified knowledge economy in line with the requirements of sustainable development.

4.2 Core values

The Iraq National Education Strategy is built on 12 core values, highlighting the education system's role in Iraq's future development:

1. Belonging and citizenship, leading to global citizenship.
2. Respect for diversity and acceptance of others.
3. Justice.
4. Transparency.
5. Integrity and impartiality.
6. Community partnership.
7. Compatibility with the needs of the Iraqi society and sustainable economic development.
8. Excellence and high-quality service delivery.

9. Teamwork.
10. Academic freedom.
11. Competitiveness.
12. Lifelong learning and continuous development of those in charge of education services.

4.3 Strategic directions

To achieve the above-mentioned vision, the education sector, led by the Ministry of Education and the Ministry of Higher Education and Scientific Research, in close collaboration with line ministries, communities and external partners, aims to work towards strategic goals specific to the three sub-sectors as outlined below.

Strategic goals per sub-sector:

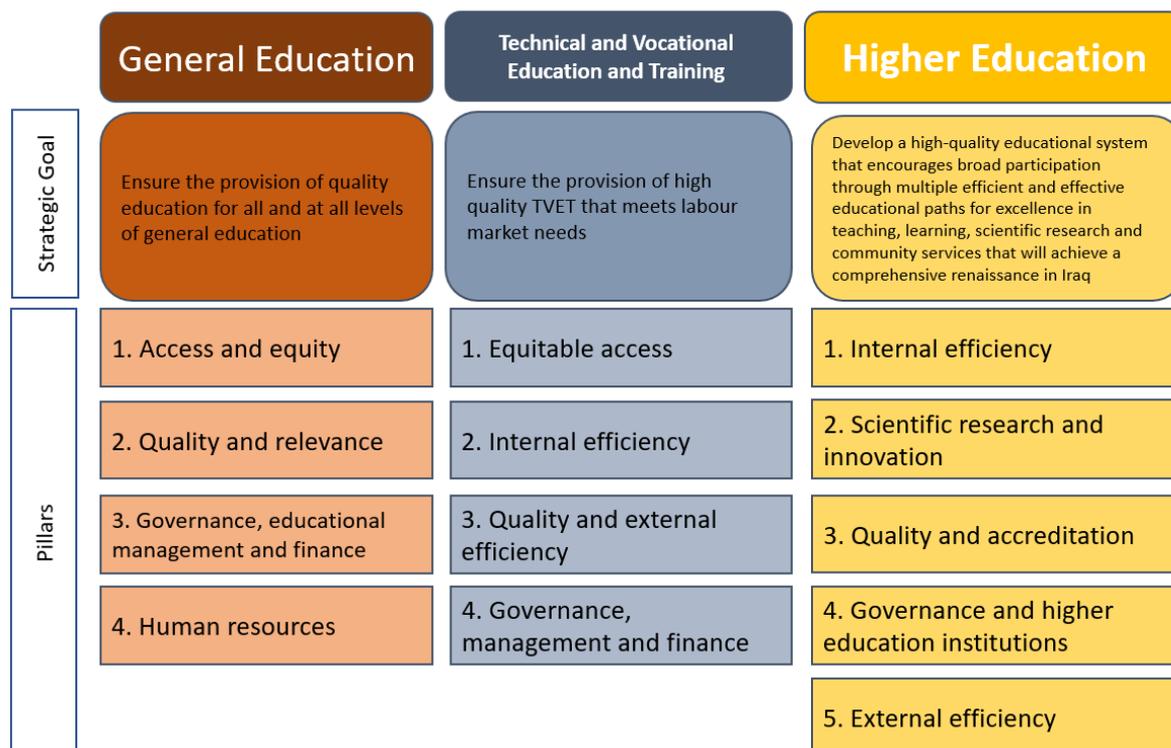
- *Ensure the provision of quality education for all and at all levels of general education (General Education)*
- *Ensure the provision of high quality TVET that meets labour market needs (TVET)*
- *Develop a high-quality educational system that encourages broad participation through multiple efficient and effective educational paths for excellence in teaching, learning, scientific research, and community services that will achieve a comprehensive renaissance in Iraq (Higher Education)*

A series of strategies organized in pillars outline how the sub-sector specific strategic goals can be met.

Key themes across the three sub-sectors are:

- ensuring equitable access to education and training,
- improving quality and relevance of education and training and strengthening linkages with the labour market,
- improving the governance of education, including human resource development, educational planning, and management, and
- improving human resource and financial management, for better service delivery and greater value for money.

The visual below provides an overview of these broad sub-sector strategies, indicated as pillars.



The identified strategies build upon and are consistent with recent policy, planning and programming decisions prepared by MoE and MoHESR. Within the overarching sub-sector strategic goals, the INES 2022-2031 puts emphasis on various cross-cutting factors, including gender, rural/urban divides, children, and youth affected by conflict and insecurity, as well as poverty. Proposed programmes address the vulnerabilities of children and youth in Iraq. Key Performance Indicators identified are disaggregated by gender and other categories to help the MoE and MoHESR identify and address sources of vulnerability and disadvantage.

The Iraq National Education Strategy also proposes programmes aiming to address the effects of past and ongoing crises, including prolonged school closure due to COVID-19, displacement, destruction of education infrastructure, and psycho-social needs of learners. Furthermore, the strategy identifies concrete avenues for strengthening the resilience of the education system by institutionalizing crisis-sensitive planning and response.

Chapter 5. Policy priorities, strategic objectives, and priority programmes

This chapter outlines the foundation of the INES 2022-2031, describing policy priorities, strategies, and related priority programmes for general education, TVET and higher education. Each of the priority programmes consists of several sub-programmes. The term “priority programme” can be understood as a set of sub-programmes that aim to achieve the same programme objective. Some priority programmes are more complex than others, because the challenge that they address is either more significant and/or has a more diverse range of causes.

The identification of policy priorities and the development of the strategies and priority programmes was based on a comprehensive analysis of the education sector performance undertaken in 2020, resulting in the identification of priority challenges. This was followed by the development of sub-sector specific problem trees which provided an overview of all the known causes and effects related to these priority challenges. Subsequently, each sub-sector team prepared solution/objective trees by reversing the negative statements that form the problem tree into positive statements. In a next step, the solution/objective trees were analysed to identify and strengthen interlinkages between general education, TVET and higher education.

This chapter describes the result of this work, showing a condensed version of the solution/objective trees after highlighting key challenges each sub-sector faces as of 2018/19. Now, in 2021, the COVID pandemic has not changed the nature of these challenges, but it has most probably deepened them. While the effects of COVID-19 containment measures (i.e., prolonged school closures) on education access, quality and governance are not yet fully visible, the government of Iraq expects learning loss and potentially higher drop-out rates, specifically among the most marginalized learners.

The successful implementation of the Iraq National Education Strategy depends on a series of factors, including the soundness of the proposed strategies and programmes but also on:

- The availability and effective provision of required financial resources, and the effectiveness of and transparency in their use.
- The availability of committed and skilled human resources, at central and decentralized levels of the educational administration, and within schools.
- The capacity of this same personnel to participate in the reforms that the achievement of INES demands. This will require that many of them change ingrained habits of working.
- The effective coordination and alignment of efforts between the MoE, MoHESR and other ministries including the Ministry of Labour and Social Affairs (MoLSA), the Ministry of Finance, the Ministry of Planning but also external partners and the private sector.
- The sustainability of political commitment to the vision of INES and to its long-term objectives.
- The existence of regular monitoring and evaluation, and the willingness of decision-makers and implementers to learn from these M&E exercises.

5.1 General Education

General Education encompasses two years prior to primary school (KG) up to preparatory education (academic stream). Despite a considerable increase in access to general education over the past decade, levels of completion remain low and unequal access to education remains a key challenge. The most recent crises, including the COVID-19 pandemic jeopardize not only access to education but further worsen learning achievements, especially for the most marginalized children and youth.

The list below summarizes key challenges in General Education:

Despite considerable increase in access to basic education over the past decade, levels of completion remain low

- Despite significant growth in pre-primary enrolment, gross enrolment remains low with around 10% for KG1 and KG2 in 2018/19.
- Despite the primary gross intake ratio of 122% at grade 1 in 2018/19, not all children access primary education. High GERs result from out-of-age children returning to school to catch up on missed schooling opportunities during the war against ISIS and significant numbers of under- and overage students.
- Even though primary education is mandatory as per the Iraqi Constitution, only three quarter of pupils (around 75%) complete the primary cycle in 2018/19, following dropouts. Therefore, universal primary completion has not yet been achieved in Iraq.
- Enrolment at the intermediate level stands at 85% (GER). Only half of the students completing intermediate education enter preparatory education in the academic year 2018/19.
- Completion rates at the end of preparatory remain low even though they more than tripled with around 40% in 2018/19 compared to around 13% in 2009/10.

Despite progress, unequal access to education remains a challenge

- Significant disparities in access affect disproportionately girls, rural learners, and children from poor families.
- Progress was made in gender equality, specifically in primary education with girls now accessing almost at the same pace as boys. The gender gap widens significantly at intermediate level while at preparatory level, the gender gap is reduced due to higher dropout rates among boys.
- The high number of out of school children (OOSC) and youth remains a key challenge. More than two million children and youth aged 6 to 17 were out of school as of 2018.
- Non-formal education programs designed to accelerate learning and (re)integrate OOSC and dropouts are not sufficient to absorb the current OOSC stock, which is expected to grow given challenges in terms of progress and completion.

The most recent crises further worsen learning achievements, especially for the most marginalized children and youth

- On average, children in Iraq receive only 4 years of actual learning (learning-adjusted years of schooling) by age 18 as effective years of schooling are 40 percent less than the actual years of schooling which are around 6.9 years on average in Iraq (The World Bank 2018).

- Prolonged school closures during the COVID-19 pandemic are likely to lead to more learning loss, projected to amount to 0.9 learning-adjusted years¹⁵.

Wastage of public resources due to internal inefficiencies

- A key concern for general education is high repetition rates which peak for grade 5 with 1 out of 4 students repeating one year before the primary education certificate examination¹⁶, then again in the last year of intermediate (grade 9) with 41% and in the final year of preparatory (grade 12) with a repetition rate of 37%. Girls repeat at lower levels than boys.
- As of 2018/19, teacher class ratios stand at 1.7:1 for primary and at 2.2:1 for secondary education. These ratios indicate that the teaching force is ineffectively used, as the additional teachers do not perform a valuable service to the system. This poses a financial burden to the education system.

The visual below shows the strategic goal for General Education, its four proposed strategic directions (pillars), their respective intended results and associated priority programmes.

General Education				
Strategic goal: Ensure the provision of quality education for all and at all levels of general education				
Pillars	1. Access & Equity	2. Quality & Relevance	3. Governance, Educational Management & Finance	4. Human Resources
Intended results	Increased enrolment and retention of learners in pre-primary, primary and secondary education, especially among girls, learners affected by conflict and displacement, students with special needs and poor students	Increased school readiness among pre-primary children, improved teaching and learning outcomes in primary and secondary education, and improved relevance of educational content	Strengthened legislative, administrative, planning and financial capacity of the education system to ensure effective and efficient education service delivery	Qualified and motivated teacher and education staff are recruited and trained to ensure quality education and effective and efficient education service delivery
Priority programmes	Infrastructure	Attractive learning environment	Crisis management	Teacher management: selection, recruitment and motivation
	Safe and healthy learning environment	Curriculum & Assessment	School Management	Pre and in-service teacher training
	Education continuity and lifelong learning	School leadership & community participation	Institutional management and leadership	Recruitment and training of non-teaching staff
			Financial management	

In a nutshell, General Education aims to work towards following policy goals:

- Increase school readiness among primary children by increasing enrolment including through increasing the share of public provision of KG, which will however remain minor.
- Ensure universal completion of primary education before the end.
- Address internal inefficiencies by reducing repetition and dropout rates.

¹⁵ Sedmik et al. (2020). "Iraq: Can COVID teach us how to build a better education system for all children?" World Bank blogs (November 6,2020). <https://blogs.worldbank.org/arabvoices/iraq-can-covid-teach-us-how-build-better-education-system-all-children>

¹⁶ MoE staff indicated that high repetition rates at grade 5 are mostly since this is the first grade in which written exams are taken. MoE staff also mentioned that anecdotal evidence suggests that teachers nudge underachieving learners into repeating one year before taking the primary leaving examination to increase their chances of success.

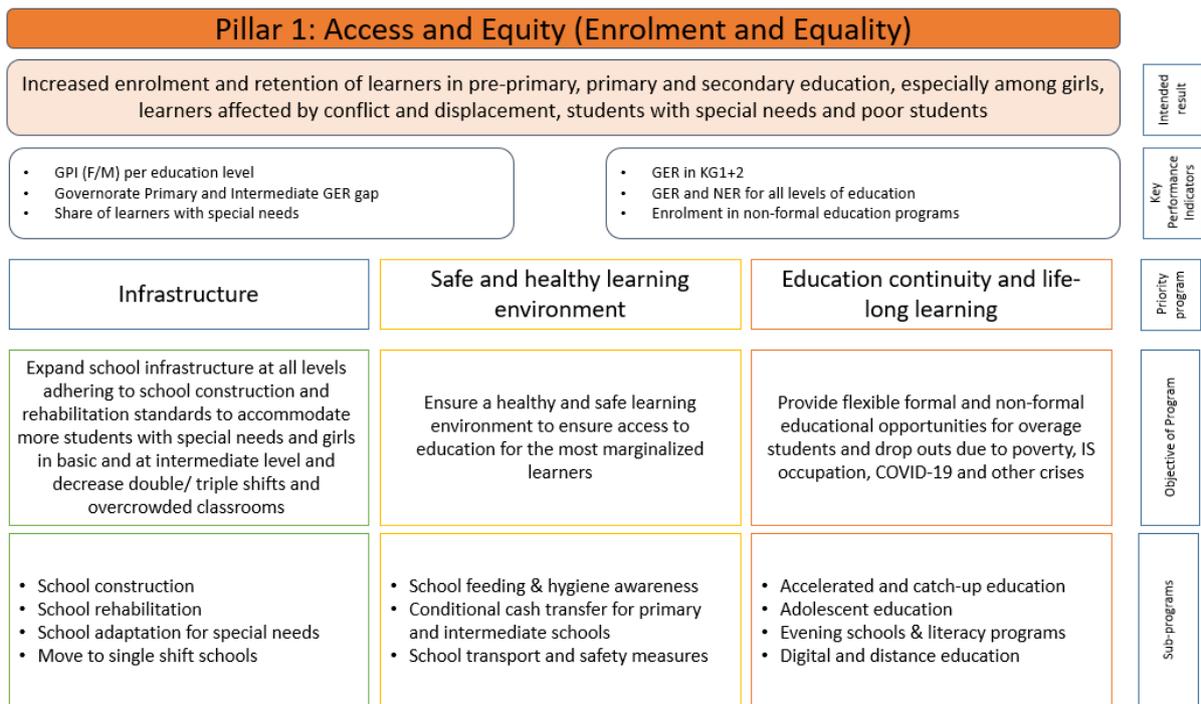
- Improve teaching and supervision conditions by reducing the average number of students per teacher.
- Provide better support for children with disabilities as part of the education sector's inclusion agenda.
- Reduce wastage of resources by reducing teacher class ratios and address teacher gaps through improved teacher allocations.
- Increase private sector engagement in education to meet increasing needs.
- Improve the education process and the quality of education through school-based management, and
- Improve governance in management and oversight at all levels of the education administration for better value for money and improved sector performance.

The following sections explore each of the four pillars in detail, providing first a theory of change, detailing the objectives of the respective priority programmes and related sub-programmes. Progress towards pillar objectives is measured through a series of Key Performance Indicators (outcome level indicators) which are shown in the visuals as well as selected output level indicators for the priority programmes (see chapter 6 (results matrix) for a full list of indicators per sub-sector).

5.1.1 Pillar 1: Access and equity

Pillar 1 contains three priority programmes contributing to the intended result based on following theory of change:

If school infrastructure expands to accommodate an increasing number of students, and to decrease multiple shifts, and *if* children and youth have access to a healthy and safe learning environment, and *if* children and youth have access to flexible learning opportunities, **then** enrolment and retention of learners in pre-primary, primary and secondary education as well as in non-formal education programmes will increase, especially among girls, learners affected by conflict and displacement, students with special needs and poor students.



Infrastructure

Significant investment in infrastructure (construction and rehabilitation) is needed to absorb increasing numbers of students, including in pre-primary education and to reduce double and triple shift classes as multiple shift classrooms are a key determinant for low quality education due to reduced contact time between teachers and students and the scarcity of resources (e.g., libraries, etc.). To promote access to education among special needs learners, school facilities will be equipped with disability-friendly infrastructure.

Operational plans derived from the INES 2022-2031 will need to investigate creative ways to upscale construction and rehabilitation projects, such as providing low-cost schools to meet immediate needs. Further information on the scale of infrastructure investment is provided in chapter 6 (cost and financing) and 7 (results matrix).

Safe and healthy learning environment

To reduce disparities among learners, pillar 1 provides a series of sub-programs to incentivize (re-)enrolment and retention especially among girls, learners affected by conflict and displacement, disability, and poverty. These programmes include, among others, upscaling the National School Feeding Programme to reach all pupils of public primary and the most vulnerable children attending KG by 2031. To increase enrolment in pre-primary education, the MoE aims to improve awareness of the positive role of Early Childhood Development among communities. School transport and safety measures aim to ensure that learners in rural areas and areas affected by insecurity and natural hazards have access to a safe learning environment. The MoE also plans to explore the affordability and practicality of providing conditional cash transfers for marginalized learners, potentially linked to social welfare packages provided by the Ministry of Labor and Social Affairs.

This series of interventions forms part of the MoE's overall strategy to address rampant internal inefficiencies that hamper students' completion of the primary and secondary education cycle, including high levels of repetition, lower enrolment among girls, rural and poor children, and overall high levels of out of school children. Other strategies to reduce high repetition rates include the

introduction of new regulatory policies limiting repetition; increasing the number of places available in the following education stages and increasing the number of students selecting into vocational preparatory education as outlined in 5.2.

Education continuity and life-long learning

The Ministry of Education aims to provide flexible learning opportunities for children and youth out of school or at risk of dropping out by strengthening established non-formal education programmes. The MoE works closely with external partners to fill existing gaps in the provision of non-formal education programmes which often take place in the afternoon or evening, including the Schools for Youth for learners age 10 to 14; the Accelerated learning programmes for learners age 12 to 18 who catch up on missed education through a compressed three-year curriculum¹⁷ and adult literacy centres for learners age 18 and above who lack basic literacy and numeracy skills. Further coordination is needed with the Ministry of Labour and Social Affairs which offers training courses for out of school youth to ensure that young people receive not only literacy and numeracy skills but also vocational skills which will allow them to enter the labour market. More work is also needed to ensure that displaced learners who lack civil or legal documentation can transition to the formal education system.

The MoE plans to continue investing in distance/digital education to expose students to modern learning techniques but also to ensure education continuity during school closures such as in the case of COVID-19 related school closures. The MoE recognizes the need to further explore strategies to reduce disparities in accessing distance/digital education across governorates, rural and urban areas, and female and male students due to limited access to devices and connectivity. Furthermore, the MoE also explores strategies to support students who have fallen behind their peers during school closures due to COVID-19 through remedial classes. To this end, the 2-year operational plan which details implementation of the INES 2022-2031 provides an opportunity to adjust existing and develop new approaches to helping students catch up on their education.

5.1.2 Pillar 2: Quality and relevance

Pillar 2 contains three priority programmes contributing to the intended result based on following theory of change:

If schools provide an attractive education environment conducive to learning, and **If** curricula and evaluation methods are updated, and **If** school leadership and community participation is enhanced through the school-based management programme, **then** pupils at primary level will be better prepared, teaching and learning outcomes in primary and secondary education will improve, and high repetition and drop out levels will decrease.

¹⁷ The Accelerated learning Programme condenses six years of primary education into three years. Successful graduates receive a primary education certificate.

Pillar 2: Quality and Relevance			
Increased school readiness among primary pupils, improved teaching and learning outcomes in primary and secondary education, and reduced dropout and repetition rates			Intended result
<ul style="list-style-type: none"> Budget for education materials (non-salary items)& goods 	<ul style="list-style-type: none"> Percentage of students at the end of the primary who achieve 80% in proficiency in reading and mathematics by gender Percentage of students succeeding in international exams by gender 		Key Performance Indicators
Attractive learning environment	Curriculum and Assessment	School leadership and community participation	Priority program
Provide an attractive educational environment conducive to learning	Develop curricula and evaluation methods, and update the specializations of preparatory education and vocational training	Upscale the school-based management program to enhance school leadership and community participation	Objective of Program
<ul style="list-style-type: none"> Educational aids for special needs and talented learners Science and computer labs & ICT equipment Sport halls & stadiums School libraries School gardens 	<ul style="list-style-type: none"> Modernize preparatory VE specializations, develop curriculum, train teachers and supervisors (overlap with TVET) Update national learning assessment methods Participate in international learning assessments Complete and implement the general framework for equal or inclusive education for students with special needs Increase the number of school days to 182 and increase the duration of lessons Enhance and diversify assessment methods for educational staff Provide new books for the first four grades of primary school 	<ul style="list-style-type: none"> Develop, implement and monitor school development plans Improve the relationship between communities, school leadership and local councils Ensure participation of Parents and Teachers Councils in the School Feeding Program 	Sub-programs

Attractive learning environment

Improving the quality of education requires a range of education tools, including learning aids for special needs learners, school gardens and libraries, sports infrastructure, science and computer labs and ICT equipment. This works as a source of motivation for school staff, in particular teachers, and for students. Moreover, the availability of these tools allows for a wider variety of teaching methods, contributing therefore to a change in teaching habits towards more student-centered and active teaching.

Curriculum and Assessment

Curriculum review and development is a long-term and resource-intensive process, with implications for almost all education staff, including teacher trainers, supervisors, and teachers. The review will be guided by two main considerations:

- The need to strengthen the link with national development, including labour market needs
- The results from student assessments and examinations, which highlight where curriculum improvement is most urgently needed. In this regard, Iraq's planned participation in international learning assessments such as in the *Trends in International Mathematics and Science Study (TIMSS) 2023* will allow the MoE to use learning results as a basis for a comprehensive curriculum review and development.

The curriculum reform will be accompanied by the update of national learning assessment methods. While close to finalization, the general framework for equal and inclusive education for students with special needs will provide further guidance.

School leadership and community participation

By 2031, the MoE aims to upscale the School-based Management programme (SBM) to all primary and secondary schools in Iraq. The SBM empowers schools, parents, and communities to take school-

related decisions collectively to improve the school environment and children's learning. The approach is rooted in Iraq's decentralization efforts, using participatory structures and tools such as School Management Committees, School/Learning Improvement Plans, and training programmes to build capacities of DoEs, school leaders, supervisors, teachers, and communities, to foster community engagement and to monitor the implementation and results of the School Improvement Plans. Within the SBM programme, the MoE aims to provide school grants to primary and secondary public schools which are managed by the School Management Committee. The committee is also tasked to perform school assessments and to develop school improvement plans identifying key priority areas that aim to improve the school environment and children's learning outcomes. By transferring financial and administrative functions to schools and increasing accountability at school level, the MoE, with support from key partners including UNICEF and The World Bank, hopes to improve the effectiveness and quality of education based on school-specific needs and capacities. This includes enhancing student achievements in general education and strengthening the demand and supply of pre-primary classes. The country-wide roll out of the SBM programme requires an institutionalized approach to school-based management, including strengthening feedback loops between central MoE departments, DoEs and school leaders which will allow decision makers to base policy and planning decisions on school-level experiences.

5.1.3 Pillar 3: Governance, educational and financial management

Pillar 3 contains five priority programmes contributing to the intended result based on following theory of change:

If education staff capacities in planning, monitoring and evaluation, coordination and administration are strengthened, and **If** financial management capacities at the institutional, organizational and individual level are strengthened, and **If** schools have access to operational funds to implement their school improvement plans and raise funds through school canteens to address school-specific needs, and **If** central and decentralized education authorities have the tools to plan for and respond to crises, and **If** partnerships between education stakeholders and the private sector are strengthened, **then** the legislative, administrative, planning and financial capacity of the education system will be strengthened to ensure effective and efficient education service delivery.

Pillar 3: Governance, Educational and Financial Management

Strengthened legislative, administrative, planning and financial capacity of the education system to ensure effective and efficient education service delivery					Intended result
<ul style="list-style-type: none"> Share of schools with operational budget available to implement school improvements plans (School-based management approach) Annual joint sector reviews and mid-term review of INES 		<ul style="list-style-type: none"> EMIS active at central and governorate level and used for planning, M&E processes Share of DoEs that have specific plans and budgets to ensure education continuity during crises, with a total of 20 plans (19 governorates and educational districts in Baghdad + 1 centre) 			Key Performance Indicators
Institutional management and leadership	Financial Management	School management	Crisis management	Partnership with private sector	Priority programs
Strengthen staff capacities at the Ministry of Education's office and general directorates in aspects of planning, coordination and administrative skills to ensure service delivery, monitoring and evaluation	Strengthen financial management capacities for effective and efficient education service delivery	Provide schools with operational funds to implement their school improvement plans and implement the school canteen strategy to allow schools to address school-specific needs	Institutionalize crisis-sensitive planning and strengthen response capacities at central and decentralized levels to ensure education continuity during crisis,	Strengthen partnerships with the private sector to improve the quality of education	Program objectives
<ul style="list-style-type: none"> Create and amend educational laws to meet quality standards Strengthen inter-ministerial coordination to ensure implementation and monitoring of progress of INES Strengthen coordination with international partners to ensure alignment, implementation and monitoring of progress of the National Education Strategy Strengthen the supervision function through review of tasks and development of supervision reform linked to decentralization efforts Support the roll out of administrative and electronic educational systems, incl. EMIS and Kobo toolbox Determine roles and responsibilities between the Ministry's office and the general directorates of education to match the requirements of the educational process 	<ul style="list-style-type: none"> Develop the Financial Management Information system Build the capacities and motivation of employees in the financial department to plan for disbursement of funds for program/project implementation Develop diversity of education financing (investment) Provide accurate financial data and information with a high level of transparency 	<ul style="list-style-type: none"> Provide schools with block grants to implement school improvement plans Amend the school canteen system to be dedicated to the school's operational budget Develop the school administration selection system Promote Human Rights Awards in Schools Expand the school-based management program to all schools 	<ul style="list-style-type: none"> Establish a crisis cell in the Ministry of Education and its offices in the governorates Train staff of the Crisis Cell in the Ministry of Education and its offices in the governorates to respond to crises and to ensure the continuity of education during crises 	<ul style="list-style-type: none"> Amend the private school system Amend legislation for the purpose of encouraging private sector investment in education 	Sub-programs

Institutional management and leadership

The MoE plans to undertake a series of interventions to strengthen a) the legislative framework for education such as through the amendment of educational laws to meet quality standards and, b) planning and management capacities of education staff at central and decentralized levels. Several key areas require special attention, including the:

- piloting and roll out of the Educational Management Information System (EMIS), the Geographic Information System (GIS) and other data collection tools such as KOBO toolbox for rapid needs assessments.
- monitoring and evaluating progress and achievements made towards set objectives such as through Annual Sector Reviews and Mid-term and end-of cycle reviews which allow education stakeholders to take stock of challenges and opportunities faced during the implementation of the INES.
- inter-ministerial coordination to ensure implementation and monitoring of progress of INES.
- coordination with international partners to ensure alignment, implementation, and monitoring of progress of the National Education Strategy such as with the Education Sector Coordination Group.
- revision of the supervision function through review of tasks and the development of a supervision reform linked to decentralization efforts and greater school autonomy; and
- determine roles and responsibilities between the Ministry's office and the general directorates of education to match the requirements of the educational process such as through the development of job and department descriptions.

Financial management

Equally, financial management capacities need strengthening to ensure effective and efficient service delivery, including through:

- the development of the Financial Management Information system to provide accurate financial data and information with a high level of transparency and to allow for efficient disbursement of funds to ensure program/project implementation.
- the preparation and effective disbursement of education budgets; and
- the diversification of education financing, including through the private sector.

School management

In line with the school-based management program listed under Pillar 2 (Quality), Pillar 3 ensures the provision of block grants to implement the school improvement plans. Furthermore, the school canteen system will be reviewed to allow schools to increase their operational budget.

Crisis management

Building on the MoE's experience with managing crises and in close collaboration with national and international partners, the MoE aims to institutionalize its crisis response by establishing a crisis cell in the Ministry of Education and its offices in the governorates to better coordinate and plan for crisis response.

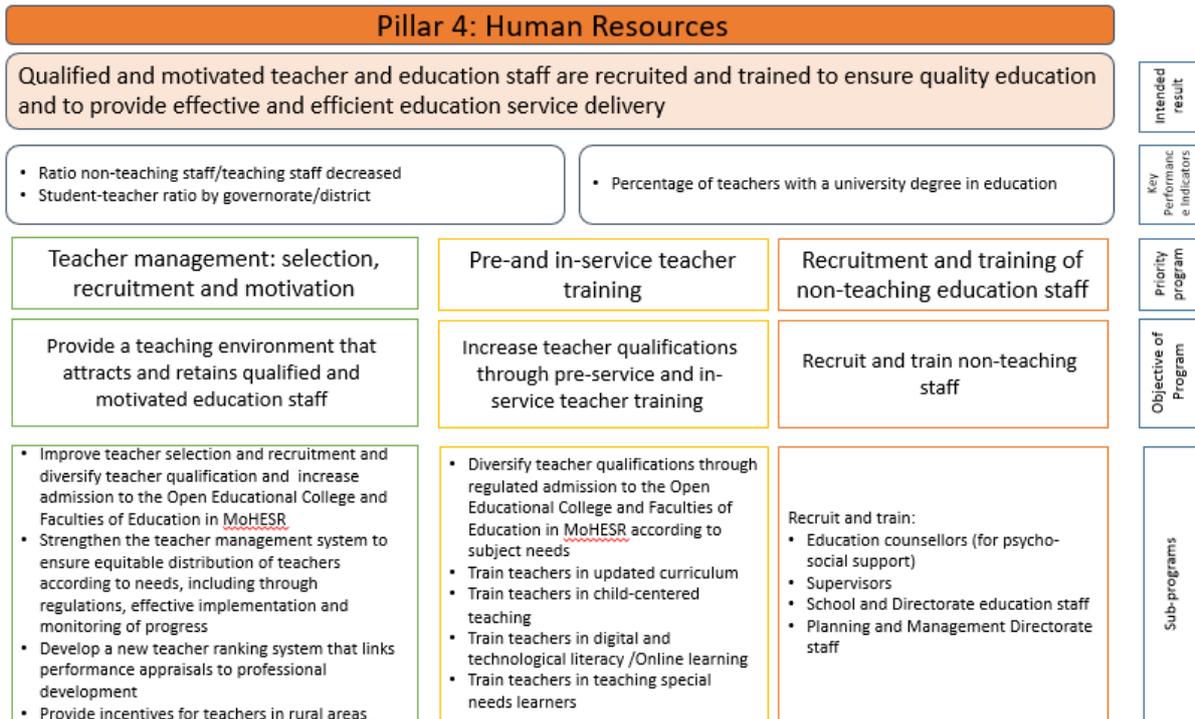
Partnership with private sector

A joint approach between public and private actors is needed to meet the demand for education and training over the coming decade. The INES 2022-2031 aims to significantly increase private sector engagement in general education, relieving pressure on the public education system. To this end, the MoE aims to amend how it regulates and supports the private school system including through issuing legislation and guidance to encourage private sector investment in education.

5.1.4 Pillar 4: Human resources

Pillar 4 contains three priority programmes contributing to the intended result based on following theory of change:

If the teaching environment attracts and retains qualified and motivated teachers, and **If** teacher qualifications are improved through pre-and in-service training, and **If** non-teaching staff are recruited and trained based on needs, **then** qualified and motivated teacher and education staff will ensure quality education and the delivery of effective and efficient education service.



Teacher management

The teaching workforce is the most valuable resource in any education system: teachers have a major impact on the quality and attractiveness of the educational offer, and on learning. Teacher salaries are also the most expensive budget item. Despite high teacher/class ratios, many schools, especially in disputed areas experience teacher gaps with the result that volunteer teachers with little qualifications teach afternoon shifts. The high wage bill leaves little room to invest in something else. Strategies to reduce the wage bill will need to include the identification and removal of ghost staff as well as removing workforce on leave from the MoEs wage bill, regulating the size of employment by increasing the number of teaching hours and further reducing the teacher class ratio as well as reducing teacher allowances. A comprehensive review of current teacher management practices is required in the first years of the INES 2022-2031 to identify the exact nature and scope of these strategies. Teacher selection and recruitment regulations need immediate improvement to ensure that teacher allocations are based on needs. To fill teacher gaps in rural areas, the MoE reverts to re-initiating incentives for teaching posts in rural areas. The MoE also pursues the development of a teacher ranking system or career progression levels that link performance appraisals to professional development.

Pre-and in-service teacher training

Key reforms are needed to improve teacher training, both pre- and in-service to achieve more effective teaching and learning approaches which boost literacy and numeracy, digital literacy, child-centred learning, and inclusive education. The link between those who provide pre- and in-service training and those who work on the development and renewal of the curriculum is essential to ensure that teacher training adapts, when needed, to the new curriculum. Teacher training should also focus on helping teachers use the more attractive learning environment to change their teaching styles and approaches towards more student-centred teaching.

Recruitment and training of non-teaching staff

In addition to teachers, non-teaching staff constitute a considerable cost of the overall wage bill. The INES 2022-2031 proposes a reduction of the overall Non-teaching staff/teacher ratio for all levels of education with the most considerable reductions in KG and higher education. The MoE plans to provide training for non-teaching staff in key areas, including for the implementation of the School-based management programme, to strengthen counselling including for the provision of psycho-social support in schools, improve supervision and mentoring, and educational planning and management.

5.2 Technical and Vocational Education and Training (TVET)

The INES 2022-2031 pays special attention to non-academic education, concretely Technical and Vocational Education and Training (TVET). As TVET is offered at both preparatory and tertiary education levels, it falls under the responsibility of the Ministry of Education, and the Ministry of Higher Education and Scientific Research. Its organization also requires close coordination and alignment with other ministries offering non-formal vocational training courses, such as the Ministry of Labour and Social Affairs (MoLSA). The vocational stream (Vocational Schools) of preparatory education marks the beginning of vocational education. Successful graduates from Vocational Schools (VSs) have the possibility to progress to a Technical college or a University of Technology.

The list below summarizes key challenges in the TVET system:

Low demand for vocation and technical education and training

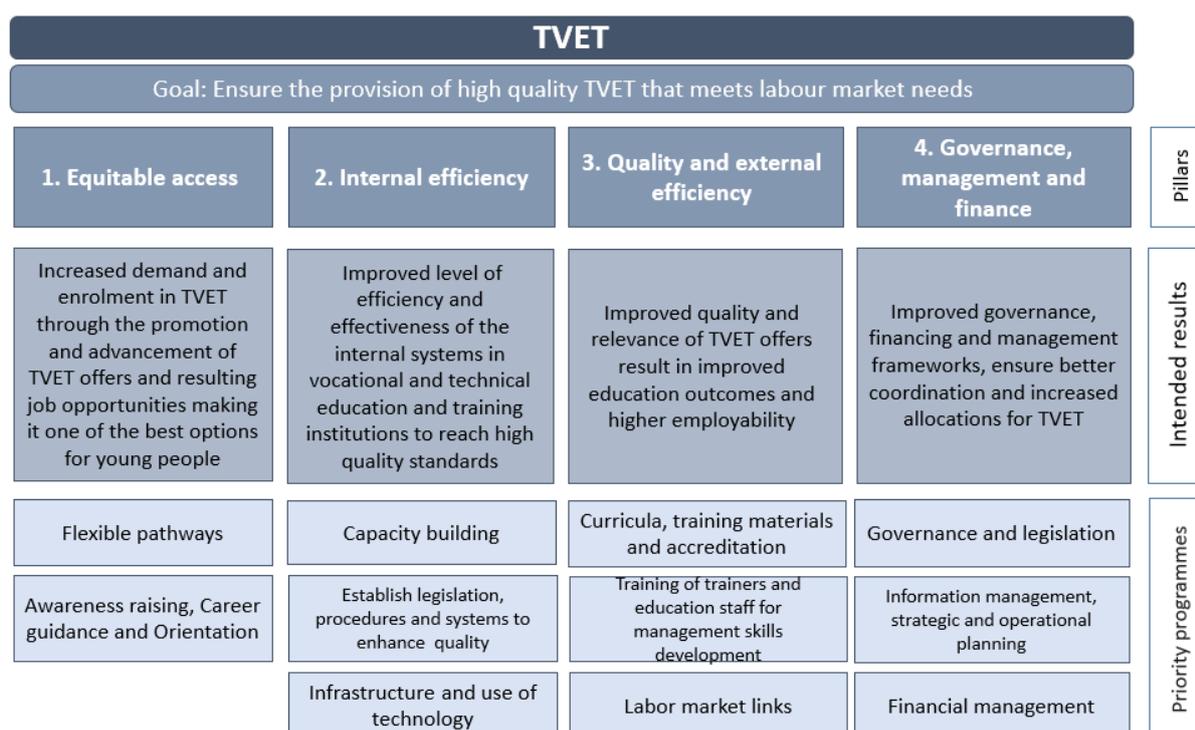
- The capacity of vocational education at the preparatory education level is very small due to lack of demand and supply, with a GER of 2% in 2018/19.
- A sudden increase in demand occurred in the school year 2020/21 increasing the GER to almost 7% due to policy changes that allow students of VSs to enter universities after grade 12. At the first glance this may look like a positive development, however it poses short- and medium-term challenges in terms of the capacity of TVET institutions (both at preparatory and post-secondary stages) to absorb this sudden increase in enrolment in terms of teaching staff and infrastructure.
- Due to capped numbers of institutions, a very small percentage of vocational education graduates enter tertiary technical education in the polytechnic universities and technical universities.
- Low demand for/enrolment in vocational education is driven by the negative perceptions associated with vocational work and low social status of technical professions compared to academic professions. Social factors also lead to lower enrolment among women.
- The absence of an institutional framework to ensure quality of TVET outputs, the unimplemented Technical and Vocational Qualifications Framework (TVQF), outdated curricula and training materials, insufficient training and qualification opportunities for teachers and trainers, and the need to upgrade schools and training centres, contribute to inefficiencies and low quality of TVET offers, which in turn lead to high repetition and dropout rates of students.
- Vocational and technical education institutions are unable to meet the needs of the Iraqi labour market and the socio-economic development needs of the country, including due to

the absence of a strong working relationship between business owners and vocational and technical education and training institutions and the lack of a comprehensive Labour market information system that can guide decision makers, students, and graduates.

- The lack of coordination, insufficient institutional capacity to ensure quality assurance and limited funding with an almost unique reliance on government allocations limit the ministries capacity to effectively manage and supervise reform of the vocational and technical education and training system.

These challenges exist against a preoccupying economic background. Iraq’s unemployment rate stands at 12% (2018), while the youth unemployment rate is 34% (2018). The private sector creates too few job opportunities, and, as a result, the public sector is the first and last resort for job seekers with 40% of all job opportunities. However, the public sector cannot continue expanding. The lack of work opportunities and ensuing despair about the future can feed into violence.

The visual below shows the strategic goal for TVET, its four proposed strategic directions (pillars), their respective intended results and associated priority programmes. Several documents and work processes were key for the development of the TVET section of the INES including the TVET strategy 2014-2023 and the TVQF.



The Government of Iraq is committed to develop and implement a flexible, responsive and demand driven TVET system to address Iraq’s most pressing issues including high unemployment rates especially among young people. To this end, TVET aims to work towards the following policy goals:

- Expand vocational education at preparatory level to accommodate a significantly higher number of students who can enter the labour market after completing grade 12 or access further technical education in higher education institutions, considering the needs of the national economy.

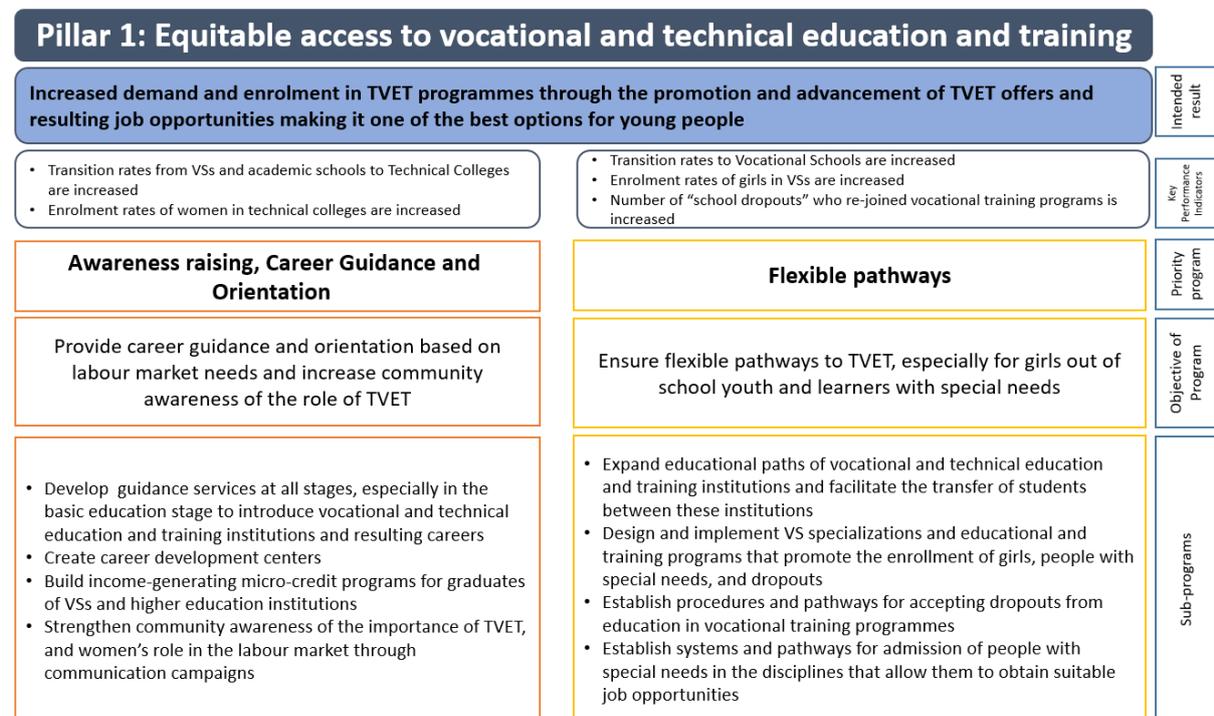
- Offer an attractive alternative to academic specializations, allowing students to either enter the labour market as soon as they complete their training in grade 12 or continue their studies in technical and academic universities.
- Coordination with Ministries and institutions offering non-formal vocational training to offer dropouts, graduates, jobseekers, and in-service workers with life-long learning vocational training offers to enhance their employment opportunities.

The following sections explore each of the four pillars in detail, providing first a theory of change, detailing the objectives of the respective priority programmes and related sub-programmes. Progress towards set objectives are measured through a series of Key Performance Indicators (outcome level indicators) which are shown in the visuals as well as selected output level indicators at the level of priority programmes (see chapter 6 (results matrix) for a full list of indicators per sub-sector).

5.2.1 Pillar 1: Equitable access to TVET

Pillar 1 is made up of two priority programmes contributing to the intended result based on following theory of change:

If career guidance and orientation based on labour market needs is provided to students, and **If** communities are increasingly aware of the benefit of TVET, and **If** students, and especially girls, out of school youth, students with special needs and students at risk of dropping out have access to flexible pathways that facilitate entry into the labour market/lead to better employment opportunities, **then** demand and enrolment in TVET programmes will be increased through the promotion and advancement of TVET offers and resulting job opportunities making it one of the best options for young people.



Awareness raising, career Guidance and Orientation

A key impediment to upscaling TVET is the cautious demand for vocational and technical training offers, which reflects and reinforces the lack of interest in professions based on vocational and technical skills. Pillar 1 includes interventions which aim to increase awareness of the importance of TVET among communities. Undoubtedly, the supply of high-quality and relevant TVET programmes will be key for changing community perceptions. To this end, the INES 2022-2031 aims to create career development centres and provide guidance and counselling services at all stages of students learning trajectory, outlining TVET offers and resulting careers. Income-generating programs such as through micro-credits for graduates of VSs and technical colleagues and universities aim to minimize risks and motivate young entrepreneurs to become self-employed.

Flexible pathways

To increase demand for TVET, educational paths of vocational and technical education and training institutions will need expansion and flexibility. This includes an improved transfer between institutions, allowing students to move easily and readily between different training sectors to increase their skills and qualifications. Improved recognition of qualifications of graduates will also enhance mobility, both nationally and internationally. The TVQF provides the framework in this regard. It is hoped that flexible pathways to TVET provide an opportunity for the many young men and women who have missed out on education and training in the most recent years to develop skills which allow them to work and earn a living and enrich their communities. To make vocational education offers more attractive, the MoE plans to design and implement additional specializations, in response to labour market needs, to attract women, students with special needs and young people who have dropped out of school for different reasons.

5.2.2 Pillar 2: Internal efficiency

Pillar 2 is made up of three priority programmes contributing to the intended result based on following theory of change:

If the infrastructure for vocational and technical education and training is enhanced, and **If** the institutional framework of TVET is strengthened such as through standards for the professionalization of teachers, trainers and supervisors within an approved quality framework, and **If** trainers have increased capacities through in-service professional development, **then** the efficiency and effectiveness of the internal system in educational, training and technical institutions will be improved, and repetition and dropout rates will decrease.

Pillar 2: Internal efficiency

Improved efficiency and effectiveness of the internal systems in educational, training and technical institutions to reach high quality standards

- Training needs for administrative staff and TVET trainers (resulting from annual performance evaluations) are largely met

- Dropout rate decreased at preparatory level VSs and technical Colleges
- Repetition rates at Technical College level decreased

			Intended result
			Key Performance Indicators
Infrastructure	Introduction of quality-enhancing legislation, procedures and systems	Capacity building	Priority program
Enhance infrastructure for vocational and technical education and training (premises, laboratories, playgrounds, classes, Internet)	Strengthen the institutional TVET framework to ensure the quality of education and training and establish a system and standards for the professionalism of teachers, trainers and supervisors within an approved quality framework	Strengthen the capacities of trainers to ensure the continuity of training	Objective of Program
<ul style="list-style-type: none"> • Strengthen central department concerned with the reconstruction, maintenance and rehabilitation of the infrastructure for all technical and vocational education and training institutions (addressing efficiency) • Establish and equip Centers of Excellence in vocational and technical education and training institutions with the participation of business owners to serve strategic sectors 	<ul style="list-style-type: none"> • Update job descriptions for workers in administrative and coordination positions and match with current staff profiles to determine gaps, training needs, etc. • Implement the National Qualifications Framework 	<ul style="list-style-type: none"> • Build the capacities of trainers on distance education and digitize educational content and training 	Sub-programs

Infrastructure

To meet the envisioned increasing demand for TVET, Pillar 1 outlines the need to strengthen the central department concerned with the reconstruction, maintenance, and rehabilitation of TVET institutions and addressing inefficiencies, including related to the location of TVET institutions.

Sectoral Centres of Excellence which emphasise employers' engagement in the provision of TVET, addressing sectoral needs, will present a TVET model that eliminates the prevailing mismatch between supply and demand with a sectoral focus.

Quality-enhancing legislation, procedures, and systems

The Iraq Technical and Vocational Qualifications Framework (TVQF)¹⁸ has been established as a normative and single reference framework covering vocational, technical, and professional education and training that permits the recognition of existing in-country qualifications. The TVQF was officially endorsed by the Iraqi Inter-Ministerial Working Group, the EU and UNESCO in 2018. The qualifications will come into full effect once the draft Law on National Council for TVET is approved. Until then, the framework supports the piloting of new curriculum and competency-based training and assessment. Once activated, the TVQF functions as a structure for the development of all new regulated qualifications and serves as an instrument for the comparison and alignment of international qualifications. The TVQF includes a framework for governing (see Pillar 4) and quality assuring the framework.

Enhancing the management of TVET institutions requires clear roles and responsibilities. Pillar 2 aims to update existing job descriptions of staff in key positions and determine existing gaps in skills and tasks which in turn will help to identify specific training needs.

Capacity building

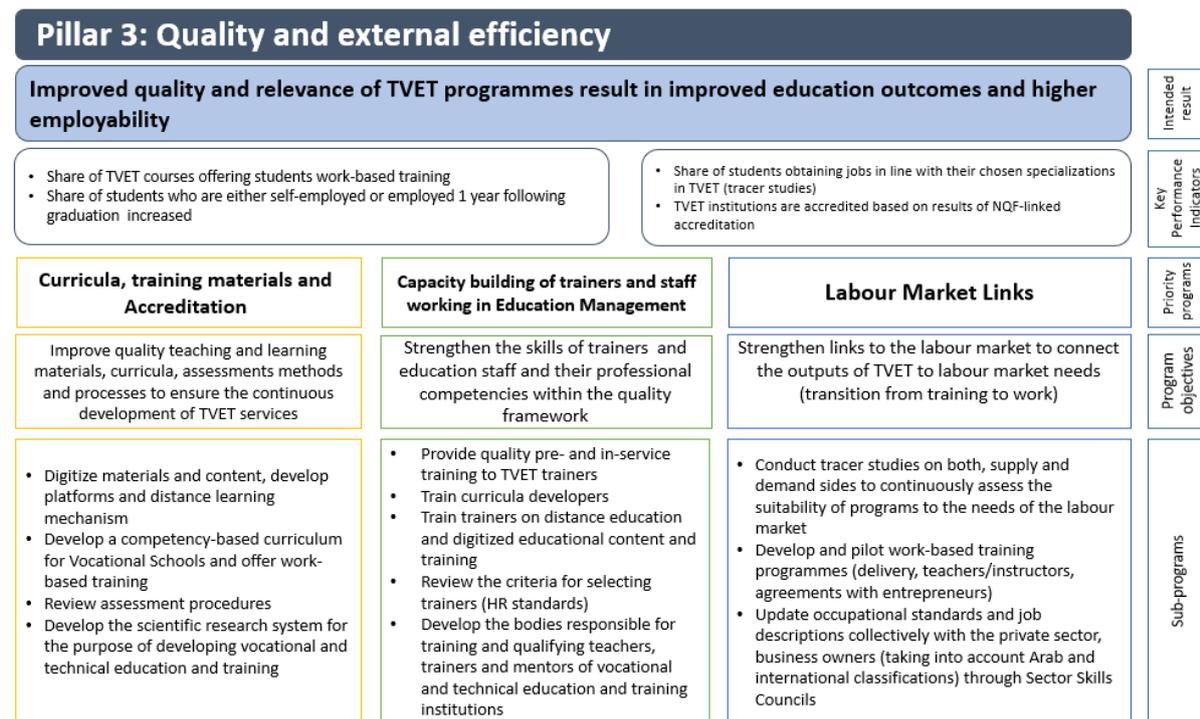
¹⁸ The development of the TVQF was supported by UNESCO with funding from the European Union.

Training of teachers and trainers is a key part of the INES 2022-2031. Under pillar 2, the focus is on strengthening the capacities of trainers on distance/digital/blended learning and the need to digitize educational and training content. The aim is to reach more students through this approach, as shown during the closures of VSs due to COVID-19 related health measures. While digital training offers carry the potential to empower teachers and parents to support learning away from home and to reach more learners, strategies are needed to address increasing disparities in access as evidenced in the digital divide discourse.

5.2.3 Pillar 3: Quality and external efficiency

Pillar 3 includes three priority programmes contributing to the intended result based on following theory of change:

If the quality of teaching and learning materials, curricula, assessment methods and scientific research that informs TVET development is improved, and **If** trainers and education staff have better skills and improved competencies according to quality standards, and **If** links between TVET offers and the labour market are strengthened through connecting the outputs of TVET offers to labour market needs, **then** the quality and relevance of TVET programmes will improve and will result in improved education outcomes and higher employability of TVET graduates.



Curricula, training materials and accreditation

By improving teaching and learning materials, including through updating the curricula, the INES 2022-2031 aims to ensure that TVET offers meet labour market needs. This includes the inclusion of work-based training offers which will allow students to acquire practical skills in partnership with employers. As mentioned in pillar 2, the digitization of training requires an institutionalized approach with well-designed platforms and mechanisms.

Capacity building of trainers and staff working in Education Management

A series of interventions are planned under this priority programme, targeting curricula developers and trainers (through pre- and in-service training). The selection criteria of trainers require a review to ensure the best fit in terms of teaching and professional skills needed. This programme also involves the restructuring and development of existing institutions and departments responsible for the training of teachers and trainers within the different ministries responsible for TVET.

Labour market links

“The relationship between the TVET institutions, the employment sector and labor market institutions is considered a reciprocal relationship and cannot be separated” (TVET strategy 2014-2023). Considerable efforts are needed to strengthen this relationship. Pillar three outlines several opportunities to ensure that the ‘output’ of TVET institutions, concretely skilled women and men are matched to the needs of the labour market which allows for a smooth transition from school/training to work. The expansion of work-based training programmes will be key for this transition. Furthermore, occupational standards and job descriptions will be updated collectively with the private sector, and business owners through Sector Skills Councils while considering Iraqi, Arab and international classifications. Tracer studies that follow graduates will allow decision makers to assess the relevance and effectiveness of programmes based on Labour market needs.

5.2.4 Pillar 4: Governance, management, and finance

Pillar 4 includes three priority programmes contributing to the intended result based on following theory of change:

If the institutional framework for the delivery of quality TVET programs is strengthened, and ***If*** strategic and operational planning capacities including information management is strengthened, and ***If*** financial management is improved allowing for timely and needs-based financial allocations based on strategic and operational plans with a diversified funding portfolio, ***then*** governance, financing and management frameworks are improved and can ensure better coordination and increased funding for TVET.

Pillar 4: Governance, Management and Finance

Improved governance, financing and management frameworks ensure better coordination and increased allocations for TVET

- Higher Council of TVET activated and produces regular recommendations
- TVET Committee under Higher Education Coordination Committee activated and in regular exchange

- Annual budget for TVET increased
- Labour market information observatory established

Governance & Legislation	Strategic and operational planning	Financial management	Intended result
Strengthen the institutional framework for the delivery of quality TVET programs	Strengthen strategic and operational planning capacities including information management for coordinated and effective service delivery	Strengthen financial management to ensure timely and needs-based financial allocations based on strategic and operational plans with a diversified funding portfolio	Key Performance Indicators
<ul style="list-style-type: none"> • Issue legislation of a unified law for the governance of vocational and technical education and training, and the activation of the National Qualifications Framework • Allow for private sector financing for TVET through legislation and laws (tax deduction, special allocations) • Issue legislation for private sector participation in technical and vocational education and training (establishing sectoral skills councils) 	<ul style="list-style-type: none"> • Establish a labour market information observatory in collaboration with MoHESR, MoLSA and other selected ministries, private sector representatives, other partners • Establish a Higher Council of TVET to ensure effective coordination, policy development and aligned implementation across sectoral ministries as issued in the proposed law for Higher Council of TVET 	<ul style="list-style-type: none"> • Allocate financial resources directed to vocational and technical education and training institutions according to annual financial plans • Apply the program and performance balancing method instead of balancing items • Establish a fund to finance and support vocational and technical education and training institutions to quickly respond to the needs of the labor market • Diversification of funding sources. 	Priority programs
			Program objectives
			Sub-programs

Governance & legislation

The Law on National Council for TVET which awaits approval by the Council of Ministers and the Parliament will be the starting point for new institutional arrangements. This also includes the above-mentioned Iraq Technical and Vocational Qualifications Framework (TVQF) which will come into full effect once the draft Law on National Council for TVET is approved. Further legislation is needed to incentivize private sector participation in TVET such as through Sectoral Skills Councils.

Strategic and operational planning

The National TVET Council which will be established once the draft Law on National Council for TVET is approved (see process outlined above), will be tasked to manage, coordinate, and ensure the quality of the development of a TVET system that responds to labour market needs. Coordination and collaboration between the respective ministries tasked to provide TVET is a pre-condition for the success of Iraq's ambitious agenda to transform TVET into a key driver of Iraq's economic growth, and employment and consequently contributing to social cohesion. Under the auspices of the National TVET Council, a Vocational Qualifications Department will be established. The department will be responsible for the implementation of the TVQF.

With the joint establishment of the labour market information observatory, ministries and private sector partners will be able to identify and analyse market trends and challenges while the Iraqi TVET sector and the labour market is undergoing a profound transformation in its structures, mechanisms, and relations. Key thematic areas for analysis will include topics such as the future of work and skills, private sector labour needs and vacancies, occupational outlooks, youth unemployment, the effects of digitalisation and greening of the economy on employment and skills as well as labour mobility.

Given the need for extensive sources to establish and maintain an effective observatory, pillar 4 foresees a close collaboration between key stakeholders. This collaboration and coordination are equally needed when informing policy changes based on evidence resulting from work the observatory.

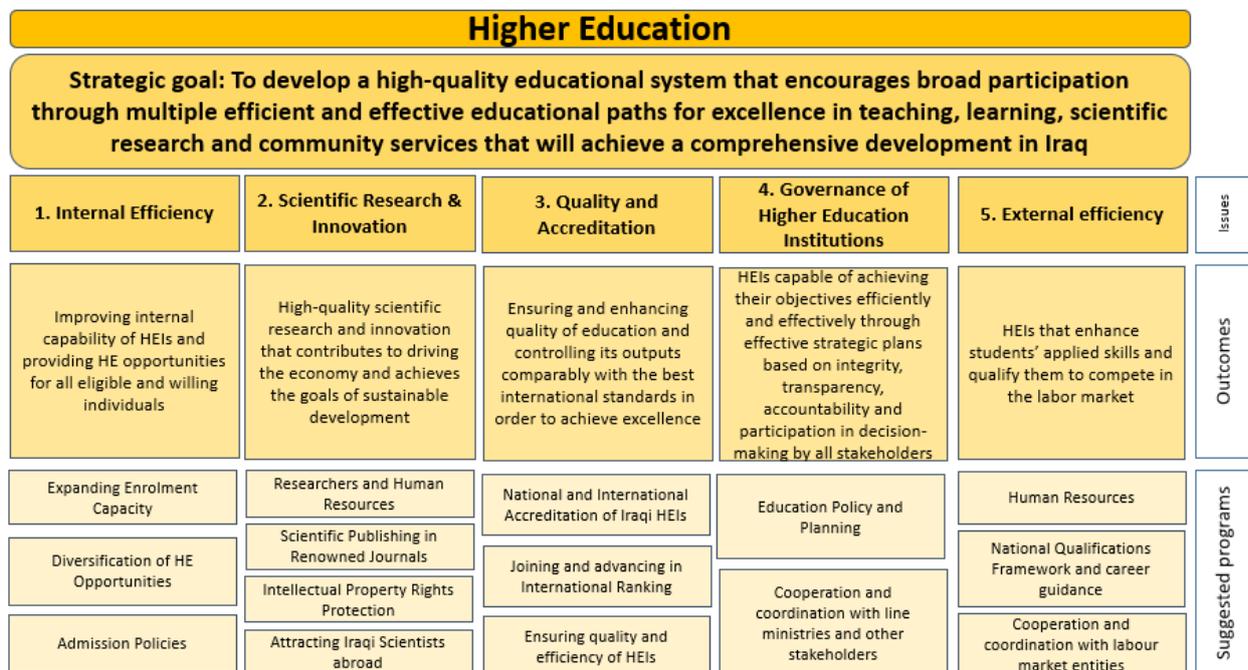
Financial management

The government financing source for TVET institutions is within the central investment and operational budget of the federal state as TVET institutions are not part of governorate authorities. At a much smaller scale, some institutions can self-finance some of their offers through production activities. Pillar 4 proposes several actions to improve the financial management of TVET services to ensure timely and needs-based disbursement of budgets but also to diversify the current funding portfolio. This includes the creation of a training fund (or levy) which will allow employers to contribute with a percentage of their payroll bill for the TVET sector to respond to the direct needs of these employers in a sustainable manner. The existence of a clear strategy for upscaling TVET is hoped to generate external funds by amplifying the Government of Iraq's intentions and readiness to strengthen TVET.

5.3 Higher Education and Scientific Research

The INES 2022-2031 recognizes the importance of higher education to achieve its sector goals. Its organization requires close coordination and alignment with the Ministry of Education which is responsible for pre-university education and universities in Iraq. Despite key improvements in the provision of higher education, technical and academic university education is insufficiently oriented towards the socio-economic development of the country. As mentioned in section 4 of this chapter, Iraq’s unemployment rate stands at 12% (2018), though youth unemployment is much higher with 34% of young people being unemployed (2018). The lack of work opportunities leaves university graduates with a bleak future.

The visual below shows the strategic goal for higher education sector, its five proposed strategic directions (Issues), their respective intended results and associated priority programs.



The Government of Iraq is committed to develop and implement a flexible, responsive and demand driven higher education system to address Iraq’s needs for economic development. To this end, higher education aims to **develop a high-quality educational system that encourages broad participation through multiple efficient and effective educational paths for excellence in teaching, learning, scientific research, and community services that will achieve a comprehensive renaissance in Iraq.**

More concretely, the INES 2022-2031 aims to:

- Provide higher education opportunities based on demand and labor market requirements.
- Upgrade quality of higher education system components resulting in quality graduates.
- Enhance graduates applied skills relevant to local and regional labour market needs.
- Ensure a sustainable funding model for Iraqi Universities.
- Ensure flexible and accountable, transparent, and well-integrated higher education systems; and

- Ensure quality scientific research.

The following sections explore each of the five Issues in detail, providing a theory of change, detailing the objectives of the respective priority programs and related sub-programs. Progress towards set objectives are measured through a series of Key Performance Indicators (outcome level indicators) which are shown in the visuals as well as selected output level indicators at the level of priority programs (see chapter 6 (results matrix) for a full list of indicators per sub-sector).

5.3.1 Issue 1: Internal Efficiency

Issue 1 includes three priority programs contributing to the intended result based on following theory of change:

If more higher education institutions are established with diverse types and programs, and **if** admission policies are reformed, **then**, better access and internal efficiency is to be achieved with higher enrolment capacity for all those willing and well qualified, as shown in the following diagram:

Issue	Issue 1: Internal Efficiency		
Purpose	Improving internal capability of higher education institutions and providing higher education opportunities for all eligible interested persons		
Goals	1. Developing the absorptive capacity of education institutions	2. Variety in higher education patterns and programs	3. Developing university acceptance policies
Options	<ol style="list-style-type: none"> Expansion by creation of specialized universities and colleges and expansion of existing universities. Developing private educational institutions through the opportunities which meet labor market needs and geographical and spatial distribution. Engaging in complementary partnership for cultural exchange with developed countries which provide scholarships and fellowships to Iraqi students in the rare specializations in postgraduate studies. 	<ol style="list-style-type: none"> Gradual adoption of various internationally accredited educational systems for some of the leading government universities for the purpose of assessment and transition towards globalization for the Iraqi students in rare specializations in postgraduate studies. Accreditation and consolidation of electronic and integrated education in Iraqi universities. Supporting and developing continuing education centers and programs. 	<ol style="list-style-type: none"> Reviewing and amending the legislations governing the acceptance of students in universities in a way that ensures the provision of just opportunities to all student interested and qualified for acceptance in the suitable specializations and other legislations. Increasing the rate of students in the undergraduate and postgraduate studies relating to school systems.
Objective Measurement Indicators	<ol style="list-style-type: none"> The number of newly created and specialized universities and colleges, and the rate of expansion in existing universities. The number of private educational institutions that meet the labor market needs and the geographical and spatial distribution. The number of integrative partnerships of cultural exchange with developed countries that provide scholarships and fellowships to Iraqi students in rare specializations for postgraduate studies. 	<ol style="list-style-type: none"> The number of globally accredited educational systems in leading government universities. The number of Iraqi universities that have integrated, accredited and solid electronic education. The number of developed continuous education centers and programs. 	<ol style="list-style-type: none"> The number of legislations governing the acceptance of students in universities which have been reviewed and amended. The amount of increase in the rate of students enrolled in undergraduate and postgraduate studies.
Objective Measurement Indicators	First Option <ol style="list-style-type: none"> Establishing specialized scientific universities concerned with technological, health and applied sciences that meet the requirements of the labor market. Creation of technical colleges/institutes affiliated with technical universities in cities and large districts, according to regulations. Increasing the absorptive capacity of all existing universities, both vertically and horizontally. Completion of projects prepared for new/young universities. Completion of the process of rehabilitation and construction of the educational institutions affected by terrorist operations. Developing scientific laboratories, specialized workshops and research centers consistently with the planned increases in the number of students annually accepted according to the needs of the labor market and development in specializations. Coordination with the relevant authorities to find solutions to land-title real estates to the Ministry of Higher Education. Holding cooperation and partnerships with local government institutions (Ministry of Health, Ministry of Agriculture, Ministry of Oil, etc.) to support the relevant specializations and the labor market. Coordination with international donors (governments and institutions) and national support to establish a support fund for higher education under the title "Establishment of Iraqi educational university city". Preparation of programs for the proficient use of the available resources to universities, including study rooms, laboratories and human resources in terms of timings and study hours. 		

5.3.1.1 Enhancing enrolment capacity of HEIs

A key driver for enhancing the capacity of HEIs is to establish new universities and higher education institutions of different types, in various geographic locations as well as new programs of study and fields of specialisations that respond to the needs for development of Iraq. This includes expansion of both, public and private higher education institutions with special attention to areas with destroyed or dilatated infrastructure. Collaboration with development partners is needed in the establishment of a fund that supports higher education sector development, including the establishment of an education and innovation city and similar new models of higher education institutions. These strategies are aligned with the governance and finance Issue where coordination is needed with relevant ministries and local authorities to ensure the allocation of land and properties.

5.3.1.2 Diversifying types and programs of HEIs

Introduction of new modes of learning and specialisations is to rely on good international practices and a piloting phase with assessment and impact studies to ensure effective implementation and relevance according to objectives set in national development plans. A scholarship plan is included to support the creation of the human capital needed to run programs in new fields of specialisations (artificial intelligence, mechatronics, and nanotechnology for example) since there is a significant shortage in these fields at Iraqi universities. Lifelong learning and continuing education, eLearning and distance education are other foreseen strategic options for increasing access to higher education system and flexibility of admission and enrolment, hence, the strategy capitalises on formalising and recognition of these modes of learning to be well integrated into the higher education system in Iraq.

5.3.1.3 Reforming University-level admission policies

There is a need to update and reform admission policies for higher education which consider other admission factors besides grades obtained at the preparatory level. A university admission exam is to be introduced to assess students' relevant competencies that allow access to required specialisations. This requires further and strengthened coordination with the MoE to ensure integration in the science and humanities tracks as well as opening pathways for graduates of Vocational Schools. To improve equitable access to higher education institutions, the MoHESR also aims to admit or re-admit candidates with training and work experience following secondary education.

5.3.2 Issue 2: Scientific Research and Innovation

Issue 2 aims to achieve a quality scientific research and innovation system that contributes to sustainable development including as outlined in Sustainable Development Goals. Issue 2 is made up of four priority programs contributing to the intended result based on following theory of change:

If competencies and skills of Iraqi researchers are upgraded in order to increase their research productivity, and **if** funding for research is provided for the purpose of scientific publishing at renowned academic journals while protecting intellectual property rights of universities at Iraq, and **if** Iraqi scientists find an attractive research context that makes them return to their country **then**, high quality research is to be produced, leading to innovation and economic development, as shown in the following diagram:

Issue	Issue 2: Scientific Research and Innovation			
Purpose	High-quality scientific research and innovation that contributes to driving the economy and achieves the goals of sustainable development			
Goals	1. Developing the skills of researchers in the Iraqi universities and increasing their high-quality research productivity	2. Funding scientific research to upgrade international publication in high-profile world databases	3. Protecting intellectual property rights in Iraqi universities	4. Attracting Iraqi scientists from abroad
Options	<ol style="list-style-type: none"> 1. Providing an environment that supports scientific research in Iraqi universities. 2. Developing cooperation mechanisms in the field of scientific research between Iraqi universities and their peers outside Iraq. 3. Developing the skills of researchers. 4. Developing the work of research centers and mechanisms of providing research services to all institutions. 5. Enhancing the requirements of scientific research. 6. Adopting and developing scientific research methodology in Iraqi universities. 	<ol style="list-style-type: none"> 1. Increasing the rates of funding of scientific research. 2. Allocating a certain rate of the annual financial budget for scientific research. 3. Establishing research academies and centers in various scientific specializations. 4. Encouraging authentic international publication. 5. Supporting Iraqi scientific journals to obtain accreditation in high-profile databases. 	<ol style="list-style-type: none"> 1. Applying the legal procedures relating to the protection of the rights of publication and authoring. 2. Reducing the violation of the rights of intellectual property and plagiarism. 	<ol style="list-style-type: none"> 1. Targeting rare and new scientific specializations. 2. Determining material and moral privileges for returning scientists. 3. Legislating regulations and instructions to ensure the rights of returning scientists, and encouraging high-profile international publication. 4. Determining the funding budget for the work of returning scientists.
Objective Measurement Indicators	<ol style="list-style-type: none"> 1. The extent of providing a supportive environment for scientific research in Iraqi universities 2. The number of Iraqi universities that have developed cooperation mechanisms with their counterparts outside Iraq 3. The number of researchers whose research skills have been developed 4. The number of centers which have been developed to provide research services to other institutions 5. The extent of enhancing the requirements of scientific research in higher education institutions 6. The extent of developing scientific research methodology in Iraqi universities. 	<ol style="list-style-type: none"> 1. The increase in the rates of funding of scientific research. 2. The existence of a determined rate from the annual financial budget for scientific research. 3. The number of research academies and centers which have been established in various scientific specializations. 4. The number of research papers published in high-profile scientific journals. 5. The number of Iraqi scientific journals which have acquired accreditation in high-profile databases. 	<ol style="list-style-type: none"> 1. The extent of applying the legal procedures relating to the protection of publication and authoring rights. 2. The extent of decrease in the number of violations of intellectual property and plagiarism. 	<ol style="list-style-type: none"> 1. The number of Iraqi scientists in rare and new scientific specializations who are returning from abroad. 2. The material and moral privileges determined for Iraqi scientists returning from abroad. 3. Issuing regulations and instructions to ensure the rights of Iraqi scientists returning from abroad. 4. The extent of allocation of a funding budget for the work of Iraqi scientists returning from abroad.

5.3.2.1 Upgrading Research Skill of Iraqi researchers and increasing quality scientific productivity

Research skills are the main pre-requisite to produce quality scientific research, in addition to the provision of basic means of scientific research including the improvement of research infrastructure, and the provision of quality research facilities and equipment. Quality Scientific research can then respond to the needs of the industry. This requires more funding for research in collaboration with the industry.

5.3.2.2 Funding of Research for Publishing at Renowned Academic Journals

Increasing funding allocated to scientific research is expected to lead to quality research productivity such as through improved access of researchers to international knowledge resources and databases. This in turn will enable researchers to publish at internationally reviewed journals recognizing quality research aspired by Iraqi universities. To this end, policy reforms will be introduced to ensure adequate levels of funding for research in collaboration with industry.

5.3.2.3 IPR Protection for Universities at Iraq

Protecting intellectual property rights of universities at Iraq is another critical requirement for enhancing research productivity and return on investments. Law enforcement of intellectual property rights (IPR) protection and reforming IPR registration procedures are critical interventions in this regard.

5.3.2.4 Incentivising Iraqi Scientists abroad to return to Iraq

The war against terrorism resulted in considerable brain drain with hundreds of Iraqi scientists leaving the country. It is hoped that enhancing the research context and environment at Iraqi universities will incentivise Iraqi scientists to return to universities and research centres in Iraq

contributing to quality research production. Special focus is to be placed on rare and modern fields of specialisations required for the successful implementation of Iraq's vision outlined in the Iraq National Strategy 2030.

5.3.3 Issue 3: Quality and Accreditation

Issue 3 aims to ensure and enhance educational quality and control over its outcomes in accordance with the best international quality standards for excellence. Issue 3 includes three priority programs contributing to the intended result based on following theory of change:

If more higher education institutions can get national and international academic accreditation to assure quality and improve effectiveness of higher education services, and *if* Iraqi universities can engage in international university ranking systems and league tables and consequently achieve an advanced position, *then*, higher education produces better learning outcomes, as shown in the following diagram:

Issue	Issue 3: Quality and Accreditation		
Purpose	Ensuring and enhancing educational quality and controlling its outputs consistently with the best international standards in order to achieve excellence		
Goals	1. Achieving national and international academic accreditation by higher education institutions	2. Entry of higher education institutions into university classifications and achieving advanced positions in them	3. Quality assurance and improving the effectiveness of higher education institutions
options	<ol style="list-style-type: none"> 1. Completing the building of national accreditation system. 2. Higher education institutions obtaining of national and global institutional accreditation for all major specializations. 3. Obtaining program accreditation by academic programs in scientific departments 	<ol style="list-style-type: none"> 1. The entry of higher education institutions into important and approved world classifications. 2. Creating a spirit of competition and promoting the culture of distinction among universities. 	<ol style="list-style-type: none"> 1. Developing curricula, students' skills, methods of teaching and learning, assessment and evaluation. 2. Upgrading the quality of electronic education. 3. Improving the quality of educational laboratories. 4. Distinguished, trained and developed human resources. 5. Controlling the quality of the educational process according to inputs and outputs.
Goal Measurement Indicators	<ol style="list-style-type: none"> 1. Extent of completion of the national accreditation system for the major specializations. 2. The number of higher education institutions which have national and international institutional accreditation. 3. The number of academic programs which have program accreditation. 	<ol style="list-style-type: none"> 1. The number of higher education institutions included in the important and approved world classifications. 2. The number of universities competing for entry into national and world classifications. 	<ol style="list-style-type: none"> 1. The Number of curricula, methods of teaching and learning, assessment and evaluation which have been developed and updated. 2. Extent of development in the quality of electronic education. 3. The number of educational laboratories whose quality has been improved. 4. The number of human resources who have been trained and developed. 5. The extent of control of the educational process according to inputs and outputs.
objective 1 Programs	First Option Completing the plan and criteria of national accreditation councils. Describing the accreditation procedures system and developing indicators, criteria and tools of assessment and measurement. Rehabilitating national evaluators within the measurement and evaluation system to match the criteria. Approval of the national accreditation plan.	Second Option <ol style="list-style-type: none"> 1. Creating the Independent National Commission of Quality and Academic Accreditation. 2. Applying the criteria of national institutional accreditation in higher education institutions. 	Third Option <ol style="list-style-type: none"> 1. Applying the criteria of specialized accreditation for all the scientific departments and their academic programs in all Iraqi public and private universities.

5.3.3.1 National and international academic accreditation

Options adopted in this goal focus on resuming the establishment of a national accreditation system. HEIs will be able to apply for national and international accreditation in all academic disciplines as well as for specific academic programs. To this end, national academic reference standards for each academic discipline will be developed. Furthermore, the development of a comprehensive data system including standards and indicators is an integral requirement that will guide decisions about quality assurance and accreditation.

5.3.3.2 International university ranking systems and league tables

Iraqi universities are urged to engage in international university ranking systems, hence, creating a competitive higher education ecosystem that drives excellence and continuous improvement through national and international benchmarking. Issue 3 will provide support

to universities to increase their readiness to engage in international university ranking systems, including through financial allocations needed for subscription fees, etc. Within the strategy period, the MoHESR aims to improve the ranking position of Iraqi universities in international league tables.

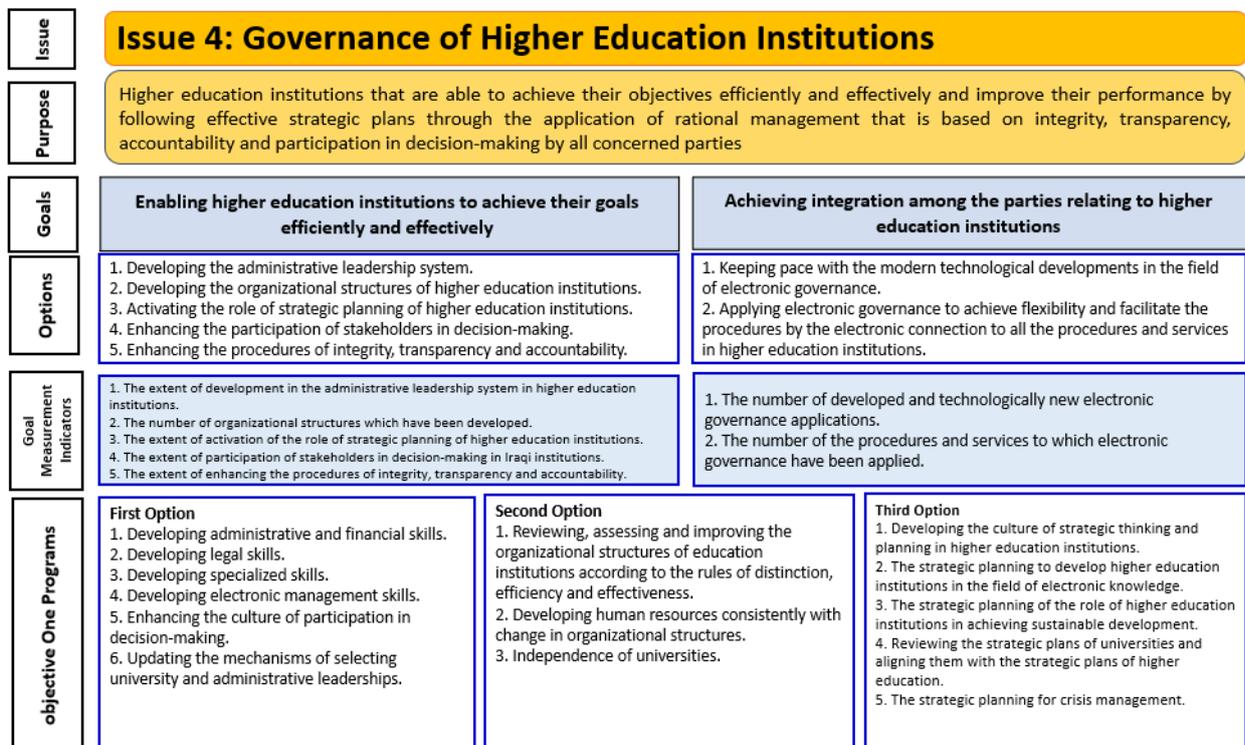
5.3.3.3 Quality Assurance and improving HEIs effectiveness

Issue 3 plans for the development of curricula and improvement of new and existing university programmes and academic disciplines including modes of delivery that integrate e-learning and blended learning. Capacities of teaching and administrative staff, physical resources in the form of infrastructure, laboratories and learning resources will be strengthened while giving priority to safety and security standards and measures. Quality assurance of both, inputs, and outputs, will be ensured by the academic supervision division at the MoHESR or the quality assurance agency to be established.

5.3.4 Issue 4: Governance of Higher Education Institutions

Issue 4 aims to enable higher education institutions to achieve their goals efficiently and effectively by improving their performance through strategic plans that follow transparent, participatory, and accountable goals. Issue 4 includes two priority programs contributing to the intended result based on following theory of change:

If the governance and finance system of HEIs is improved, and **if** Iraqi universities can engage all stakeholders, **then**, higher education institutions are empowered to achieve their goals in an effective and efficient way, as shown in the following diagram:



5.3.4.1 Leadership support

Iraqi higher education institutions will be empowered through the enhancement and support of university level leadership structures, while engaging stakeholders in the decision-making

process through a well-structured university strategic plan that caters for transparency, accountability, and integrity. The professional development of university staff in leadership and management skills, establishing electronic management information systems on the national and institutional levels, and the reform of leaders' recruitment and selection systems will be programmes adopted by the strategy for this purpose.

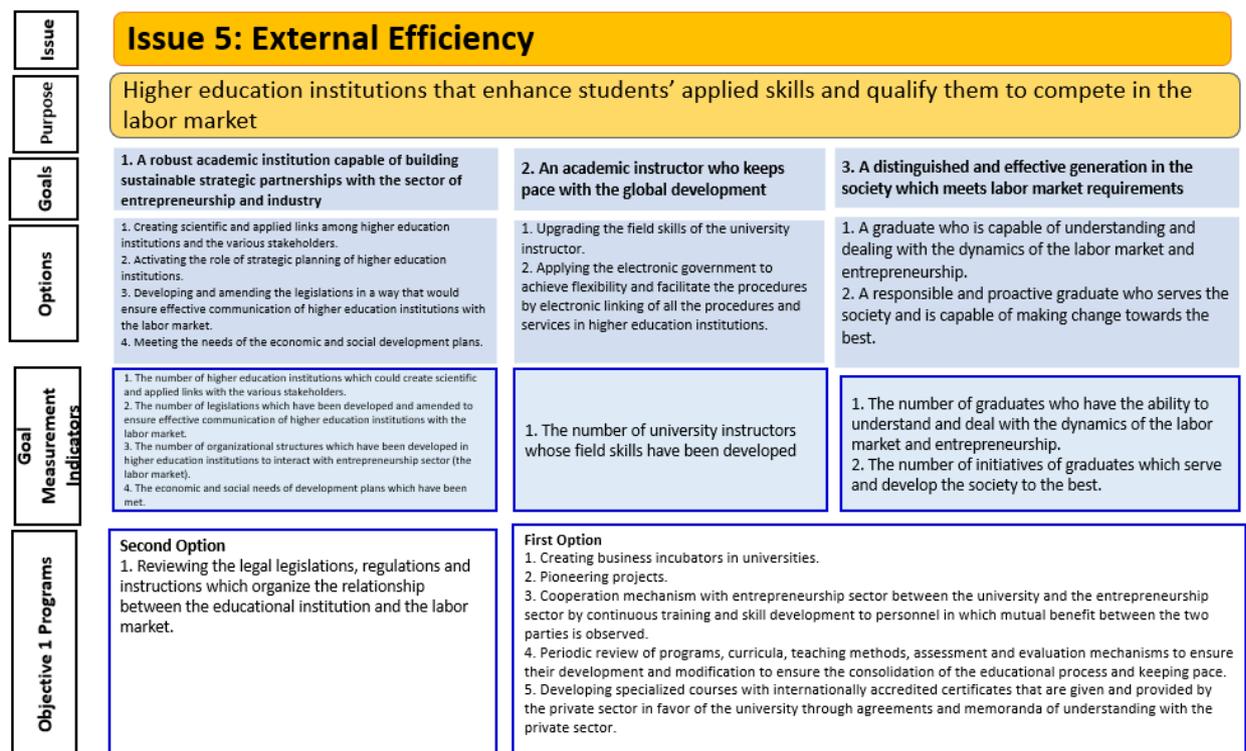
5.3.4.2 Integration

Periodical mapping of internal and external stakeholders, their engagement in institutional boards at the levels of academic departments, faculties, and university and sharing of outcomes of their involvement are the primary areas this option is focusing on. A set of outcome indicators will be adopted to ensure stakeholders active and meaningful participation in the governance of Iraqi higher education institutions.

5.3.5 Issue 5: External Efficiency

Issue 5 aims to enhance students' applied skills that enable them to compete at the labour market. Issue 5 includes three priority programs contributing to the intended result based on following theory of change:

If higher education institutions can establish solid partnerships with the industry, and *if* university professors can integrate global advancements in their teachings, and *if* graduates can better respond to labor market and society needs *then*, employability of higher education graduates is improved, as shown in the following diagram:



5.3.5.1 Sustainable partnerships with Labour market and Industry

Sustainable partnerships with the labour market and industry are key in strengthening external efficiency and relevance of higher education. This requires comprehensive labour market

information to inform higher education policies, planning and teaching as well as strengthened scientific and applied links between higher education institutions and various business entities.

5.3.5.2 Professional development

Continuous professional development on global advancements will enable teaching staff at universities to ensure that academic courses are linked to real-world problems, teaching student's relevant knowledge and skills applicable in the labour market but also to contribute to the development of industry and hence create win-win partnerships.

5.3.5.3 Higher education outputs respond to labor market needs

This option enables higher education institutions to address emerging skills gaps and compete in a rapidly changing world by strengthening students' skills and creating strong links with business entities. An integral part of this option is the development of a national qualifications' framework (NQF) that supports integration of professional experience into credentials of learners. The establishment of the labour market observatory in cooperation with other line ministries (see also section 4 TVET in this chapter) is a mechanism to continuously observe and evaluate labour market needs and job requirements. Close collaboration and coordination with general education and TVET stakeholders is a success indicator for this option.

Chapter 6. Cost and Financing

This chapter presents the associated costs and resources required to implement the Iraq National Education Strategy 2022-2031 and achieve its key policy targets. In preparation of the INES, three quantitative scenarios were developed and discussed. The three scenarios¹⁹ anticipate different levels of education achievements and then project the human and physical resources required to accommodate the expected enrolments at the general education, TVET, NFE and higher education levels. The third and chosen scenario was developed during a face-to-face workshop held in September 2021 in Erbil, involving key technical and decision-making staff from MoE, MoHESR and MoP. The projected costs of the third scenario amplify an ambitious, yet realistic and holistic development of the education system over the next 10 years through strategic investments aimed at improving equitable access to and quality of education and addressing inefficiencies of the education system.

The chapter begins with introducing the Iraq Simulation model, then outlines the criteria used for the simulation, the macro-economic framework, and is followed by a detailed description of cost implications of agreed policy targets. The chapter concludes with a discussion of financing gaps.

6.1 The Iraq Education Simulation model

The Iraq Education Simulation model is an Excel tool that has been used to create quantitative scenarios for the development of education and assessing the financial and human resource consequences of the education objectives set out in the Iraq National Education Strategy 2022-2031. The model includes:

- projections of enrolment, based on demographic projections and specific access and efficiency objectives (gross intake ratios, repetition rates, etc.).
- projections of teaching and non-teaching staff, classrooms, learning materials and other resources required to accommodate the projected number of students.
- projections of key operational²⁰ costs occurring within the National School Feeding programme, school grants for all public KG, primary and secondary schools, the provision of scholarships in preparatory and higher education, and the inclusion of learners with special needs; and
- projection of the financial resources required.

Education data within the model are official data from the Central Statistical Office of the Ministry of Planning. Financial data were taken from the MoF Open Budget Survey website and from the World Bank's Public Expenditure Review undertaken in 2020. Additional macroeconomic data (GDP and GDP growth rates) were obtained from the IMF online database. The Ministry of Planning provided information on macro-economic data which however was limited to 2019 and very similar to IMF

¹⁹ The first scenario reflects no major changes to the education system development and can therefore be considered as 'business as usual'. The second scenario works on the assumption that strategic policies and sub-sector strategies will be implemented, specifically regarding improving access, internal efficiency, and quality of education services from KG to higher education in Iraq. A policy note was prepared to present scenario 1 and 2 as a basis of discussion for the development of scenario 3. Scenario 3 which is the adopted scenario for the INES 2021-2031 results from trade-off discussions based on scenario 2 between the MoE, MoHESR and MoP and ensures alignment between the three sub-sector and careful consideration of technical, financial, and human capacities to implement the identified priority programs.

²⁰ According to terminology used in Iraq, 'operational' costs are equivalent to 'recurrent' costs.

projections. Reference made in this chapter as throughout the strategy document to ‘Iraq’ is equivalent to Iraq Centre, excluding the governorates of Erbil, Sulaymaniyah and Dohuk. Tables and graphs presented in this chapter are directly issued from the Iraq Education Simulation model. The official projections from the CSO, which apply a constant annual growth rate of 2.6% to 2.7% have been used as the demographic framework for the INES 2022-2031²¹. Per these projections, the overall school age population is expected to increase by around 27% over the period 2021-2031 period, amounting to almost 20 million children and youth age 4 to 22. The table below includes the population projections by schooling age-group.

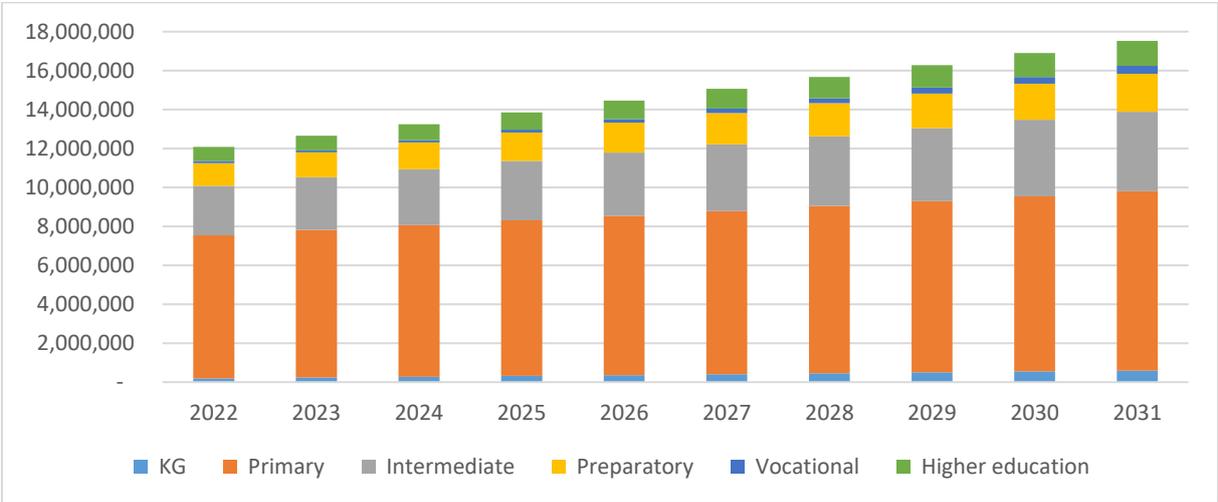
Table 6. Population projections by schooling age group, in hundred thousand, 2021-2031 projections

Age group	2021	2031
		(end of INES)
age 4-5 (KG)	2 119	2 695
age 6-11 (primary)	5 661	7 200
age 12-14 (intermediate)	2 527	3 214
age 15-17 (preparatory)	2 346	2 984
age 18-22 (higher education)	2 847	3 621
Total	15 500	19 713

Source: CSO

The INES 2022-2031 projects a steady increase in enrolment over the 10-year period of the strategy as shown in the graph below. The total number of enrolled learners in pre-university education in 2031 amounts to around 16.2 million compared to 11.4 million at the start of the INES (2022). Enrolment in higher education grows from 729,000 students in 2022 to 1.3 million in 2031.

Figure 13. Enrolment projection, 2022-2031 per education level



Source: Iraq Simulation Model, 2021

Key reforms within the INES 2022-2031 are projected to start in 2022 with a gradual improvement of key education parameters in the first five years of the strategy. The assumption is that many regulatory and policy frameworks need to be put in place first before effective change such as in enrolment, repetition, drop out etc. can be observed. Key regulations concerned with teacher recruitment and allocation, and infrastructure should be addressed in the initial phase of the strategy (2022-2025). Annual salary increase is projected to start in 2025. Non-salary operational expenditures including in-

²¹ The last full population census was conducted in 1997.

service teacher training, provision of teaching and learning materials, school feeding, school grants are projected from the very start of the strategy.

6.2 Targets and hypotheses used for the simulation

The cost of INES 2022-2031 depends primarily on its key policy objectives, which are translated into specific intake and internal efficiency targets as part of the Government of Iraq's overall vision for sustainable development. The INES 2022-2031 defines several key targets as outlined below:

- Increase school readiness among pre-primary children by increasing enrolment from 10.7% GER (2018/19) to 30% by 2031, including through increasing the share of private provision of KG to 25%.
- Ensure universal completion of primary education by 2025 compared to around 83% in 2018/19.
- Ensure universal completion of intermediate education by 2028 from around 62% in 2018/19.
- Increase GER for preparatory education (academic) to reach 68%/66% (male/female) by 2031 from 47%/46% in 2018/19.
- Expand vocational education at preparatory level to accommodate a significantly higher number of students (GER 14%/13% by 2031 compared to 7%/3% in 2018/19) who can enter the labour market after completing grade 12 or access technical training in higher education, considering the needs of the national economy.
- Ensure a controlled expansion of higher education with 82% of academic preparatory graduates (compared to 100% in 2018/19) and 50% of Vocational preparatory graduates projected to enter universities and colleges by 2031, while keeping current levels of private provision at 25%.
- Improve teaching and supervision conditions by reducing class sizes in KG and primary education (from 64 to 30 at KG, from around 40 to 35 at primary), keeping class sizes of 35 students at secondary level but increasing class sizes at Vocational Schools to 30.
- Increase the number of students participating in non-formal education programmes from approximately 70,000 to 300,000; and
- Improve internal inefficiencies by regulating repetition, reducing the teacher class ratio, applying new teacher allocation regulations, and increasing the number of teaching hours.

Funding is also provided for the establishment of several programmes²² aiming at reducing disparities in access to education in terms of gender, disability, displacement, location, and poverty and improving the quality of education. This includes:

- Gradual increase of provision of school feeding to all pupils of public primary schools by 2030 and of the most vulnerable children attending pre-primary education (25% of all children attending KG by 2031)¹
- Provision of school grants as part of the school-based development programme²³ to all public KG, primary and secondary schools from 2022 onwards. School grants are projected at a unit cost per student of 2,000IQD for primary and secondary schools and 6,000IQD for Vocational Schools. The unit cost is based on number of students per school. School grants do not replace other operational non salary items such as textbooks, in-service teacher training, school feeding etc.
- Provision of textbooks²⁴ in primary school (3 per student for G1-3, 7 for G4-6), intermediate level (5) and preparatory level (5) and a set of learning materials for vocational education.
- Provision of scholarships to reach 2% of all students in preparatory and 5% of all students in higher education.

²² The exact scope of these programs, their content, and the expected results will be defined in the three-year operational plans resulting from the INES 2021-2031.

²³ Reflected in the simulation model as non-salary recurrent expenditures

²⁴ The assumption is that the government pays only for core textbooks.

The description of the pillars and priority programmes per sub-sector (see chapter 5) highlights how these key objectives will be achieved. Related policy targets are described in chapter 7 (Results matrix).

6.3 The macro-economic framework for the INES 2022-2031

Over the past decade, education spending as a share of total government expenditure and GDP, has seen a steady decline. In 2019, education in Iraq centre received only 9.7% of total government spending compared to 13.6% in 2016. While 5.1% of the government expenditure as a share of GDP went to education in 2009, 10 years later only 3.9% of GDP was allocated to education (WB, 2021). Within the region, Iraq falls significantly behind the MENA average of government spending on education (14%) and fails to meet the minimum international benchmarks for public education financing as per the Education 2030 Incheon Declaration which calls for at least 4 to 6% of GDP and/or at least 15 to 20 % of the total expenditure to education to work towards the Sustainable Development Goal 4. The World Bank estimates that the total amount of government spending in Iraq Centre in 2019 was 10.8 trillion IQD.²⁵

The nature of education spending is heavily skewed towards operational expenditures, most notably wage bill expenditure. Of the estimated 10.8 trillion IQD spent on education in 2019, 93% went to wages, leaving little room for non-personnel operational expenses (4.7% in 2019) and capital investment (2.4% in 2019).²⁶ Investment in capital expenditures, such as in building and rehabilitating schools has been chronically under-resourced in Iraq, aggravating the need for safe and learning conducive school buildings following years of destruction and neglect. In 2019, after two years of virtually no investment budget expenditure, the MoE's investment budget amounted to less than 24 billion IQD. The MoHESR accounted for less than 4% of education investment expenditure in 2018 and 2019. Most of the education investment budget, 96% in 2018 and 87% in 2019 is spent by governorates, the Council of Ministers and other ministries and agencies. A key concern for the implementation of the INES is a) the need to increase the investment budget significantly throughout the course of the strategy implementation, and b) the need to address current under-execution of the investment budget, especially regarding school construction²⁷. The section on classroom needs in this chapter discusses this issue in more detail.

While the Iraqi national economy, and per consequence its education sector, are likely to face financial constraints in the coming years due to the economic impacts of the COVID-19 pandemic coupled with volatile oil revenues (i.e., Iraqi gross domestic product fell by almost 10% in 2020), the most recent estimates project a return to growth as early as 2022, during which the economy is expected to grow at a rate of about 4.4% and 6% in 2023.

Within that framework three parameters allow for the estimation of funds available for the education sector during the implementation of the INES 2022-2031:

²⁵ Finance data for the macro-economic framework relied fully on the WB's Public Expenditure Review given the difficulties of calculating the total amount of public spending on education. Reasons for this are multifold, including the lack of a functional classification within the federal budget that is required to identify and quantify education sector expenditures across all spending units. The decentralization of most of the public education spending to the governorate level since 2017, has resulted in increased fragmentation in the reporting of education spending across different spending units.

²⁶ The 2021 WB Public Expenditure Review (PER) notes that 60% of the education wage bill was financed by the governorates and other spending units, 17% was financed by the MoE and about 23% by the MoHESR. The MoE and MOHESR financed 41 % and 20% of non-personnel recurrent expenditures respectively, while the governorates and other units accounted for the remaining 39%.

²⁷ In 2019 execution rate of capital expenditure was 20% for MOE and 13% for MoHESR (WB, 2021:113).

- The evolution of the gross domestic product (GDP) for Iraq²⁸ which is based on IMF projections until 2026, after which an average increase of 3.3% is applied up to 2031.
- The share of government expenditures as a share of GDP with the assumption that the current rate will remain at its current levels of about 35%.
- The share of education as a percentage of total government expenditures, which is expected to increase from 9.7% in 2019 to 16% in 2031, for operational expenditures from 12% in 2019 to around 17.5% in 2031 and for investment expenditure from 1% to around 7%. Expanding the share of investment expenditure in the education budget requires both, “increasing the investment budget allocations dedicated to the education sector in the medium term, as well as improving the efficiency of budget disbursement and utilization” (WB, 2021:99).

Under these assumptions, total public spending for education would thus increase from around 11 trillion IQD in 2019 to around 19 trillion IQD in 2031 (in 2019 constant dinars), accounting for 5.6% of GDP.

The table below provides an overview of key financial parameters for the INES 2022-2031.

Table 7. Key financial parameters for INES 2022-2031

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
GDP (billion constant 2019 dinars)	247,294	262,206	273,814	282,650	291,988	301,635	311,600	321,894	332,529	343,514
GDP real growth rate (%)	4.4%	6.0%	4.4%	3.2%	3.3%	3.3%	3.3%	3.3%	3.3%	3.3%
Government expenditure as % of GDP	32.5%	32.8%	33.0%	33.3%	33.6%	33.9%	34.2%	34.4%	34.7%	35.0%
Education budget	9,320	10,375	11,360	12,280	13,269	14,321	15,440	16,629	17,894	19,237
Education budget as % of total government expenditure	11.6%	12.1%	12.6%	13.0%	13.5%	14.0%	14.5%	15.0%	15.5%	16.0%
As % of GDP	3.8%	4.0%	4.1%	4.3%	4.5%	4.7%	5.0%	5.2%	5.4%	5.6%

Source: Iraq Simulation Model, 2021.

While the evolution of the first two parameters is external to the education system, the share of government expenditures on education depends in part on convincing and financially sound arguments presented by the Ministry of Education and Higher Education to the Ministry of Finance. The existence of a long-term plan that is of high quality should strengthen this argument, especially since the government of Iraq has identified the education sector as a key sector to overcome longstanding development challenges (GoI, White Paper 2021). The INES 2022-2031 also includes several strategies to strengthen financial management of the education sector through improved engagement between MoE, MoHESR and MoF within a wider public financial management reform.

6.4 Total cost of the INES 2022-2031

The table below shows the total projected cost of the INES 2022-2031 which amounts to around 140 billion Iraqi Dinars (in 2019 constant values) for the total duration of the strategy implementation and

²⁸ The GDP includes Kurdistan while the rest of financial and education data are specific for Iraq centre.

per education level. A significant increase in nominal terms takes place in pre-primary and vocational education which reflects the planned expansion of both sub-sectors.

Table 8. Summary of projected total expenditures by education level, 2022-2031, in (2019 constant) billion Iraq Dinars

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
KG	137	213	245	278	314	352	394	441	495	560
Primary	5,161	5,390	5,434	5,478	5,563	5,660	5,755	5,846	5,943	6,043
Intermediate	2,161	2,382	2,514	2,693	2,846	2,982	3,108	3,242	3,375	3,509
Preparatory	1,382	1,461	1,488	1,503	1,484	1,471	1,458	1,456	1,445	1,416
Academic	465	316	400	449	493	541	595	648	697	737
Preparatory	2,732	2,710	2,762	2,854	2,966	3,084	3,195	3,303	3,415	3,531
Vocational	87	105	122	139	156	174	191	208	225	243
Higher education										
NFE										
TOTAL	12,125	12,579	12,964	13,394	13,823	14,264	14,696	15,144	15,594	16,039

Source: Iraq Simulation Model, 2021.

A closer look at the share of operational and investment expenditures reveals that while operational expenditures remain the largest post of education spending, investment expenditures are expected to become an increasingly important part of public education spending increasing from 7% in 2022 to 10% of the total education expenditure in 2031 which is in line with the current infrastructure needs but also the quantitative expansion of the system expected in the coming years.

Table 9. Projected total operational expenditures (in billion IQD) and share of operational expenditures out of total education expenditures, 2022-2031

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Total operational expenditures, in billion IQD	11,266	11,456	11,825	12,199	12,594	12,983	13,348	13,704	14,050	14,380
Share of operational expenditures out of total education expenditures	93%	91%	91%	91%	91%	91%	91%	90%	90%	90%

Source: Iraq Simulation Model, 2021.

The distribution of operational expenditures across the education levels is presented in below table. In 2031, pre-university education accounts to 75% of all operational expenditures while 24% goes to higher education. Non-formal education sees an increase from 1% in 2022 to 2% in 2031.

Table 10. Share of projected operational expenditures out of total education expenditures, per education level, 2022-2031

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
KG	1%	1%	2%	2%	2%	2%	2%	2%	2%	2%
Primary	42%	42%	41%	40%	40%	39%	38%	38%	37%	37%
Intermediate	17%	18%	19%	19%	20%	20%	21%	21%	21%	22%
Preparatory	11%	11%	11%	11%	11%	10%	10%	10%	9%	9%
Vocational	4%	3%	3%	3%	4%	4%	4%	4%	5%	5%
Higher education	24%	24%	23%	23%	23%	23%	24%	24%	24%	24%
NFE	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%
TOTAL	100%									

Source: Iraq Simulation Model, 2021.

Detailed analysis of operational expenditures

Within operational costs, the share of salaries for teaching and non-teaching staff reduces from around 96% in 2022 to around 90% in 2031 with the most significant change in the wage bill of non-teaching staff, from almost 19% to less than 11% of the total operational expenditures (see detailed table in Annex). Expenditures for teacher salaries increase slightly from 77% in 2022 to 80% by 2031 due to the stark increase in enrolment across all levels of education. Across the education levels, the projected share of the wage bill by 2031 is the lowest for primary education at 85%. The projections assume that a) teacher class ratios and b) the ratio of non-teaching staff to teachers²⁹ decreases significantly. The table below shows these policy targets in a nutshell.

Table 11. Projected non-teaching/teaching staff ratios and teacher class ratios, 2018/19 and 2031, per education level

	Teacher class ratio		Non-teaching/teaching staff ratio	
	2018	2031	2018	2031
KG	2.1	1.1	62%	15%
Primary	1.7	1.3	25%	10%
Intermediate	2.0	1.5	17%	10%
Preparatory Academic	2.2	1.5	28%	25%
Preparatory Vocational	-	-	16%	10%
Higher education	-	-	50%	25%

Source: Iraq Simulation Model, 2021.

It is evident that major teacher (and non-teaching staff) management reforms³⁰ are needed to address the current inefficient and inequitable use of funds. Any reform will need to address various governance, political, and economic factors, including displacement, recent decentralization reforms resulting in a lack of clarity of decision-making processes, lack of teachers in rural areas as teachers and especially experienced teachers prefer to work in urban areas and politicization of education staff recruitment, existence of ghost teachers and ghost non-teaching staff and various education staff mismanagement practices, to succeed. If achieved, the relatively small decrease in salary expenditures by 2031 will be a significant achievement, a solid basis for future corrections. A detailed distribution of total operational expenditures is shown in the table below.

Table 12. Distribution of total operational expenditures in %, 2022-2031

	2022	2025	2028	2031
Wage bill, teachers	77.0%	77.3%	78.6%	80.0%
Wage bill, non-teaching staff	18.7%	16.1%	13.6%	10.8%
Learning materials (textbooks)	0.2%	0.3%	0.3%	0.3%
Other non-salary operational expenses	0.9%	1.0%	1.2%	1.4%
Continued teacher training	2.5%	2.4%	2.3%	2.2%
Scholarships	0.7%	2.9%	4.1%	5.4%
Total operational expenditures	100.0%	100.0%	100.0%	100.0%

Source: Iraq Simulation Model, 2021.

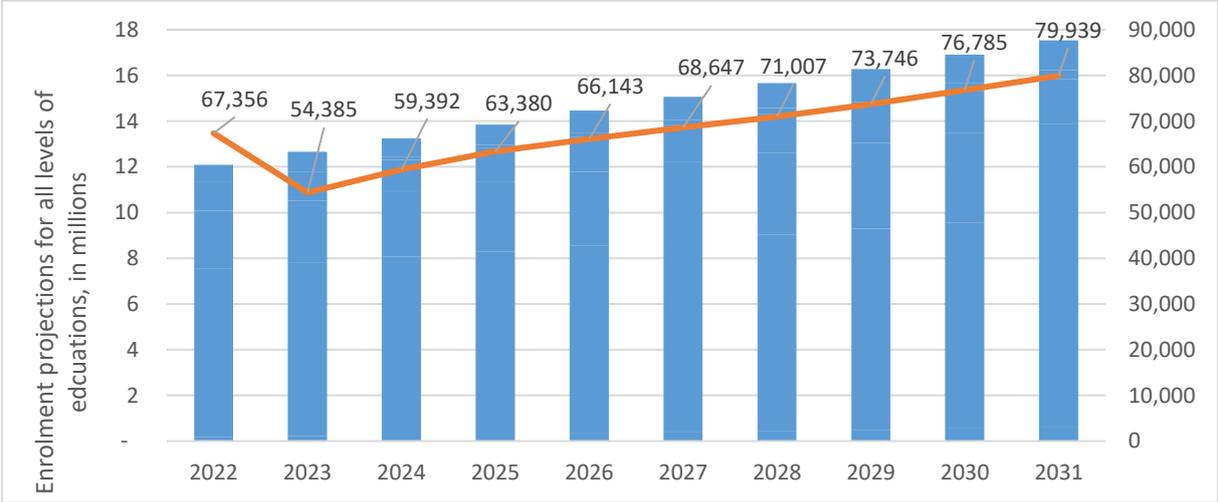
New teacher/trainer recruitment

²⁹ The non-teaching staff to teacher ration indicates how many staff without teaching responsibility exist per teacher. A Non-teaching staff/teacher ratio of 15% implies that for each 2 teachers there is 1 non-teaching staff.

³⁰ The MoE, with support from the World Bank, is currently developing a teacher allocation policy that analyzes past and current teacher-allocation practices (including challenges and opportunities associated with decentralization) and provides a framework for teacher allocation in line with international best practices. Once implemented, the teacher allocation policy will aim to ensure more equitable and efficient distribution and use of human resources under the current budget constraints (WB, 2021).

Despite the planned efficiency reforms, the need for recruitment and training of teachers and trainers to meet increasing levels of enrolment remain heightened, with a total need of almost 681,000 new teachers/trainers over the strategy period. The distribution of teaching staff needs (new recruitments) on an annual basis is shown in the figure below against the projected enrolment for all education levels.

Figure 14. Annual enrolment projections and teacher recruitment needs (new recruitments) for all education levels (orange line), 2022-2031



Source: Iraq Simulation Model, 2021.

The table below shows the distribution of teaching staff recruitment needs per education level and year of strategy implementation. Over the period of the strategy, the highest number of teachers/trainers will need to be recruited for primary education (301,988), followed by preparatory academic education (191,848), intermediate education (117,433), vocational education (28,773), higher education (23,941) and pre-primary education (16,798).

Table 13. Teacher needs per education level (new teachers only), 2022-2031

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
KG	290	1,544	1,610	1,677	1,747	1,819	1,895	1,977	2,067	2,170
Primary	29,307	21,783	22,157	23,999	26,450	29,245	32,232	35,328	38,830	42,658
Intermediate	11,525	11,304	11,262	12,243	12,320	12,081	11,751	11,692	11,637	11,619
Preparatory	19,005	19,612	19,952	20,074	19,882	19,547	19,126	18,713	18,253	17,683
Vocational	3,291	-	2,914	3,093	3,069	3,144	3,345	3,432	3,360	3,124
Higher education	3,938	142	1,498	2,293	2,675	2,810	2,658	2,604	2,639	2,684
TOTAL	67,356	54,385	59,392	63,380	66,143	68,647	71,007	73,746	76,785	79,939

Source: Iraq Simulation Model, 2021.

Other operational expenditures, such as learning and teaching materials, in-service teacher training, and equity measures including school feeding for KG and primary students, scholarships for preparatory and higher education and other non-salary operational expenses (i.e., school grants for KG, primary, and secondary schools) increase steadily from a cumulative 4% of all operational expenditures in 2022 to 9% in 2031. Key driver for this development is the school feeding programme with an average annual growth rate of 46% and 28% for KG and primary education, respectively. At the higher education level scholarships drive the increase in non-salary operational expenditures with an average annual growth rate of 28% as shown in the tale below. The table provided in the Annex provides more detailed information on the distribution of operational expenditures per education level.

Table 14. Operational expenditure for selected posts per education level, in billion IQD, 2022 and 2031 and average annual growth rate (2022-2031)

		2022	2031	Average annual growth rate 2022-2031
KG	Teaching and learning materials	0.6	1.8	13%
	Other non-salary recurrent expenses	0.5*	1.2	12%*
	Continued teacher training	3.5	11.2	14%
	School feeding	0.3	10.5	48%
Primary	Teaching and learning materials	14.3	19.5	4%
	Other non-salary recurrent expenses	14.1	16.2	2%
	School feeding	63.9	603.0	28%
Intermediate	Teaching and learning materials	7.5	9.9	3%
	Other non-salary recurrent expenses	4.9	7.4	5%
Preparatory Academic	Teaching and learning materials	1.7	5.0	13%
	Other non-salary recurrent expenses	7.7	36.3	19%
Preparatory Vocational	Teaching and learning materials	0.6	2.0	14%
	Other non-salary recurrent expenses	1.3	10.5	26%
	Continued teacher training	12.8	17.7	4%
Higher education	Other non-salary recurrent expenses	69.4	123.1	7%
	Scholarships	16.2	145.9	28%

Source: Iraq Simulation Model, 2021, *2023 used as baseline.

Investment expenditures

As mentioned earlier in this chapter, the INES 2022-2031 plans to double investment expenditures by 2031 as shown in the table below to meet urgent education infrastructure needs –due to increasing enrolment, a large stock of destroyed school buildings and the planned reduction of double shift schools. The total amount of capital expenditures over the strategy period amounts to 13.7 trillion IQD, with the assumption that 50% of new schools are low-cost infrastructure³¹.

Table 15. Projected total investment expenditures (in billion IQD) and share of investment expenditures out of the total education expenditures, 2022-2031

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Total investment expenditures, in billion IQD	859	1,123	1,139	1,195	1,229	1,281	1,347	1,439	1,544	1,659
Share of investment expenditures out of total education expenditures	7%	9%	9%	9%	9%	9%	9%	10%	10%	10%

Source: Iraq Simulation Model, 2021.

Classroom needs

As indicated earlier in the chapter, school construction projects suffer from under-funding and under-execution of education investment budgets. The PER (2021) notes that “A special committee was established by the Council of Ministers to aid in the implementation of large-scale education construction programs, bypassing the MOE” (WB:114).

The table below shows the annual needs for classroom construction, which amounts to more than 166,000 new classrooms over the strategy period. To meet the pressing classroom shortage, strategies

³¹ The model introduces a unit cost of 80million IQD for one regular classroom and 48million IQD for one low-cost classroom. Unit costs for regular classrooms were taken from the Governorate Education Plans, developed with support from UNICEF.

are needed to explore the better utilization of existing infrastructure³² as well as methods of low-cost construction such as by promoting local construction materials and methods which are also likely to generate jobs for local labour³³. MoHESR requires a special plan of investment to close the infrastructure gap as currently no data is available to estimate infrastructure and equipment needs.

Table 16. Projected new classroom needs by education level, 2022-2031

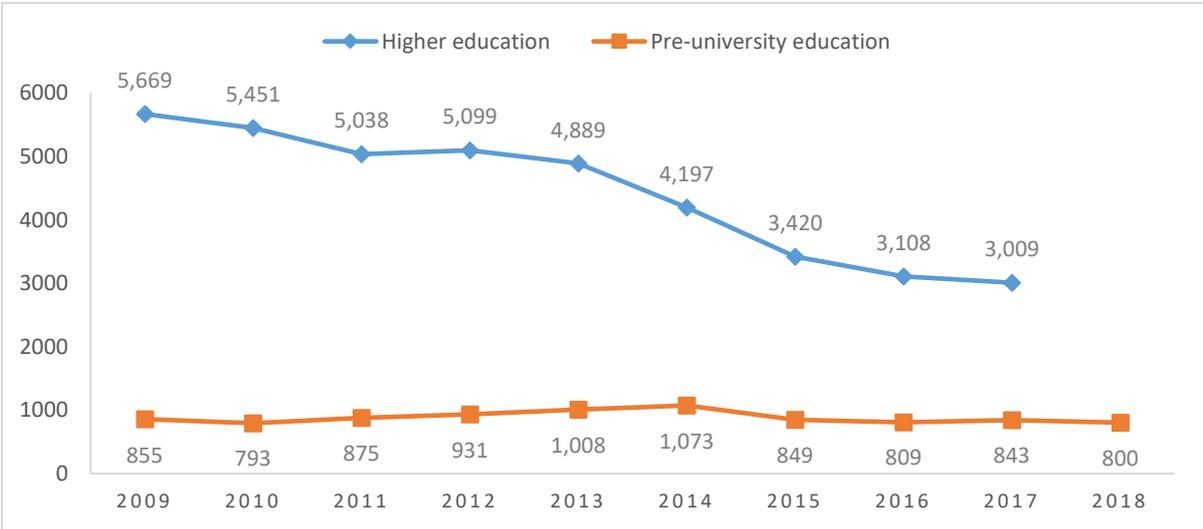
	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
KG	77	885	1017	1177	1372	1615	1922	2319	2844	3561
Primary	5291	7096	6590	6684	7011	7420	7831	8178	8624	9106
Intermediate	2719	4213	4330	4957	5176	5254	5299	5512	5753	6046
Preparatory	1973	2385	2221	2093	1760	1661	1643	1806	1868	1783
Vocational	590	-	755	806	801	830	905	955	970	944
TOTAL	10,650	14,579	14,914	15,716	16,120	16,780	17,600	18,769	20,059	21,440

Source: Iraq Simulation Model, 2021.

6.5 Government expenditure per student

The Iraq Public Expenditure Review for Human Development Sectors notes that for 2017, the most recent year for which complete enrolment and expenditure data is available, Iraq’s unit cost (expenditure per student) in higher education stood at around 3,000,000 Iraqi Dinars compared to 800,000 Iraqi Dinars for pre-university education (WB, 2021) as shown in the figure below. The level of spending per student is 3.5 times higher in the university sector (WB, 2021).

Figure 15. Government expenditure per student by pre-university and higher education, 2009-2018, in constant 2019 IQD per student (in thousands)



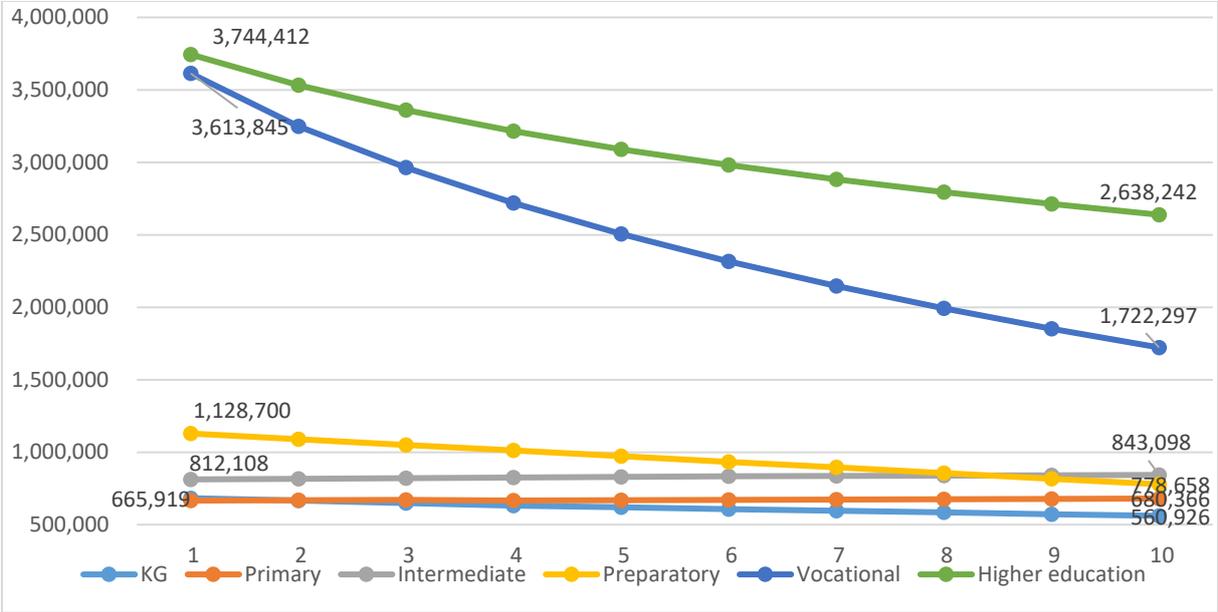
Source: WB Public Expenditure Review, 2021.

³² As part of the WB’s support to the MoE, strategies are being developed to better utilize existing infrastructure (WB, 2021).

³³ The MOE, with technical support from the World Bank, is currently developing a comprehensive school construction policy, which will focus on developing national school-construction-planning guidelines and data-driven prioritization mechanisms for school construction. The school construction policy will make recommendations for more efficient utilization of current school infrastructure and propose a set of norms for different types of schools, considering local needs.

Despite an improved allocation of funds between higher and pre-university education since 2013 with a decreasing unit cost for higher education, public funding per student in higher education is projected to remain significantly higher than in pre-university education as shown in the figure below. Projections for the INES 2022-2031 are based on following constructed unit costs per education level:

Figure 16. Projected unit costs per education level, per year for strategy duration 2022-2031, in constant 2019 IQD per student



Source: Iraq Simulation Model, 2021.

The figure above shows that even though public spending per student in higher education decreases, the gap between higher education spending and pre-university education spending remains significant as pre-university spending per student except for vocational education remains flat in inflation-adjusted terms. The INES 2022-2031 plans to address the existing efficiency challenges in education spending by increasing public spending per student in pre-university education relative to higher education in the next decade, while seeking internal efficiency savings in the short term. These include the reduction of allocations for teacher and non-teaching staff wages, improved budget execution especially in capital expenditures, including the construction and rehabilitation of schools.

6.6 Funding gap

Due to the unfavourable economic environment caused by the COVID-19 pandemic, combined with longstanding system inefficiencies and the increased demand for resources to accommodate a rapidly increasing number of children and youth, the funding gap amounts to a total of almost 12 trillion Iraqi Dinars (2019 constant price). By 2026 the funding gap for operational expenditures will be closed. The funding gap for investment expenditures decreases from 2023 onwards though remains significant until the end of the strategy period with 28% of the total investment expenditures not funded. Major efforts are needed to fill the investment gap.

Table 17. Annual funding gap, in billion IQD and share of funding gap out of the total projected resources, 2022-2031

Funding gap	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
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Operational	-1,981	-1,160	-606	-140						
Investment	-824	-1,043	-998	-974	-907	-836	-755	-673	-575	-457
Total	-2,805	-2,203	-1,604	-1,114	-554	-836	-755	-673	-575	-457
Operational	-18%	-10%	-5%	-1%	0%	0%	0%	0%	0%	0%
Investment	-96%	-93%	-88%	-81%	-74%	-65%	-56%	-47%	-37%	-28%

Source: Iraq Simulation Model, 2021.

The INES is expected to mobilize support from all relevant stakeholders, both national and international. Although there is currently no data available on the planned level of investment, it is evident that donor support will need to increase throughout the INES period from the 2019 level of 34.2 million USD as per data made available by the OECD Official Development Assistance (DAC)³⁴. Out of a total of 63 million USD in 2019 declared for education, only 34.2 million USD were channelled to the education sector through the public sector or multilateral organizations as per the OECD nomenclature. The remaining 28.8 million USD are expenditures for experts, other technical assistance and scholarships and student costs in donor countries. Compared to the financing gap in the first year of the INES alone, international donor financial support would only cover 2% of the 2022 financing gap.

Significant resource mobilization efforts with the private sector and with donors are needed to fill the financing gap, especially for education infrastructure investment to support transformative changes in education in Iraq. Planned governance reforms are expected to improve system efficiency and re-build trust among financing partners to collectively close the financing gap. It is key that households are not expected to take on a greater financial burden. Households in Iraq contribute with around 0.5% of GDP substantially to the financing of education in Iraq although less than elsewhere in the MENA region but private spending is higher than in most OECD countries (WB, 2021). As household spending is neither an equitable nor a sustainable way of education provision at pre-university levels, other funding sources should be explored.

³⁴ It should be noted that OECD DAC data does not capture funding provided by donors in-directly such as in the case of global funds such as the Global Partnership for Education or Education Cannot Wait.

Chapter 7. Coordination, Implementation, Monitoring and Evaluation Frameworks

This chapter describes the framework for the coordination, implementation, and monitoring and evaluation of the INES. The chapter is divided into three parts:

First: Mechanisms for implementation, monitoring, and evaluation.

Second: Monitoring and evaluation processes.

Third: Key Performance Indicators.

First: Mechanisms for Implementation, Monitoring and Evaluation

The mechanisms for the implementation, monitoring and evaluation of the INES are as follows.

7.1 Developing Operational Plans to implement and monitor the implementation of the INES

The INES is a long-term plan that provides a framework for policies, strategies, and programmes for a period of 10 years. It does not and cannot describe in detail how these policies, strategies and programmes will be implemented and therefore does not provide a description of detailed activities.

To begin the implementation of the strategy, a separate document, a multi-year **operational plan** will be prepared. Operational plans provide a detailed description of how the pillars and programmes of the national strategy will be implemented by identifying programme activities and implementation procedures for each activity. Operational plans also identify responsible entities per activity, the timeline and the cost required to implement each activity. To measure progress, operational plans set output targets which represent the basis for achieving the intermediate results of the programmes proposed in the strategy. The following figure shows key elements of the operational plan:

Figure 17. Key elements of the multi-year operational plan



Operational plans allow for integrating any emerging educational issues as well as addressing recommendations resulting from monitoring and evaluation processes at different levels. A key process is the annual review of the education sector, which contributes to ensuring that implementation is directed towards achieving the outputs defined in the operational plans, and consequently the results defined in the Results Matrix of all the pillars and programmes of the INES for each of the three education sub-sectors (general education, TVET and higher education).

7.2 Assigning Roles and Responsibilities of Central and Provincial Levels in the Implementation and Monitoring of the INES

The operational plans represent a framework for the implementation and monitoring process. This includes a definition of roles and responsibilities of the various education departments at the central and decentralized levels regarding the implementation of the INES.

a. Roles and responsibilities at the central level

The implementation, monitoring and evaluation of the INES is supervised by the Higher Committee of Monitoring and Evaluation (HCME). Two committees will be created, a committee in the MoE, and a committee in the MoHESR. These committees will be chaired by the Ministers of Education and Higher Education and will include in their membership the deputy ministers of each ministry, the Director General of Financial Affairs, and the directors of the relevant bodies in each ministry. The Deputy Minister for Technical Affairs in each ministry serves as rapporteur for the respective committee. The committees will carry out the following tasks:

- Review the progress reports submitted by the public departments in charge of implementation, or by the Technical Committee of Monitoring and Evaluation.
- Identify and prompt appropriate measures to ensure the success of the implementation and monitoring and evaluation of the INES according to the timeline specified in the operational plan.
- Communicate and coordinate with other ministries and donors/partners to ensure effective implementation and alignment of activities and to prevent duplication.
- Consult with and provide support to the implementing bodies to ensure effective implementation and follow up.

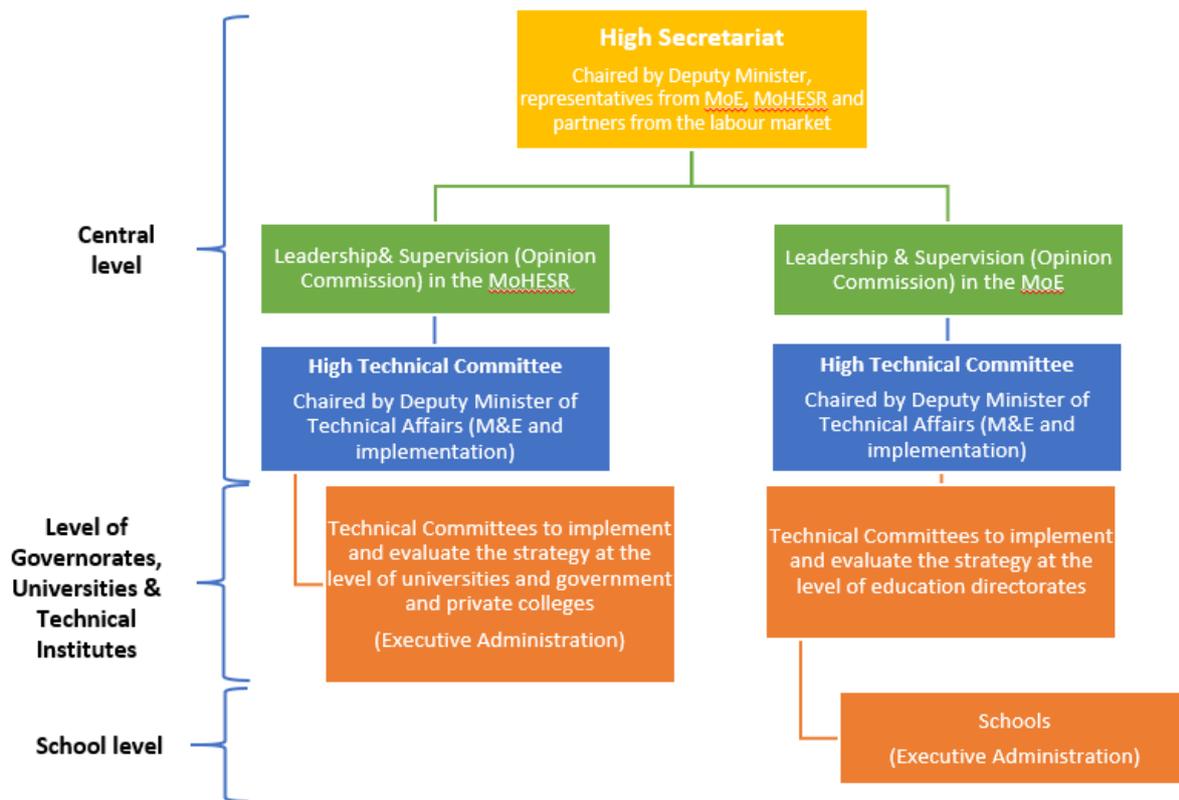
The implementation and monitoring of the INES at the national level is led by the Technical Committee of Monitoring and Evaluation (TCME). Two monitoring and evaluation committees are set up, one committee in the MoE and the other in the MoHESR. Each committee is chaired by the Deputy Minister of Technical Affairs of the respective ministry. The Director General of the Planning Directorate in each ministry will be a member and rapporteur for the committee. The operational plan in the MoE and the MoHESR represents a framework for both committees to lead the implementation and monitoring processes. The committees are tasked with following tasks:

- Lead and guide the development of operational plans in the MoE and the MoHESR, ensure their alignment with INES pillars and programmes, collect, and prepare data to monitor progress towards set targets.
- Develop the criteria and principles to distribute funding among the governorates and universities according to identified targets.
- Communicate and coordinate with education partners in Iraq to ensure the availability of technical and financial support to programmes and activities identified in the INES and respective operational plans.
- Develop and strengthen coordination mechanisms with the private sector to support the educational process.
- Coordinate with the responsible departments to review and develop the regulations and laws and issue ministerial decisions relevant to the implementation, monitoring and evaluation of programmes as outlined in the INES and associated operational plans.
- Identify and coordinate with the authorities responsible for achieving each of the targets listed in the strategy.
- Specify the data and information required to monitor result indicators in the INES and ensure the availability of the required data in the educational information management system (EMIS).
- Support and follow up on the development of the EMIS to include all data required to monitor progress towards set objectives and result indicators and ensure training of MoE and MoHESR staff to use EMIS for planning, monitoring, and evaluation.
- Lead the process of designing tools for data collection and analysis and issue the annual statistical report which provides key data to monitor progress towards sector objectives.

- Coordinate and provide support to the other departments to collect data and information, monitor and evaluate the result indicators which cannot be obtained from the annual statistical reports or the EMIS.
- In cooperation with the relevant departments in the MoE and MoHESR, lead the preparation of annual progress reports showcasing progress made towards outputs as indicated in the operational plans and progress towards INES targets for general education, TVET and higher education.
- Prepare and oversee annual review conferences of the education sector to review progress made towards set targets, and prepare the development of operational plans.
- Submit monitoring and evaluation reports to the higher committee for the implementation of the INES.

Based on previous experiences in monitoring and evaluation, a higher committee will be formed to oversee the implementation of the INES, chaired by the Deputy Prime Minister. The committee includes the Minister of Education, the Minister of Higher Education and Scientific Research, and the ministers of line ministries, including but not limited to Finance, Planning, and Labour and Social Affairs. The committee monitors progress and achievements made in the implementation of the INES. The committee also works to overcome and address the difficulties that obstruct or prevent implementation and support and coordinate collaboration and alignment between the relevant ministries to ensure effective implementation and to provide the required resources. The following figure shows the mechanism of implementing, monitoring, and evaluating the INES in the MoE and the MoHESR at the central and decentralized levels.

Figure 18. Mechanism of Implementation, monitoring, and evaluation of the INES in the MoE and the MoHESR



b. Roles and Responsibilities at the Governorate level

At the sub-central level, implementation, monitoring, and evaluation of operational plans is carried out under the supervision of the directors of the education directorates in the governorates and districts. Universities and technical institutes implement, and monitor progress made towards intended results for higher education. A committee will be created to lead the implementation and monitoring process in each education directorate in the governorates and universities, chaired and supported by the Deputy Assistant Director-General for Technical Affairs. The Manager of the Planning Department will be responsible for:

- Leading the preparation of the operational plans at the level of governorates or universities and coordinating implementation and monitoring.
- Reviewing and managing the entry of the education data which are collected from the departments and universities, districts, and schools, providing feedback concerning data quality and identifying any contradictions in data.
- Holding periodic meetings with the aim of regularly monitoring the implementation of the educational programmes as outlined in the operational plans and developing strategies to overcome obstacles.
- Analysing education data and information related to the outputs listed in the operational plans at the university level and education offices in the governorates. Preparing reports for the Technical Committee of Monitoring and Evaluation in the MoE and MoHESR to inform progress reports at the national level.

At the district level, the departments of education offices shall assume the following tasks:

- Develop and implement the operational plan.

- Hold regular meetings to monitor progress of programmes and activities defined in the operational plans and identify solutions to overcome obstacles in implementation.
- Prepare and submit implementation reports to the Educational Planning Department in the Education Office at governorate level.
- Provide support to schools to develop and implement school development plans.

The school and training institute administrations assume the responsibility of developing the school/institute plan according to the framework of the school-based management programme, monitoring progress, and submitting reports to the departments of the Education Office in the districts.

7.3 Assigning roles of partners in the implementation and monitoring of the INES

The INES represents a common framework for all education stakeholders. It is expected that donors and partners align available resources with the objectives outlined in the INES through strategic and technical dialogue and partnership.

A key coordination body for the education sector is the Education Sector Coordination Group which was set up in 2019. As outlined in the group's ToRs, the group aims to:

- Coordinate the various interventions in the education sector with a view supporting the INES and development of the sector by aligning donor funds and government budgets to ensure their most effective use.
- Provide an oversight to the sector progress in meeting strategic objectives, by tracking performance using a commonly agreed results framework.
- Conduct regular education reviews to track implementation of the INES and related strategies and to address any challenges affecting the achievement of results.
- Establish a forum for technical and strategic discussions and dialogue for education policy and programs in doing so sharing information to avoiding duplication.
- Leverage the experience of international and local partners to strengthen institutional capacity and strengthen education systems.

The Education Sector Coordination Group will be supported by Technical Working Groups established for each sub-sector. Thematic Taskforces support specific interventions and strategy development. The Technical Working Groups and Thematic Taskforces will be led by the appropriate/relevant Directorate/Department in the Ministries and co-chaired by one of the partners.

The group is led by the Chairs (MoE and MoHESR), the Co-Chairs (EU and PMO), UNESCO and UNICEF. International partners are subject to re-election after two years.³⁵

The Education Sector Coordination group includes Directorates of MoHESR and MoE, education partners/donors and representatives of the civil society.

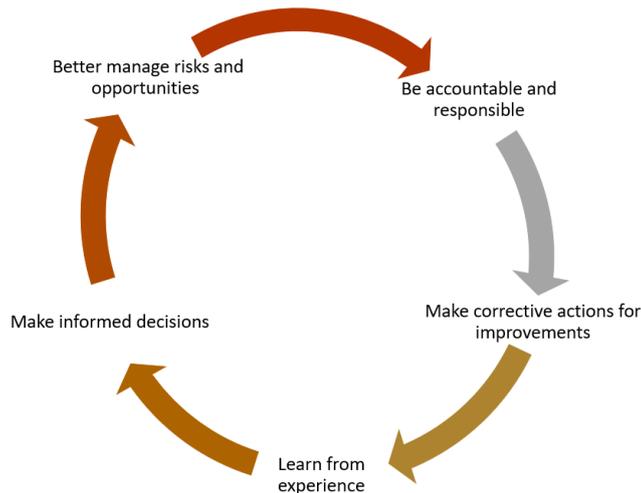
Second: Monitoring and Evaluation Processes of the INES

Monitoring and evaluation are considered as a key element in the implementation of the INES and contributes to achieving the following:

³⁵ From November 2020 onwards, UNICEF hosts the group's secretariat though the MoE is expected to take on the role in the longer term. To this end, capacities at the Cultural Affairs Directorate of the MoE are strengthened.

- Enabling the MoE and MoHESR to verify whether the strategy implementation is on track regarding inputs, activities, and results, and taking appropriate corrective measures to enhance the chances of a successful strategy implementation.
- Enabling the MoE and MoHESR to verify whether the strategy has achieved its objectives, which strategies worked and what lessons can be learned.
- Building a culture of risk management responsibility and accountability, taking corrective actions, learning from experience, and making informed decisions, as shown in the following figure:

Figure 19. Key functions of the Monitoring and Evaluation Process



7.4 Levels of Monitoring and Evaluation

Monitoring and evaluation of the INES will be carried out according to three levels, as follows:

First Level: Regular Monitoring

Regular monitoring ensures the implementation of the detailed activities of the annual operational plans generated by the INES at both, central and decentralized levels. At the central level, the Higher Committee of Monitoring and Evaluation in both, the MoE and MoHESR hold periodic meetings or as needed to follow up and monitor the progress made in the implementation of the operational plans and take the necessary steps to resolve any difficulties that hinder the implementation. At the decentralized level, the presidency of universities and the directors of education offices in the governorates and districts hold regular meetings to monitor and follow up the implementation of operational plans and develop solutions to the problems that may hinder the implementation process. The supervisory committee of monitoring and evaluation in the MoE and MoHESR will be involved if immediate solutions cannot be found.

Second Level: Annual Monitoring and Evaluation

The Technical Committee of Monitoring and Evaluation in the MoE and MoHESR organise annual review meetings to measure progress made towards set targets in the INES. The annual progress report is the basis for preparing the operational plan of the following year. The annual progress report and annual review discussions focus on:

- Reviewing progress made in the previous year and analysing the performance of the education sector, identifying recommendations, policies, and priorities for the following year.

- Reviewing the financial resources provided for the implementation of the plan from both, the government, and external partners.
- Reviewing the level of coordination, alignment and harmony of support provided to the implementation of the operational plans of the INES.

The Third Level: Mid-Term Review of the INES

Five years into the implementation of the INES, the MoE and MoHESR undertake a mid-term review. The mid-term review is an evaluation that aims to:

- Evaluate the progress made towards achieving targets listed in the INES.
- Introduce any amendments to policies and strategies outlined in the INES document for the second phase of the INES. The amendments may include the following:
 - Changing or introducing of new programmes and strategies to achieve objectives and targets identified in the INES.
 - Updating and modifying key performance indicators until 2031.
 - Updating the financial data related to the cost of implementing the INES during the second phase of the INES, the available resources, and the funding gap.
 - Proposing new policies and recommendations to ensure effective implementation of the INES by 2031.

The mid-term review of the INES can be carried out through the annual review meetings of the sector for the year 2026 for example, by preparing a mid-term achievement report in addition to the annual progress report.

Fourth Level: Final Review of the implementation of the INES

The final review of the INES takes place in the last year of the strategy implementation, in 2031, to evaluate achievements made for each sub-sector. The results inform the development of the next education strategy. The achievement report of the strategy determines to which extent INES targets were achieved and analyse the performance of the MoE and MoHESR during implementation. The evaluation derives the most important lessons learned related to planning, implementation, monitoring, and evaluation throughout the past 10 years and guides the education sector in the preparation of a new strategy post-2031.

The following table summarizes the objective, timing, focus, and expected results of the annual, mid-term and final review of the INES.

Table 18. Objectives, timing, focus and expected results of annual, mid-term and final review of the INES

	Annual Review	Mid-Term Review	Final Review
Objective	Evaluating the annual progress with the aim of following up the work on the operational plan of the next year	Reviewing the progress made to introduce any mid-term adjustments to the INES	Evaluating the implementation of the sector strategy, and using the results as input to the following education strategy
Timing	Once a year, synchronized with the preparation of the budget	Mid-term of the implementation period of the INES	The last year of the INES
Focus	Reviewing the implementation of the operational plan of the previous year	Trends on indicators and financial results. Reviewing the suitability and effectiveness of the strategies.	Evaluating success and challenges throughout the implementation period of the INES

		Integrating changes related to the strategy/objectives for the second phase of the strategy	
Expected Result	Modifying the annual or multi-year operational plan	Updating/modifying the strategy, especially the results framework	Analysing the education sector and informing the new education strategy

Third: Result matrix and Key Performance Indicators

The tables below propose a results matrix for the INES 2022-2031 per sub-sector. The matrices contain a limited and carefully selected set of Key Performance Indicators (KPIs). They reflect the sub-sector strategies and selected priority programmes. The listed KPIs, both at outcome and at intermediate outcome level focus on the “intended results/outcomes” of the INES, not on inputs, activities, or specific projects. The indicators are disaggregated to the extent possible though further disaggregation, especially regarding regions/ governorates and district should be undertaken as part of the short-term operational plans. It is of great importance to ensure that the situation of specific groups of learners is carefully monitored, including students with special needs, displaced learners, as well as disparities in access and completion of education and learning achievements between boys and girls, and between regions.

The selection of the KPIs was carried out based on following decisions:

- The selection of KPIs represent a technical and political process during which feasibility, relevance, desirability, and sustainability of selected policies is assessed.
- The number of KPIs remain limited and focused due to the cost of monitoring and evaluation (financial and human resources).
- The selected KPIs are clear and easily understandable by decision makers and the wider public. Composite indicators and indicators which require substantial statistical measures should be avoided.
- The simulation model provides several KIPs which contributes to linking the simulation model with monitoring and evaluation, and cost estimates.
- To the extent possible, indicators relate to international frameworks, such as the SDGs, the 2030 Education Agenda.
- Selected KPIs are SMART indicators, i.e., they are *specific, measurable, achievable, realistic, and time bound*.

List of Key Performance Indicators for General Education

Baseline (2018/19 or latest year)

Target 2031 (or as indicated)

General Education

Pillar 1: Access and Equity

Intended result: Increased enrolment and retention of learners in pre-primary, primary and secondary education, especially among girls, learners affected by conflict and displacement, students with special needs and poor students by 2031

Key Performance Indicators (Outcome-level results)

GER in KG1+2 (M/F)	11%	30%
GER primary (M/F)	129%/123%	131%/130%
GER intermediate (M/F)	103%/85%	137%/123%
GER preparatory (academic) (M/F)	47%/46%	68%/65%
Completion rate, primary education (Grade 6)	84%/83%	100% (2025)
Completion rate, intermediate education (Grade 9)	62.2%/63%	100% (2028)
Enrolment in non-formal education programmes	Youth: 10,507 Adult: 72,242	Youth: 300,000 Adult: 170,000
Governorate Primary and Intermediate GER gap	TBD	TBD
Share of learners with special needs compared to total learners in primary	0.26%	2%

Selected performance indicators (output-level results) by priority programme

Infrastructure	Share of schools operating double shifts, per education level	Primary: 34% Intermediate: 10.3% Preparatory (Academic): 10.1%	Primary: 14% Intermediate: 6.9% Preparatory (Academic): 3.4%
Safe and healthy learning environment	Percentage of students receiving school feeding at public primary schools	5%	100%

Pillar 2: Quality and Relevance

Intended result: Increased school readiness among primary pupils, improved teaching and learning outcomes in primary and secondary education, and harmonized educational content

Key Performance Indicators (Outcome-level results)

% of students at the end of the primary who achieve proficiency in reading and mathematics by gender	TBD	80%
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	% of students succeeding in international exams by gender (e.g., TIMSS ³⁶)	TBD in 2023	TBD
	Share of budget for teaching and learning materials, school grants and teacher training (non-salary operational expenditures)	N/A	In billion IQD Pre-primary: 4.3% Primary: 3.6% Intermediate: 3.3% Preparatory Academic: 6.2%
Selected performance indicators (output-level results) by priority programme			
Attractive learning environment	Share of schools with tools to facilitate digital classes (electricity, internet, computer labs, science labs, school libraries)	TBD	TBD
	Class size (KG/Primary G1-3/ Primary G4-6)	64/40/36	30/35/35
School leadership and community participation	% of schools achieving 4th level of quality in the external assessment (part of school-based development programme's external evaluation by supervisors matching school achievements with set quality criteria)	N/A	100%
	% of schools included in school-based development programme	10% (2,260 schools)	100%
Curriculum and Assessment	Standards-based curricula developed for all general education grades, integrating skills and knowledge expressed in SDG 4, including sustainable development, human rights, gender equality, promoting a culture of peace and non-violence, global citizenship, and acceptance of cultural diversity	N/A	100%
Pillar 3: Governance, Educational and Financial Planning and Management			
Intended result: Strengthened legislative, administrative, planning, and financial capacity of the education system to ensure effective and efficient education service delivery			
Key Performance Indicators (Outcome-level results)			
	% of schools with operational budget available to implement school improvements plans (School-based management approach) per education level	10% (2,260 schools)	100%

³⁶ The Government of Iraq has signed a MoU to participate in the Trends in International Mathematics and Science Study (TIMSS) 2023.

	Annual joint sector reviews and mid-term review of INES conducted	N/A	Yes
	EMIS active at central and governorate level and used for planning, M&E processes	N/A (pilot starting in late 2021)	Yes
	Share of DoEs that have specific plans and budgets to ensure education continuity during crises, with a total of 20 plans (19 governorates and educational districts in Baghdad + 1 center)	7 (source: 2018 Humanitarian Development Plan)	20
Selected performance indicators (output-level results) by priority programme			
Institutional management and leadership	Percentage of trainees from middle and upper management in aspects of planning, coordination, and administrative skills to the total number on annual basis	TBD	TBD
Financial management	Implementation rate of the annual current and investment budget of the Ministry of Education	9.62% (2019)	100%
Crisis management	Crisis cell/unit established in MoE and DoEs, supporting schools in preventing and managing crises affecting education service delivery	N/A	MoE and DoE crisis cells/units established, staffed and active
School management	School canteen law amended	N/A	1
School management	Parent-teacher council system amended	N/A	1
Partnership with private sector	The ratio of private schools to government schools per education level	KG 14.5% Primary 4.2% Intermediate 4.5% Preparatory 5.3% Higher education 27%	KG 25% Primary 15% Intermediate 10% Preparatory 15% Higher education 25%
Pillar 4: Human Resources			
Intended result: Qualified and motivated teacher and education staff are recruited and trained to ensure quality education effective and efficient education service delivery			
Key Performance Indicators (Outcome-level results)			
	Ratio of non-teaching staff to teaching staff by level of education (and by governorate, TBD)	KG 62% Primary 21% Intermediate 16.7% Preparatory Academic 28%	KG 15% Primary 10% Intermediate 10% Preparatory 25%
	Teacher-class ratio	KG 2.1:1 Primary 1.7:1	KG 1.1:1 Primary 1.3:1

		Intermediate 2:1 Preparatory Academic 2:1	Intermediate 1.5:1 Preparatory Academic 1.5:1
	Student-teacher ratio by governorate per education level	TBD	TBD
Selected performance indicators (output-level results) by priority programme			
Recruitment and training on non-teaching staff	Share of counsellors and supervisors who participate in relevant training courses	TBD	TBD
Pre-and in-service teacher training	Percentage of teachers with a university degree in education	TBD	TBD

List of Key Performance Indicators for TVET

Baseline (2018/19)

Target 2031

Technical and Vocational Education and Training

Pillar 1: Equitable access to vocational and technical education and training

Intended result: Increased demand and enrolment in TVET programmes through the promotion and advancement of TVET offers and resulting job opportunities making it one of the best options for young people

Key Performance Indicators (Outcome-level results)

GER Vocational Schools (M/F)	7%/3% (2021)	14%/13%
Transition rate to preparatory VSs (M/F)	8%/3%	19%
Number of "school dropouts" who re-joined vocational training programmes is increased	TBD	TBD
Number of students attending technical Institutes (higher education)	69,000	169,000
Transition rates from VSs and academic schools to Technical Colleges	TBD	TBD
Enrolment rates of women in technical colleges are increased	TBD	TBD

Pillar 2: Internal efficiency

Intended result: Improved the efficiency and effectiveness of the internal systems in educational, training, and technical institutions to reach high quality standards

Key Performance Indicators (Outcome-level results)

Retention rates at Vocational Schools	81%	90%
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Selected performance indicators (output-level results) by priority programme

Infrastructure	# of Vocational School classrooms constructed/rehabilitated	N/A	7,555 classrooms between 2022 and 2031
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Capacity building	Training needs for administrative staff and TVET trainers (resulting from annual performance evaluations) are met	TBD, past 2 years cannot be used as baseline	90%
Pillar 3: Quality and external efficiency			
Intended result: Improved quality and relevance of TVET programmes result in improved education outcomes and higher employability			
Key Performance Indicators (Outcome-level results)			
	Share of students who are either self-employed or employed 1 year following graduation	TBD	TBD
	Share of students obtaining jobs in line with their chosen specializations in TVET	TBD (based on tracer studies)	to be defined once labor market information system is in place
Selected performance indicators (output-level results) by priority programme			
Curricula, training materials and accreditation	Share of TVET courses offering students work-based training. TVET institutions are accredited based on results of NQF-linked accreditation	10%	50%
		n/a	100%
Training of TVET trainers	Share of trainers trained in relevant fields	TBD	90%
Pillar 4: Governance, Management and Finance			
Intended result: Improved governance, financing and management frameworks ensure better coordination and increased allocations for TVET			
Key Performance Indicators (Outcome-level results)			
	Higher Council of TVET activated, meets regular and produces regular recommendations	n/a	Higher Council of TVET endorsed by Parliament and regular meetings conducted
Selected performance indicators (output-level results) by priority programme			
Governance & legislation	National Qualifications Framework activated	n/a	1
Strategic and operational planning	TVET Committee under Higher Education Coordination Committee activated and in regular exchange	n/a	1
	Labor market information observatory established and utilized for policy and planning decisions	n/a	1 (2025)

List of Key Performance Indicators for Higher Education

Strategic Issues	Strategic Objectives	Strategic Options	Required Output	Measurement Indicators
Internal Efficiency	Developing the admission capacity of education institutions	Expansion by creating specialized universities and colleges and expansion of existing universities	Higher education institutions with high admission capacity proportionate to population growth	<ol style="list-style-type: none"> 1. The number of new universities and colleges and expansion percentage in the existing universities. 2. The number of private education institutions appropriate to the needs of the labor market, and geographical and spatial distribution. 3. The number of integrative partnerships of cultural exchange with developed countries which provide grants and scholarships to Iraqi students in rare postgraduate specializations.
		Developing private education institutions through the opportunities appropriate to the needs of the labor market, and geographical distribution		
		Holding integrative partnerships of cultural exchange with developed countries to increase grants and scholarships to Iraqi students in rare postgraduate specializations.		
	Variety in Higher Education Patterns and Programmes	Adoption of globally adopted educational systems, gradually for some leading government universities for the purpose of evaluation and transition towards universality.	Flexible higher education institutions with varied patterns and programmes	<ol style="list-style-type: none"> 1. The number of internationally accredited educational systems in the leading government universities 2. The number of Iraqi universities that have integrated, accredited and solid electronic education 3. The number of developed continuous education centers and programmes
		Accreditation and consolidation of integrated electronic learning in Iraqi universities		
		Supporting and developing continuous education centers and programmes		
Developing university admission policies	Reviewing and amending the laws governing the admission of students to universities to ensure the provision of a fair opportunity to all students wishing to increase and are qualified for admission to the appropriate specializations and the laws related to study systems	Modified university admission policies that ensure fair enrolment	<ol style="list-style-type: none"> 1. Number of laws governing student admission to universities that have been reviewed and amended 2. The amount of increase in the percentage of students enrolled in the undergraduate and postgraduate studies 	

		Sustaining and increasing the percentage of students enrolled in the undergraduate and postgraduate studies		
Governance of Higher Education Institutions	Enabling higher education institutions to achieve their goals efficiently and effectively	Developing the management system	Higher education institutions are able to achieve their goals efficiently and effectively	<ol style="list-style-type: none"> 1. The extent of development in the administrative leadership system in higher education institutions 2. The number of organizational structures developed 3. The extent to which the strategic planning role of higher education institutions is activated 4. The extent of stakeholder participation in the decision-making process in Iraqi institutions 5. Extent to which integrity, transparency and accountability procedures are strengthened
		Developing the organizational structures of higher education institutions		
		Activating the role of strategic planning for higher education institutions		
		Enhancing stakeholder participation in the decision-making process		
		Strengthening integrity, transparency, and accountability procedures		
	Achieving integration between the relevant parties in higher education institutions	Keeping abreast of recent technological developments in the field of e-governance	Integrated higher education institutions	<ol style="list-style-type: none"> 1. The number of advanced and technologically advanced electronic governance applications 2. Percentage of procedures and services to which electronic governance has been applied
Implementing electronic governance to achieve flexibility and facilitate procedures through electronic linking of all procedures and services in higher education institutions				
Quality and Accreditation	Achieving national and international academic accreditation of higher education institutions	Completing the construction of the national accreditation system for all major specializations	Higher education institutions with national and international accreditation	<ol style="list-style-type: none"> 1. The extent of achievement of the national accreditation system for the main specializations 2. The number of higher education institutions that have obtained national and international institutional accreditation 3. The number of academic programmes that have obtained program accreditation
		Higher education institutions obtain national and international institutional accreditation		
		Academic programmes in scientific departments obtain program accreditation		
	Entry of higher education institutions in local	Entry of higher education institutions into important and accredited international classifications	Advanced higher education institutions with	<ol style="list-style-type: none"> 1. The number of higher education institutions included in the important and accredited international classifications

	and international rankings and taking advanced positions in them	Creating a spirit of competition and promoting a culture of excellence among universities	advanced global ranking	2. The number of universities competing to enter the national and international rankings
	Quality assurance and improving the effectiveness of higher education institutions	Developing curricula, student skills, teaching and learning methods, evaluation, and assessment	Improving the effectiveness of higher education institutions	1. The number of curricula and methods of teaching, learning, assessment, and evaluation that have been developed and updated
		Improving the quality of e-learning		2. The extent of development in the quality of electronic learning
		Improving the quality of educational laboratories		3. The number of educational laboratories whose quality has been improved
		Distinguished trained and developed human resources		4. The number of human resources trained and developed
		Quality control of the learning process according to the inputs and outputs		5. The extent to which the educational process is controlled according to the inputs and outputs
Scientific research and innovation	Developing the skills of researchers in Iraqi universities and increasing their high-quality research productivity	Providing an environment which supports scientific research in Iraqi universities	Increasing high quality research productivity of researchers in Iraqi universities	1. The extent to which an environment which supports scientific research is provided in Iraqi universities
		Developing mechanisms of cooperation in the field of scientific research between Iraqi universities and their counterparts outside Iraq		2. The number of Iraqi universities that have developed cooperation with their counterparts outside Iraq
		Developing the skills of researchers		3. The number of researchers whose research skills have been developed
		Developing the work of research centers and mechanisms of providing research services to all institutions		4. The number of centers which have been developed to provide research services to other institutions
		Strengthening the requirements of scientific research		5. The extent to which the requirements of scientific research are enhanced in higher education institutions
		Adoption and development of scientific research methodology in Iraqi universities		6. The extent to which scientific research methodology has been developed in Iraqi universities
	Funding scientific research to advance	Increasing funding rates for scientific research	Scientific research which contributes	1. The amount of increase in scientific research funding rates

	international publishing in solid global journals	Allocating a specific percentage of the annual financial budget for scientific research	to supporting innovation	<ol style="list-style-type: none"> The existence of a specific percentage of the annual financial budget for scientific research The number of academies and research centers that have been established in various scientific specializations The number of research papers published in solid scientific journals The number of Iraqi scientific journals that have obtained accreditation in solid journals 	
		Establishing research academies and centers in various scientific specializations			
		Encouraging solid international publishing			
		Supporting Iraqi scientific journals to obtain accreditation in solid journals			
	Protection of intellectual property rights in Iraqi universities	Applying the legal procedures related to copyright protection	A protection system of intellectual property for scientific research	<ol style="list-style-type: none"> The extent of application of legal procedures related to copyright protection How low the number of violations of intellectual property rights and plagiarism 	
		Reducing the violation of intellectual property rights and plagiarism			
	Attracting Iraqi scholars abroad	Targeting rare and modern scientific specializations	Increasing the number of Iraqi scholars returning from abroad	<ol style="list-style-type: none"> The number of Iraqi scholars in rare and modern scientific specializations returning from abroad The material and moral privileges that have been allocated for Iraqi scholars returning from abroad Issuing regulations and instructions to guarantee the rights of Iraqi scholars returning from abroad The extent of allocating a financing budget for the work of Iraqi scholars returning from abroad 	
		Determining the material and moral privileges for the returning scholars			
		Legislation of regulations and instructions to guarantee the rights of returning scholars			
		Determining the funding budget for the work of returning scholars			
	External Efficiency	Solid academic institutions capable of building sustainable strategic partnerships with the business sector and industry	Creating scientific and applied links between higher education institutions and various business entities	The number of higher education institutions capable of building sustainable strategic partnerships with the business	<ol style="list-style-type: none"> The number of higher education institutions that could create scientific and applied links with various business entities The number of laws that have been developed and amended to ensure the effective communication of higher education institutions to the labor market
			Developing and amending the laws to ensure the effective communication of higher education institutions in the labor market		
Developing the organizational structure in universities to interact with the business sector (labor market)					

		Meeting the needs of economic and social development plans	sector and industry	3. The number of organizational structures developed in higher education institutions to interact with the business sector (labor market) 4. The number of needs of economic and social development plans that have been met
	An academic professor who keeps pace with scientific development	Promoting the field skills of the university professor	A university professor who has field skills which keep pace with scientific developments in the field of specialization	The number of university professors whose field skills have been developed
	A distinguished generation that is active in society and meets the requirements of the labor market	A graduate who can understand and deal with the dynamics of the labor market and entrepreneurship	A graduate who has specialized and general skills that meet the requirements of the labor market and has an active role in the development of society	1. The number of graduates who can understand and deal with the dynamics of the labor market and entrepreneurship 2. The number of graduate initiatives that serve and develop society for the better

