LONDON JOURNAL OF SOCIAL SCIENCES

eISSN 2754-7671

An overview of education at middle and high schools in Iraq: A summary on the case of mathematics

Delan Serhang*

Bnar Karim**

Abstract

This brief investigation dives into the landscape of general education and mathematics instruction in Iraq's middle and high schools to provide insight into many facets of the educational system. The talk covers essential educational themes by giving an overview of general education and mathematics teaching and learning, emphasizing the issues faced and untapped potential within the Iraqi school system. This review aims to delve into the complexities of the current condition of general and mathematics teaching in these institutions, offering significant insights that go beyond surface-level examination. This investigation aims to identify existing barriers and prospective areas for reform and progress. This results in a better knowledge of the dynamic elements impacting general education and mathematics instruction in Iraq's middle and high schools.

Keywords: Curricula, education, Iraq, Kurdistan, mathematics, school, student, teaching, isolation

https://doi.org/10.31039/ljss.2024.8.281

* International Atatürk-Alatoo University, Bishkek-Kırgızia, delan.sarhang@stirlingschools.co.uk
**International Atatürk-Alatoo University, Bishkek-Kırgızia, bnar.karim@stirlingschools.co.uk

1. Introduction

Education is the primary catalyst for complete change in today's world, leading the reform and advancement agenda for societies seeking progress and prosperity. This needs a comprehensive assessment of systems, programs, departments, and educational leadership. Continuous renewal, upgrading, and remaining current with the latest scientific and educational breakthroughs are required to increase the quality of educational services and boost the abilities and competencies of future professionals (Hasan, 2021).

Before 1991, Iraq's education system was among the strongest in the area, with more than 100% gross enrolment in elementary school and high literacy levels among girls and boys. Higher education institutions, particularly scientific and technological ones, met worldwide standards and were manned by highly qualified professionals. Modern universities in Iraq evolved in the latter half of the twentieth century, with the University of Baghdad founding in 1957, bringing together several component institutions in the process. In the 1960s, five new universities were established: the University of Technology and Al-Mustansirya University in Baghdad, as well as institutions in Basra, Mosul, and Sulaymanyiah (UNESCO &IRAQ, 2003).

Today's educational institutions operate with quality, competitiveness, research, efficiency, and originality. As a result, they are always looking for new experiences. Shehat (2016) states, "Human development is the base and foundation of all economic, political and social development, and setting up scientific diagnosis and educational reform plans for educational reality is a major entry point for development and improvement."

Based on these points, we conducted research and analysis on an important study titled "Overview of Education in Middle and High Schools in Iraq: A Brief Summary of the Mathematics Case." Everyone shares a common goal for these fertile lands, which hold a significant place in Islamic history in terms of education, to return to their former glory. However, overcoming these challenges takes time for various reasons. In this regard, efforts were made to focus on the education system, especially mathematics education. Mathematics, which we can consider as the art of problem-solving, is an integral element at every stage of education. Therefore, the information and notes provided below under different headings add particular importance to this study.

Studies show that society at large and students alike see mathematics as a challenging topic (Rose & Gallup, 2005). Since mathematics is widely acknowledged as a topic that is relevant to practically every aspect of human existence (Aksu, 1991), almost everyone who has ever entered a formal classroom has dealt with mathematics at some point. And again, research has shown that students' success in mathematics depends on developing a favorable attitude toward the subject. In other words, positive attitudes about mathematics are critical for mathematics achievement (Hemmings, 2004; Ma, 1999).

2. Literature Review

Examining the report (Alwan, 2004) written by the Ministry of Education will provide us with more solid and hopeful information, especially since we are aware of similar challenges,

particularly in mathematics and across all fields. The report highlights that addressing these issues and revitalizing the education sector have become crucial priorities for Iraqis. The report discusses short—and medium-term plans to resolve these problems and renew the education sector. These plans, beginning with ensuring universal access to quality education, are genuinely promising.

Al-Agaili's (2023) study sought to identify the barriers to teaching and learning mathematics at the intermediate level from the perspectives of instructors and students in Iraq. The study found that instructors and students in Iraq face barriers to teaching and studying mathematics at the intermediate level.

The research (Hussein, 2021) was conducted in numerous cities across Iraq to analyze obstacles and constraints to teaching from the perspective of subject instructors. The purpose was to identify these issues and impediments and develop solutions to improve the efficiency of educational performance in the intermediate stage. After doing the investigation and statistically analyzing the data, the researcher came to the following conclusions:

1-The growth in the number of pupils in a classroom presented issues for instructors and schools, limiting their ability to properly monitor and improve students' educational and scientific performance, particularly in mathematics.

2-The frequent disruptions to work hours were noted as detrimental to pupils' academic performance.

3-The Ministry of Education provided little encouragement for subject instructors and mathematically inventive students.

Furthermore, in our research, we endeavored to investigate a recent unpublished master's thesis (Al-Zalbani, 2014) that explores the learning skills presented in the middle third-grade mathematics book from a teacher's standpoint. This study illuminated our understanding and offered valuable insights.

Similarly, another unpublished master's thesis prepared by (Al-Habbash, 2014), titled "Obstacles to Learning Mathematics and a Proposal to Overcome Them for Eleventh-grade Students," has provided insights.

In another mathematics-focused study, the understanding of the concept of function among middle school students was investigated. Three main aspects are focused on here: students' ability to define the concept of function, their ability to recognize different function representations, and their ability to transform between different representations. To assess these points, a test was developed and administered to students. Ultimately, it is encountered that there is a need to pay a bit more attention to mathematics education. (Hussein, Cs´ıkos, 2021).

In another study focused on the Kurdistan region of Iraq, which is experiencing faster development compared to the cities in the south of Iraq today (Waswa & Al-Kassam, 2023), the entrenched perception of mathematics as a 'difficult' subject worldwide has been examined and analyzed for its manifestation as specific psychological barriers in the Kurdistan region of Iraq. The results confirm that some psychological barriers to mathematics for students in the

region include a lack of self-confidence, anxiety, and an inadequate attitude toward mathematics. The study also identifies the significant role of teachers in influencing students' attitudes toward mathematics and provides suggestions and recommendations for improving the situation.

This has been addressed in another article (Vernez et al., 2014) that needs to be examined to better understand the system, especially in Kurdistan. The Kurdistan Regional Government initiated a comprehensive overhaul of the K–12 educational system in 2007. There were several reasons behind this. There was broad agreement in this new setting about the necessity of updating the nation's educational system: The population was expanding rapidly, the educational system was overcrowded, the curriculum was decades outdated, there were not enough instructors to teach critical subjects like English and arithmetic, and only a small percentage of pupils graduated from high school.

In addition to all these studies, we believe it is essential to address an exciting topic raised in the published doctoral thesis by Baser (2016). Among the challenges identified in the current research, there is a noteworthy aspect related to the lack of information about education (especially in math and science) among gifted and talented students and teachers. As a result, the study points out that there is no relevant and suitable treatment system for gifted children in schools in Iraq. We find this study significant in highlighting another dimension of the difficulties experienced, shedding light on the lack of appropriate systems for addressing the educational needs of gifted and talented students and teachers.

Another study that will help us in this regard is "Effects of Fundamental Schools on Mathematics Performance: Iraq as a Model." (Dikheela & Uraibi, 2010). Sometimes, after passing the elementary stage, students experience dread before beginning the intermediate stage. This aspect undoubtedly contributes to what is known as the transition gap. Of course, this gap would impact pupils' scientific achievement; Basic Schools first arose in Iraq in 1996. This sort of school strives to reduce the transitional gap's impact and improve its students' scientific performance. The findings demonstrate that the experience was successful, so the conclusions and suggestions focus on extensively implementing essential school competence. One question determines if an event is successful or unsuccessful: Does it improve students' ability in mathematics?

3. Education System

It is necessary to inform the world about the current status of education in Iraq. Iraq's education system is divided into four major levels: elementary (6 years), intermediate (3 years), upper intermediate (3 years), and university. Intermediate and upper intermediate schools are sometimes merged to form a single institution called secondary school (6 years). The idea behind basic schools in Iraq is to unite elementary and intermediate schools into one institution. In this case, pupils will attend the same schools from first to ninth grade (9 years).

Basic school implies that students study from the first to the ninth grade (elementary and intermediate in the same school). Non-basic schools are the conventional arrangement that separates elementary and intermediate schools. All public education, from pre-school to post-

secondary, is free. Schooling was required up to grade 6 until 2009, and then it was extended to grade 9. As far as we know, systems need to be in place to ensure that students who are required to attend do so.

The Kurdistan Region initiated a comprehensive overhaul of the K–12 educational system in 2007. A new, more demanding curriculum was implemented, schooling became mandatory through grade 9 rather than grade 6, and the three school levels that had previously existed were split into two: basic (grades 1–9) and secondary (grades 10–12). It also introduced two national tests and implemented mechanisms to lower the high percentage of student holdback in the early grades. The reform also included teacher preparation; a bachelor's degree is now mandatory for all instructors (Vernez et al., 2014).

Researchers have increasingly focused on the fundamental school experience, which has been implemented in various nations. Larry et al. (1984) found that basic schools scored higher on learning atmosphere, punishment, and suspensions. Tahir and Hind compared schools that use the fundamental system versus those that do not for the first graduation patch in 2007, using discriminant analysis to determine the benefits and drawbacks of this system. Tahir and Hinds investigated all disciplines learned by students, including mathematics. However, the survey discovered a preference for fundamental schools, particularly in "Biology, Mathematics, and Physics."

In Iraq, even if enrollment declines are concerning in and of themselves, the physical state of the school has gotten so bad that it is negatively affecting attendance rates and the quality of instruction. These days, teaching too many students in two or three shifts is necessary. Working several shifts in the same facility shortens the school day and makes it more difficult for students to learn the necessary curriculum. Compared to other nations, the average teacher-to-student ratio seems adequate. Nonetheless, there are hard-to-fill spots throughout the country and an unequal distribution among the governorates. Even while the nation still produces many teaching candidates, during the past 20 years, there has been a significant decline in the availability of pre-service and professional development programs (Alwan, 2004).

4. Educational Environment

A significant component is the shift in instructional program standards, emphasizing understudy-focused training. Foundations for math and other subjects are linked to several factors, including the school environment, the student environment, and the quality of educational services provided.

We can emphasize the following points.

1. Assessing the math atmosphere in schools.

2. Identify the role of educational administration in schools.

3. Student satisfaction in the math education environment

4. Teachers' satisfaction with their educational environment.

Teaching is a marathon process that demands dedication and hard work to complete. Repeat the cycle to prepare for the next race, reflecting on the experience acquired and the findings of the variable diagnosis analysis. The experience's consequences reflect the documented personal sentiments as well as the reconstruction of the encounter. Based on broad observations, the strategy can take shape and be expected in the preparation of the following event (Salman et al., 2023).

This technique can help educators improve an efficient and effective instructional environment. It involves determining what to assess, determining how to execute, evaluating, and applying the results (Lozzi et al., 2012). The step-by-step instructions, as well as any alternate methods and pathways to reach these standards, are predicated on the idea that the evaluators are the school professors. Assessment is not something that everyone enjoys doing. It is often avoided unless when issuing grades (Lange Rober, 2014).

The approaches ultimately lead to an assessment and judgment of the efficacy of the environmental education program. The average and strategy for completing assignments with limited resources demonstrate learning efficiency. Evaluation is not considered research since it does not include making conclusions. It comprises seeking new information and enhancing one's experiential knowledge. Evaluating environmental education teaching is vital for choosing the best road ahead in terms of benefits to the students you teach in school and, most importantly, to you as an instructor (Srbinovski et al. 2010).

The continual assessment process leads to considerable instructional improvement, efficacy, and the successful change of teaching and learning approaches. Improving learning effectiveness entails considering the classroom, the surrounding environment, and the physical, emotional, and social climate. Furthermore, you can access the school environment, community, and educational materials (Pirchio et al., 2021). The process of learning to acquire information, define values, and improve moral reasoning. Continuous environmental improvement is an independent assessment of critical thinking and action skills.

Teachers can evaluate the characteristics of these crucial aspects in three ways:

1) students' learning needs to be diagnosed.

2) assessing achievement to assess the program's efficiency and effectiveness; and

3) employing assessment as an effective teaching tool (Hugerat et al., 2021; Annelis, 2010; UNESCO, 2018).

4. Environmental Education Goals

The necessity for an environmental education evaluation arises from ecological fitness, which is required for life to coexist with a loving and healthy environment. The significance of education in creating and sustaining a healthy learning environment has received more attention in recent years. One type of parameter is responsibility. Many comments have been written on the objective, highlighting this duty. There is a clear understanding that aligns with

the Belgrade Charter: A Global Framework, which states the goal of environmental education. They also classified education to develop a worldwide populace that is aware of and concerned about the environment and its issues. The variables develop knowledge, skills, attitudes, motivations, and a willingness to work independently and collaboratively to tackle modern challenges. The relevance and utility of this goal statement are highlighted by the guidance it has offered instructors in defining goals for their program. One of the areas in Iraq where education is seriously needed is this. This requirement has begun to be addressed by the relevant education authorities. However, the process needs to be accelerated here, as in every aspect of education.

5. Educational Reforms

Education reform is a critical component of Iraq's reconstruction efforts. Over the last two decades, major educational indicators have gradually declined, erasing the significant achievements made in the education sector. Major wars failed military undertakings, and misguided policies have consistently worsened all basic human services, with education suffering the most (Alwan, 2004).

Despite continuous hurdles, Iraq's education system continues to function. To date, actions have included rehabilitating and building new schools, recruiting teachers, focusing on girls' education, reforming curriculum, providing learning resources, offering distance learning programs for out-of-school children, reforming organizational charts, and collaborating with external partners.

We will concentrate on revamping the math curriculum, which is required to raise a new generation with a prosperous outlook on life. The most significant variables that may contribute to generating curriculum content that fits with the changing needs of the person and society are the following (Education in Iraq, n.d.):

- Respect for individual variances.

- Promoting critical thinking.

- Applying problem-solving and experimental techniques.

- Making scientific information applicable in everyday life.

- Increasing textbook quality through continual content revision, design, and printing.

- Experiment with textbooks.

- Include modern educational themes such as popular, environmental, hygiene, and traffic instruction.

The educational system is undergoing fundamental changes across all aspects, including:

- Educational Policy

- Educational Structure

- Curriculum and texts
- Educational Technologies
- Educational infrastructure and school buildings
- Preschool education (kindergartens)
- Basic and compulsory education
- Illiteracy and Adult Education
- Educational assessment (school and general exams)
- Computer services (informatics and computer education)
- Educational administration and innovation
- Integration of lucrative work into schooling

However, we may summarize the selected techniques as follows (Iraqi CF, 2012):

- With the student as the main point of the educational process, he should enhance his standards by infusing his instructional programs with information.
- Offering education to everyone - Establishing learning centers with prerequisites
- Creating teaching materials and instructional activities for basic schools.
- Integrating computers into teaching and learning.
- Prioritizing science, mathematics, and foreign language curriculum as the foundation for cultural progress. - Focusing on evaluating educational programs and student performance.

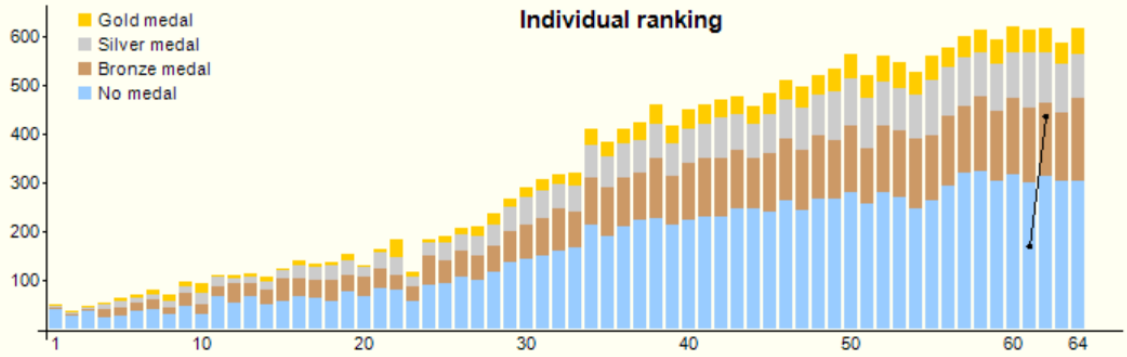
The Kurdistan Region of Iraq has made significant progress in raising the level of education in the area. As a result, early childhood English language programs and encouraging critical thinking in the classroom were included in the school curriculum. The Kurdistan Region's educational reform will serve as a model for other regions of the nation that also require educational reform. While KRG education reform encompasses several areas, we would primarily like to address the following aspects of math (Vernez et al., 2014). A new Harcourt mathematics and science curriculum was approved in 2007–2008, replacing the previous one that had been in use for 35 years. It began with grades 1, 2, and 3 Basic and continues to cover the remaining grades this year.

6. The strange behaviors of schools

Internal readiness or propensity to meet and address difficulties and tasks in a specific manner -attitudes are impacted by knowledge and beliefs and typically result in behaviors contradicting the country's national spirit. All of these factors influence the educational level of the entire generation. Iraq was ranked 102 out of 110 countries in the 58th International

Mathematical Olympiad, which took place in Brazil. It is a hazardous sign of the educational system's lowest level after 2003. The International Mathematical Olympiad (IMO) is the World Championship Mathematics Competition for High School Students, conducted yearly in a new country. The first IMO was held in Romania in 1959, with participation from seven countries. It has steadily spread to over 100 nations across five continents. The IMO Board guarantees that the tournament takes place annually and that each host country adheres to the IMO's norms and traditions.

However, a student named Mohammed Ali Othman (IMO, n.d.). from Stirling Schools (US Colleges-Sulaymaniyah) has started challenging this trend in Iraqi history. Mathematics Olympiad selections are being organized nationwide in Iraq. Numerous national and international mathematics competitions have dispelled this hostile atmosphere. Of course, the support provided by education ministries and private schools that take a pioneering role in education, especially those dedicating a separate focus to mathematics, holds a significant place. Stirling Schools, operating in various cities in Iraq since 1994, are particularly noteworthy in this regard.



Year	Country	P1	P2	P3	P4	P5	P6	Total	Rank		Award
									Abs.	Rel.	
2021	Iraq	7	0	1	7	0	0	15	180	71.04%	Bronze medal
2020	Iraq	7	0	0	0	0	0	7	445	27.80%	Honourable mention

Figure 1. IRAQ IMO Result 2021

These competitions follow the format of competitions such as IMO, Kangaroo, and Math Challenge and take on a different dimension through project competitions organized at national and international levels. INPO, INTEL, and GENIUS Project Olympiads are just a few examples.

Positive developments in mathematics, especially those mentioned in the education reforms, can be observed in these schools. In addition to assisting state schools, the leadership of private schools and updates made by education ministries based on diverse results create a conducive atmosphere where everyone benefits. The study, explaining the enrichment of

schools and attaining more prosperous outcomes, delves into these aspects in more detail (Kurudirek & Berdieva, 2024).

7. Recommendations

The inclusion of modern teaching methods in our educational system must be overlooked. The problems facing the education system range from inefficient management and severely deteriorating physical infrastructure to those related to inadequate access and inequalities in education, low quality, weak preparation and training of teachers, outdated and distorted curricula, and ineffective instructional methods. Addressing these issues and revitalizing the education system are now important priorities for Iraqis. The short- and medium-term plans can be based on these policy orientations:

1. Creating the education management information system and updating and enhancing the data quality for evidence-based planning

2. Putting the MOE's new structure into effect and strengthening its management capabilities

3. Rebuilding the educational system's physical infrastructure, especially school buildings

4. Reorienting the teaching staff and creating a thorough teacher training program with an emphasis on citizenship and instructional strategies

5. Agreeing on how the Iraqi educational system would look in the future and starting the curriculum reform process.

6. To adapt to all kinds of developments worldwide, emphasis should be placed on mathematics, as well as other fields, in these lands that were once the cradle of knowledge.

8. Conclusions

Although Iraq faces numerous challenges, perhaps foremost among security issues, another difficulty is brain drain. However, despite all these challenges, significant private sector and foreign capital investments in education are notable, particularly in the Kurdistan region and central Iraq. This helps maintain our hopes, even in the face of adversity. Despite the various reasons for people leaving Iraq as shown in Figure 2 below and the multitude of reasons mentioned above, we remain hopeful both in terms of the overall quality of education and the aspect related to mathematics education. Beautiful and very positive developments are happening and will continue to happen.

Falling into mud does not diminish the value of gold. These lands, which have cradled many civilizations throughout history, have always been a center of attraction by nurturing numerous scholars. We have full confidence that this allure will continue. In this regard, we support the steps taken by the Ministry of Education and private enterprises, and we see an Iraq in the field of education that is improving every day.

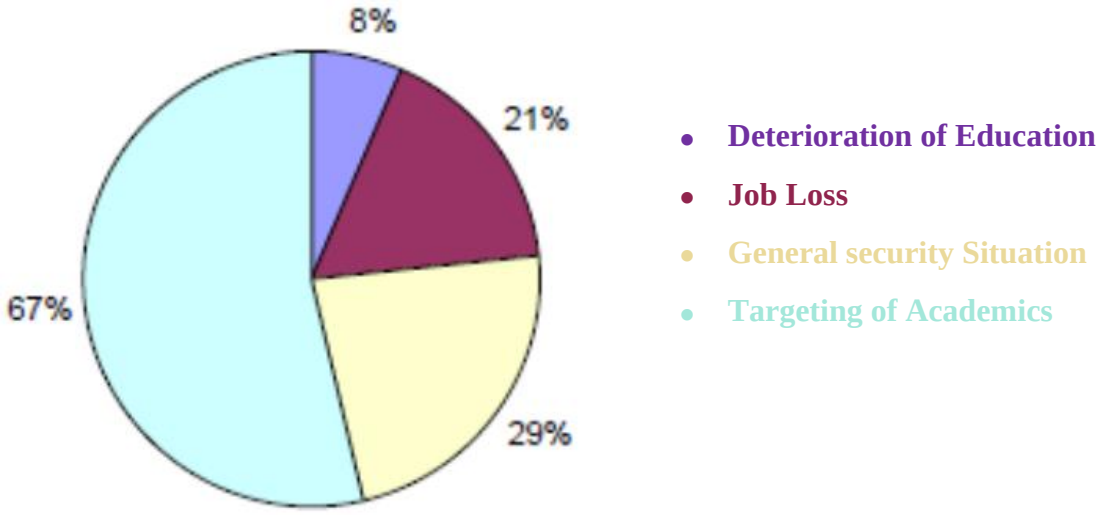


Figure 2. Reasons to leave Iraq

Finally, this paper provides an overview of general education and mathematics instruction in Iraq's middle and high schools. By delving into many parts of the educational system, it sheds light on crucial issues, revealing both the limitations and untapped potential of the Iraqi school system. This assessment offers valuable insights that go beyond surface-level analysis by extensively assessing the current situation of general and mathematics education. It tackles present roadblocks while also highlighting possible areas for reform and growth. Ultimately, this study contributes to a better understanding of the dynamic factors that influence general education and mathematics teaching in Iraq's middle and high schools, paving the way for more informed actions to improve the country's educational quality.

References

Annelise Carleton-Huga, J. William Hugb (2010). Challenges and opportunities for evaluating environmental education programs. Evaluation and Program Planning, 33(2), 159-164. https://doi.org/10.1016/j.evalprogplan.2009.07.005

Aksu, M. (1991). A study on the effectiveness of different teaching methods and mathematicsachievement levels on achievement, retention, and attitude toward mathematics and selected topics. Educational Research and Evaluation, 7(1), 1-18.

Al-Habbash, A.Y. (2014). Obstacles to learning mathematics and a proposal to overcome them for eleventh-grade students. A magister message that is not published. The Islamic University of Gaza.

Al-Agaili, L. (2023). Obstacles to teaching and learning mathematics scheduled for the intermediate stage from the point of view of teachers and students in Iraq. Texas Journal of Multidisciplinary Studies, 24, pp.64–72.

Alwan, A. (2004). Education in Iraq: Current Situation and New Perspectives. A report on the situation today and our strategies for the immediate future. Ministry of Education

Al-Zalbani, B. (2014). Learning skills included in the mathematics book for middle third grade from a teacher's perspective. Unpublished MA Thesis, Umm Al-Qura University

Baser, C. (2016). Teaching Gifted and Talented Children by Applying Enrichment and Acceleration Programs (Teaching Math and Science in Primary Schools in Iraq). Extended Abstract of Doctoral Dissertation, International Black Sea University.

Dikheela, T., Uraibi, H. (2010). Effects of Fundamental Schools on Mathematics Performance: Iraq as a Model, Procedia - Social and Behavioral Sciences, Vol 8, pp. 236–241. https://doi.org/10.1016/j.sbspro.2010.12.032.

Education in Iraq. (n.d.), https://wikipedia.org/

Hemmings, B. (2004). Beyond mentoring and coaching: Developing the skills of school leaders. International Journal of Leadership in Education, 7(3), 167-176.

Hasan, H., et al. (2021). Designing criteria to evaluating the performance of educational supervisors and specialists of physical education in the Iraqi Ministry of Education from the point of view of educational supervision experts. Turkish Journal of Computer and Mathematics Education Vol.12 No.8, 1867-1877

Hussein, A. N. (2021). Problems of secondary school students in studying mathematics from the point of view of the subject's teachers. Nasaq, 8(32), pp 726-745.

Hugerat, M., Kortam, N., Kassom, F., Algamal, Sh., &Asli, S. (2021). Improving the Motivation and the Classroom Climate of Secondary School Biology Students Using Problem Based – Jigsaw Discussion (PBL-JD) Learning. Eurasia Journal of Mathematics, Science and Technology Education, 2 17(12), em2036 https://doi.org/10.29333/ejmste/11304

Hussein, YF., and Cs´ıkos, C. (2021). How do secondary school students from the Kurdistan Region of Iraq understand the concept of function? Teaching Mathematics and Computer Science. 19/2, pp. 221-244, DOI: 10.5485/TMCS.2021.0529

IMO, International Mathematical Olympiad. (n.d.). Results Ranking of countries. https://www.imo-official.org/results.aspx

Iraqi CF, Iraqi curriculum framework. (2012). UNESCO Iraq office, UNESCO International UNESCO Bureau of Education (IBE),

Kurudirek, A., & Berdieva, O. (2024). The more empowered schools, the more fruitful students. Educenter: Jurnal Ilmiah Pendidikan, 3(1), 1–9. https://doi.org/10.55904/educenter.v3i1.921

Larry J. Weber, Janice, K. McBee & Joseph, H. Lyles. (1984). An Evaluation of Fundamental Schools. A Journal of Applied Social Research, 8, pp. 595–416.

Lozzi, Louis A. (2012). Research in Environmental Education. (The first report of the National Commission on Environmental Education Research of the North American Association for Environmental Education), p 437

Lange, Robert R. (1980). Environmental Education Needs Assessment and Evaluation eManual. Vol.2, p 534

Ma, X. (1999). Immediate and delayed effects of coaching on principal leadership practices Educational Administration Quarterly, 35(4), 548-566. https://doi.org/10.1177/0013161x99354004

Pirchio, S., Passiatore, Y., Panno, A., Cipparone, M. & Carrus, G. (2021). The Effects of Contact with Nature During Outdoor Environmental Education on Students' Wellbeing, Connectedness to Nature and Pro-sociality. Front. Psychol., 2021. https://doi.org/10.3389/fpsyg.2021.648458.

Rose, L. C., & Gallup, A. M. (2005). The 37th annual Phi Delta Kappa/Gallup poll of the public's attitudes toward the public schools. Phi Delta Kappan, 87(1), 41-57.

Srbinovski, M., Erdogan, M., Ismaili, M. (2010). Environmental literacy in the science education curriculum in Macedonia and Turkey. Procedia - Social and Behavioral Sciences, 2(2), 4528-4532. https://doi.org/10.1016/j.sbspro.2010.03.725.

Shehat, H. (2016). The role of educational indicators in evaluating the performance of educational institutions, the Sixth Arab International Conference for Quality Assurance of Higher Education, Cairo.

Salman, J., Al-Bahrani, H., Kadhum, A., Al-Amiery, A. (2023). Investigation of the Educational Environment for Middle Schools in Iraq. American Journal of Research in Humanities and Social Sciences, Vol 18, pp. 44–54.

Tahir, R.D., and Hind, J.K. (2009). A Comparative Study between Fundamental and Non-Fundamental Schools. Al-Qadisyia Journal for Administration and Economics Sciences, 11, pp. 171-181

UNESCO. (2018). The Belgrade Charter: A Global Framework for Environmental Education, p 734.

UNESCO &IRAQ. (2003). UNESCO and Education in IRAQ fact sheet, http://portal.unesco.org/en/ev.phpURL_ID=11216&URL_DO=DO_TOPIC&URL_SECTION=201.html

Vernez, G., Culbertson, S., Constant, L. (2014). Strategic Priorities for Improving Access to Quality Education in the Kurdistan Region—Iraq. RAND EDUCATION.

Waswa, D.W. & Al-Kassam, M.M. (2023). Understanding Challenges of Mathematics Education in Iraq: A Focus on Kurdistan Region. YMER, DOI:10.37896/YMER22.06/79 Vol.22, Issue 06, pp 931-946.