

The Influence of International Tests on Arabic Educational Policies Through Examining the Results of Arab Countries in PISA

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Abstract:

This research aimed to investigate the participation of Arab countries in the international exams and to explore the reasons behind their participation. The study focused on PISA and on the Arabic participation in this test. Eight Arabic countries have participated in the test which are (Tunisia, Qatar, UAE, Jordan, Lebanon, Algeria, Morocco, Saudi Arabia). The data extracted from the Arabic participation showed that all Arabic countries are performing under the average of OECD countries. The findings of this research revealed that the majority of Arabic countries have participated in the test to identify the performance of their students among other countries worldwide and to track their progress in education. Moreover, the results showed that these international exams are affecting positively on policy-makers' decisions to make the correct improvements in education based on PISA results. Also, the study has referred to a number of lessons learned from the participating countries.

Key word: (*International exams, PISA, PIRLS, TIMSS, OECD, Arabic Participation*)

CHAPTER ONE

1.1 Introduction:

Many countries in the world pay attention to improve the substantial skills of the learners, including reading and writing skills, science, mathematics, etc. These countries have motivated the students to compete at the local and international levels by participating in different international tests such as EGRA, EGMA, TIMSS, PIRLS and PISA. As these tests aim to evaluate the educational systems of participating countries.

In this research, international exams will be discussed and the focus will be on the participation of the Arabic countries in these exams. Due to "Programme for International Student Assessment" PISA is considered as one of these international exams that have a major role in reforming education for the participating countries based on students' outcomes (Breakspear, 2012). Therefore, the researcher will highlight the impact of PISA on the educational policy of the Arabic countries and it will be discussed with more details.

1.2 Research Problem:

Most of educational systems in the Arab world suffer from different problems, especially if compared with the developed countries. Based on the data collected from the international organisations such as OECD, UNESCO, World Bank, it has determined that even high-income Arabic countries such as Qatar and United Arab Emirates (UAE) have attained low positions in the rank of nations in terms of education (Bloem, 2013: 17). Recent research has suggested that these countries endeavour to improve their education by participating in the international tests. Therefore, this research seeks to address the following questions:

First, why there are more Arabic countries are continue joining in PISA?

Second, what is the impact of international tests on the educational policy of the participating Arabic countries?

Third, what are the lessons learned from the participating countries?

1.3 Research Aims:

Nowadays, we live in a world which changes rapidly. The globalization has created a global market for education which yesterday's solutions is incapable to meet today's problem. The world now towards upgrading their educational plans by depending on what is called "International exams" which considered as the new remedy to fix the educational systems. The main focus of this research will be on the initiative of Arab countries to join the Programme for International Students Assessment (PISA) as an attempt to improve their educational systems. Hence, current research aims to:

- Review research conducted on international exams, especially these who concentrate on PISA
- extend our knowledge of international exams and its influence on the Arabic educational systems.
- Examine the extent of international tests contribution in reforming educational policy.
- Critically trace the progress of Arabic participation in the international exams.
- Clarify the reasons and motivations for part taking in these exams.
- Explore the experience of Arabic contributions and get advantages and lessons regarding international tests.

1.4 Research Importance:

Recent development in education have highlighted the need for international exams as a tool to reform educational policy. Having reviewed the literature associated to international exams, the researcher raised concerns about knowledge gap in the written literature regarding this subject. Especially when it comes to Arabic resources. the researcher also noticed that there is lack of research done regarding international exams for the middle-east region and the Arabic countries in particular. Majority of studies have been focused only on the advanced countries that topped the rank in PISA such as China, Japan, and Estonia. Therefore, this research will participate in extending the knowledge about international exams in this region and highlights the Arabic participation and extract the lessons from this participation. Moreover, the research will reveal whether the decision makers benefits from such international exams or not regarding bringing change to their schools.

1.5 Research Limits:

Current research is limited to the concept of international exams, its goals, its impact on educational systems, and the targeted domains that seek to measure. To be more precise, measuring students' skills in the Arab countries. What is more, this research is limited to Arabic countries which joined PISA represented by: Tunisia, Qatar, Jordan, UAE, Algeria, Lebanon, Saudi Arabia, and Morocco.

1.6 Research Methodology:

"Many educational research methods are descriptive, that is they set out to describe and to interpret what is" (Cohen, et.al, 2005:169). The researcher therefore, has chosen the descriptive approach as it is considered appropriate for the purpose of this study. Descriptive analytical approach also emphasised by Al Agha & Al Ustaz (2000:83) as it aids researchers who concerned with a particular phenomenon and attempt to describe, classify, and analyse it. This approach also helps the researchers to discover the correlation between the variables through gathering the required data then analyse them.

CHAPTER TWO

2.1 Background About International Exams:

To date various international tests have been developed and introduced to measure the performance of students. There were many attempts to establish an international exam that helps countries to compare their educational system with other nations. For instance, in 1964 the First international Mathematics Study (FIMS) had been introduced by the International Association for the Evaluation of Education Achievement (IEA) to measure the outcomes of different schooling systems as an attempt to diagnosing the failure (Purves, 1991:35). Then, an international agreement from various countries of accepting a "new mathematics" as a new material to be taught in schools having discussed what were the new materials that should include in the curriculum. 13-year-old students from different countries such as United States, England, Scotland, Australia, Finland, Belgium, France, Germany, Netherlands, Sweden, Japan and Israel have participated in this programme. The work on this programme has continued after 1960s, 1970s, 1980s and 1990s. A series of international exams followed FIMS such as SIMMS and TIMSS, PIRLS, PISA were controlled by governments and supervised directly by the educational policy-makers.

In today' world, the need for learning skills such as reading, writing, mathematics, and science by individuals is considered as prerequisite for social development to empower them to achieve prosperity for their society in education and economy. reading and writing is considered as most important competencies acquired by students in their primary education. it is the foundation for any other learning process and it is the cornerstone for mastering and learning other subjects. Therefore, measuring students' performance in reading, writing, mathematics, and science is substantial for educational decision-makers and curriculum officials and even for the researchers whom concerned in improving education in their country. Educational policy-makers who are in charge of educational

leadership advocate applying studies that target to measure the performance of their students by involve them in the international exams. (Qadoori, 2019:16)

2.2 The Concept of International Exams:

Due to the increasing support from educational experts all over the world and advocating the value of conducting a widescale international comparison in the field of education. IEA (The International Association for the Evaluation of Educational Achievement) played a distinctive role in this aspect. At the outset, IEA employed a group of researchers then it became a cooperative body for research institutes which concentrate on academic research in the first place. Since the 1980s, IEA started with focusing on educational stockholders and policy-makers until the number of member countries increased to almost 60 members around the world. The initial focus to establish an international exam was on mathematics and science when educational research and studies have started to investigate since 1980-1984 and continued till 1990. Later, a decision has been made by IEA and member states to launch an assessment for students in both mathematics and science every four years. The most famous study for IEA was the third study for mathematics and science which conducted in 1995 for all three groups of the participating countries which represented by more than 40 countries.

However, PIRLS has started at 2001 which is designed to assess students' performance across the world each five years and enable the countries to monitor their educational systems. (IEA, 2017)

On the other hand, "The Organisation for Economic Co-operation and Development" (OECD) coined PISA and presented it in 2000. Its purpose was to measure the extent of mastering the skills of mathematics, reading, and science that the student has learned in his school at age of 15. Moreover, this exam is conducted once every three years and it is monitored and supervised by the OECD. (OECD, 2012:8)

2.3.1 TIMSS: Trends in International Mathematics and Science Study

TIMSS is an international study aimed to measure global trends in science and mathematics. It assesses the level of performance in mathematics and science of 4th grade in the primary schools and the 8th grade (2nd intermediate) in intermediate schools in different countries. TIMSS focuses on comparing the differences of curriculum in each country and find the correlation between students' performance and the information of their curricula. The study is conducted by the IEA which is located in Amsterdam, Netherlands. This international study started in 1995 then continued to be done every four years. TIMSS held so far seven times: 1995, 1999, 2003, 2007, 2011, 2015, 2019.

2.3.2 Target Population:

Policy-makers and educational planners have decided to make TIMSS targets students in their first four years of study which is (4th grade) in primary schools. Then, targets them at the end of the next four years at their schools which is (8th grade) at the formal education.

2.3.3 TIMSS Objectives:

- Measure and compare the progress in learning mathematics and science with other nations simultaneously for the 4th and 8th grade students.
- Improving learning level and boost it to a global quality level.
- Monitoring trends and educational indicators of the 4th and compare it with the same indicators of the 8th grade. As the students who participated in TIMSS in the 4th grade will be examined again in the 8th grade in the second cycle of TIMSS.

2.3.4 TIMSS Importance:

The importance of TIMSS underlies its ability to measure the level of student's attainment and compare it with the level of attainment for another student on the global level to improve education level and elevate it to the global quality level. In addition, it investigates effective factors which impacts student's attainment through the surveys represented by students' questionnaire, school's questionnaire, teacher's questionnaire, and parents' questionnaire in order to measure the level of student's performance within global standards (Qadoori, 2019:22)

2.4.1 PIRLS: Progress in International Reading Literacy Study

PIRLS based on the comparison to measure the capabilities of the 4th grade students in their mother tongue reading skills. It aims to determine their weakness and strength aspects to develop them and mastering them. This is because any weakness in reading skills will affect student's attainment in other school subjects. (Ibrahim & Abd-Alhameed, 2018:602)

2.4.2 Target Population:

Educational planners have decided to make PIRLS targets pupils in the 4th grade because this age represents an important turning point in the child's development as a reader. At this point, the child has learned how to read.

2.4.3 PIRLS Goals:

- Provide information on fourth grade students' abilities to read and it helps to analyse the differences in the performance of male and female among different schools.
- Comparing the level of students in a specific country with the level of other students in another nation,
- Identify factors related to knowledge acquisition such as teaching practices and materials.

2.4.4 PIRLS Importance:

- PIRLS provides educational policy-makers with a set of global data in addition to country's data related to reading attainment of the 4th grade students.
- It focuses on investigating and analysing educational systems to extract the cons and pros of each system.
- It is also providing the country with important data regarding student's home environment, school environment, and reading activities in schools. (Qadoori, 2019:17)

2.5.1 PISA: Programme for International Students Assessment

PISA is an international survey conducted every three years to evaluate the performance of 15-year-old students in three main areas: mathematics, reading and science in addition to problem solving (Gurra, 2012). It aims to assess the progress of countries' educational systems all over the world triennially. More than 70 countries and economies have engaged in PISA and they are tracking their progress according to the OECD's survey. In 2000, the OECD "Organization for Economic Cooperation and Development" which located in Paris, France has initiative (PISA). PISA held so far seven times: 2000, 2003, 2006, 2009, 2012, 2015, 2018. The test lasts for two hours, and in each cycle of the exam, the focus of 70% of the materials will be on one of the three main domains (Qadoori, 2018: 19). For example, in 2018 the main focus was on reading, then the next cycle PISA will focus on one of the two remaining domains either mathematics or science. The test usually contains two types of questions: multiple choices and essay questions. The number of students that participate in PISA is 4500-10000 students in each country. (Qadoori, 2018: 21)

What is more, this international exam has an important part which gives abundant information about the students and the school. The accompanied survey has given essential information and makes this test different from all other standardised tests (OECD, 2009:102). For instance, it asks the students to give answers about different questions such as their life at home, their background, the social-economic background of their parents and the numbers of books exist in their houses. Besides that, headteachers have to participate in a separate survey which gives extra information about school's location, whether it is located in rural or urban area, and whether it is private or public school (Plackett, 2014:1).

2.5.2 Target Population:

What is making PISA distinguish from other international exams is that it assesses students aged 15 years or regardless in which classroom they belong to. (Gurra, 2012)

2.5.3 PISA Goals:

- Evaluating current situation for the three main domains (mathematics, reading, science) and compare it with other participating countries.
- Providing a set of educational data helps education officials to improve and boost targeted domains.
- Identifying the factors which affect students' attainment in the targeted domains and focusing on what is useful for the student; the teacher; the schools. (Qadoori, 2018: 19)

2.5.4 PISA Importance:

PISA focusing on deep and wide approach to measure knowledge and skills and students' trends in school curriculum. It concentrates on using these skills beyond school life to deal with life's challenges in different situations. This kind of tests based on the idea of dynamic model for Lifelong learning which explains that new skills and knowledge is necessary for a succeeded adaptation (Gurra, 2012). Furthermore, this survey accompanied with PISA gives an ultimate background for policy-makers to analyse the whole data to make the required modifications for their education policy (Plackett, 2014:1). Moreover, "International assessment results may provide participants with an opportunity to not only compare their results internationally, but to also learn about other countries' education policies with a view to making use of this information to develop their own policies" (Bloem, 2013: 7). Another important point is that PISA is seeking for helping educational policy-makers to shift from looking upward within the schooling system towards viewing what is outward the educational system. More precisely, it looking forward to the next teacher, next school, and eventually for the next country by providing the necessary data to the educational officials so they can make the right reform decisions. (Schleicher, 2019:3)

In a nutshell, the table below clarifies the differences between each type of international exam:

International Exam	TIMSS	PIRLS	PISA
Full exam's name	Trends In International Mathematics And Science Study	: Progress In International Reading Literacy Study	Programme for International Students Assessment
Assessment aspect	Mathematics, science	Reading	Reading, mathematics, science, problem solving
Grade	4 th and 8 th (2 nd intermediate)	4 th	3 rd secondary
Age	10 and 14 years	10 years	15 years old
Exam's cycle	4 years since 1995	5 years since 2001	3 years since 2000
Last conducted	2019	2016	2018
Next cycle	2023	2021	2021
Date of exam	March - June	March- June	September
Purpose of exam	It measures recent trends in mathematics and science, and describes the educational system in terms of students, their trends, teachers, curriculum, training and classroom activities	It measures the level of reading comprehension, and the extent of family and school participation in boosting children's learning process in reading	Evaluating the level of educational systems by assessing student's performance at the end of basic education stage And measure their ability to apply knowledge in the situations of life and society
It focuses on	Science and mathematics	Reading	Life skills
Additional information	Questionnaires applied to learners focusing on gathering information about teachers, school activities and teacher behaviour in the classroom	Questionnaires applied to learners, teachers, headteachers, and parents to identify ways to support and enhance reading for students	Questionnaires applied to learners focusing on determine their personalities and their attitudes towards the subjects And learning strategies
Supportive organisation	IEA	IEA	OECD

Table (1) Comparison between international exams:

Source: (Ibrahim & Abd-Alhameed, 2018:604)

2.6 The Role of OECD:

The OECD is a non-government organisation that aims to encourage strategies or policies which foster the improvement of economic and social well-being all over the world. OECD made this kind of tests distinguish from the former programmes by including some specific features. The design of this test focuses on how to

evaluate the skills and knowledge for students who have completed their compulsory education, and linked this knowledge with situations in their actual life. In other words, PISA aims to measure how well those students will be in applying their knowledge in the society to make benefit from their education. By collecting the background information through the questionnaire, analysts will be able to analyse the context and generate useful data about their performance (OECD, 2009:75). What is more, PISA matches the socio-economic background of students with their attainments. Thus, the triangulation process assesses the effectiveness of students, teaching and parents' role as well (Plackett, 2014:1).

Besides that, the design of most traditional international exams depended on the "international commonality in school curriculum" (Baird, et al. 2011), while PISA has eliminated that. The OECD has succeeded in adopting the idea of choosing three global denominators, namely, mathematics, reading and science which can be applied to all countries to measure their cognitive skills instead of depending on school curriculum.

PISA also provides another unique feature which helps policy-makers to evaluate the effectiveness of their education policy. The ongoing surveys of PISA accumulate information which can be easily compared with the successive surveys about students' performance. As a matter of facts, decision-makers can amend their strategy according to these data and assess progress over the time (OECD, 2009:75).

CHAPTER THREE

3.1 The Participation of Arab Countries in PISA:

Recently, more and more Arab countries are signing up for joining PISA. So far, eight Arabic countries enrolled in PISA, the first participated country is Tunisia who joined the programme in 2003. Following, Qatar has joined in 2006 then both the United Arab Emirates (UAE) and Jordan decided to enroll in PISA in 2009. Later, Lebanon and Algeria have signed up to take part in PISA in 2015 (Plackett, 2014:1). Yet, Morocco and Saudi Arabia were the last countries who joined PISA in the last cycle in 2018. The table below clarifies this participation according to the timescale and based on data collected from OECD and PISA database:

Country or economy	PISA 2000 & 2000 +	PISA 2003	PISA 2006	PISA 2009 & 2009+	PISA 2012	PISA 2015	PISA 2018
Tunisia		x	x	x	x	x	
UAE			x	x	x	x	
Jordan			x	x	x	x	
Qatar			x	x	x	x	
Lebanon						x	
Algeria						x	
Morocco							x
Saudi Arabia							x

Table (2) The participation of Arab countries in PISA (2000-2018)

Source: The researcher based on data collected from OECD, PISA, and Bloem (2013:9)

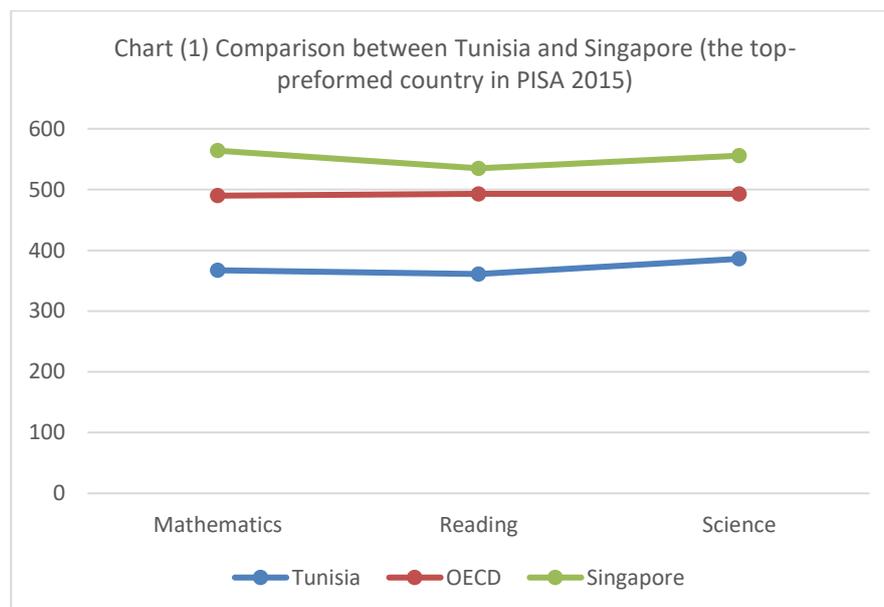
Based on data collected from PISA, Tunisia has firstly attained the penultimate place in 2003 for mathematics and the last place in reading, science and problem solving among 45 other participating countries. Moreover, in 2006, Tunisia has ranked 55 among 57 participated countries and it came after Jordan. Compared with Tunisia's participation in 2003, little improvement can be seen as it is climbed up two steps and outperformed one Arabic country which is Qatar. Students in Tunisia scored 386, 380, 365 in the three main domains.

In 2009, Tunisian students performed almost the same as Jordanian students in mathematics as they scored 404, however, the attainments of Tunisian students in reading and science were lower than Jordan (371, 401 respectively). In this cycle of PISA, Tunisia has positioned 56 in the international league table which included 65 participants. By looking at the data in (Table 3), it is obvious that Tunisia is surpassed Qatar again by five places, and it came after Jordan by one place. Also, the improvement of students in reading exceeded nine nations if compared with previous participations. However, it is important to not forget that another 59 country are still ahead of Tunisia (Bloem, 2013:14).

In 2012, Tunisia has come second among Arabic countries after UAE. This time, it did not jump that far from the bottom as it left five nations behind. What is more, Tunisia placed 12th behind the UAE and it ranked 60. What is interesting, the performance of the students was almost the same as Jordanian students in mathematics, however, Tunisia has outperformed both Jordan and Qatar in this participation.

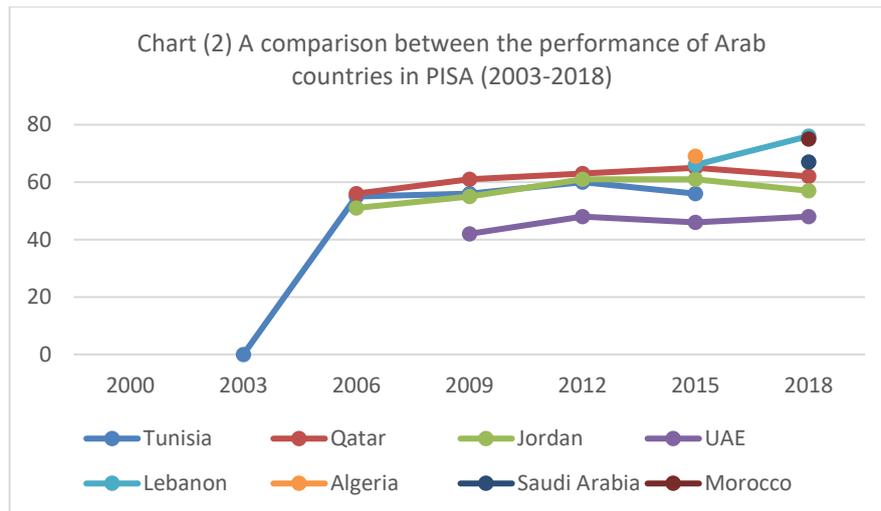
In the next cycle of PISA, Tunisia has placed the 56th position out of 70 participants around the world. It is interesting to note that Tunisia has climbed 14 places in the international league table, and surpassed Algeria by 13 places. Despite that, Tunisia still fell behind many other participating countries on the Arabic level, such as UAE, Qatar, Jordan, and Lebanon.

In brief, it is disturbing to see such disappointing results; however, it is worth to know the real level of education and compare it with other countries (Plackett, 2014:2). The participation of Tunisia through the time revealed that there is few indicators about improvements in students' performance at the Arabic level, however, at the international level, Tunisia still lag behind and there is a big gap between its attainment and developed countries' achievements (see chart 1). More improvements need to be done in educational system. Finally, it is worth noting that Tunisia has not participating in PISA 2018 for unknown reasons.



Source: The researcher, based on PISA 2015 data

UAE first participated in PISA in 2009 when only Dubai province was involved in this exam. Dubai was ranked 42 among other 65 participants (see table 3) in reading with mean score of 459, while it ranked 41 for both mathematics and science with mean score of 453, 466 respectively (PISA 2009). The mean score was below OECD average which required 500. Later, in 2012, UAE's participation in PISA was expanded to include another 6 provinces accompanying Dubai. The rank of UAE was dropped to 48 among other 65 countries; however, the performance of UAE's students has exceeded the performance of all other Arab participating countries in 2009, 2012, 2015 and 2018. Chart (2) below includes a comparison among the Arabic countries shown that UAE is surpassing all other Arab countries in all domains.



Source: The researcher, based on data collected from PISA, OECD publications

The chart above shown that UAE has positioned the level 42,48, 46, 48 through the time in the ranking table which is much better than all other Arabic countries. However, it still lags behind if compared with other nations and it still far away from OECD average.

Jordan has joined PISA in 2006 and it came in the place 51 among 57 participating countries with mean scores of 422, 401 and 415 for mathematics, reading, and science respectively. Although Jordan started with a humble attempt, its performance was better than Tunisia who started in 2003 when it had overtaken in one place by Jordan (PISA, 2009). In 2012, Jordan's performance declined to rank the 61th position, taking one step behind Tunisia while still exceeding Qatar. In the next two cycles of the programme, Jordan's students did almost the same performance when it took also the 61 position in 2015 and declined to 57 position in 2018 (see chart2).

Qatari Participation was the lowest-achieving among the Arab countries especially in 2006, 2009, and 2012. Although it had participated since 2006, the performance still under average in all domains even in the four following cycles of the programme. The OECD (2007) reported that Qatari students have performed below the average of OECD in a noticeable way. Khatri, 2013 stated that little signs of improvement can be seen in Qatar if compared with the first results. The international table of PISA (2009) put Qatar in the rank 61 from 65 with mean scores of 372, 368 and 379 for mathematics, reading, and science respectively (PISA, 2009). In the next attempt, the results of Qatar's participation showed that the average of mathematics, reading, and science was 376, 388 and 384 respectively. Although these results were under the OECD average and other Arab countries, it showed kind of improvement if compared with what Qatari students achieved in 2006 where Qatar was near the bottom (Khatri, 2013).

In the same vein, the participation of Algeria and Lebanon were almost similar in terms of results. Lebanon positioned 66 out of 70 in 2015 when the attainment of the students scored 386, 347, and 386 in the three main areas. Despite this low attainment, in the next cycle of PISA, the outcomes revealed that Lebanese students have performed slightly better when Lebanon has moved up 10 positions surpassing Saudi Arabia and Morocco to rank 69 in the international league table among another 79 participating countries. (PISA, 2018)

Algeria's outcomes were also poor as it came penultimate in the international league table in 2015. Algerian students fail to take higher position among OECD or partner countries. Their mean scores in the three subjects were 360, 350, and 376 respectively. It is noteworthy that Algeria did not participate in the last cycle of the programme in 2018. (See table 3).

Saudi Arabia and Morocco were the last two Arabic countries who joined PISA in 2018. They positioned 67 and 75 respectively out of 79 participating country. In this participation, both countries have overtaken Lebanon and came after UAE, Jordan, and Qatar.

Overall, to track the impact of PISA on the Arabic educational systems, despite the fact that all Arabic countries have performed below OECD average. The participation of Arabic countries has shown signs of improvements over the time. That reflects the wide interest from the policy-makers to give more attention to the weakness points in their educational systems. PISA represented a "wake up call and a road map for education policy-makers across the region" (Plackett, 2014:2). Similarly, Bloem (2013:14) concluded that lower-performing countries are

considered as the most achieving in this programme. Taking the Qatari example and the improvement which gained in short period of time were 60 points had been increased within 3 years. In addition, taking the Lebanese participation into consideration when it jumped ten levels up in 2018 for mathematics skills. In a nutshell, the participation of Arab countries can be simply described as “poor” if compared with other nations such as China, Korea, Finland and Singapore.

Cycle	Country	Mathematics	Reading	Science	Rank	of
PISA 2003	Tunisia	Rank 40 penultimate	Rank 40 At the bottom	Rank 40 At the bottom	40	40
PISA 2006	Jordan	422	401	384	51	57
	Tunisia	365	380	386	55	57
	Qatar	318	312	349	56	57
PISA 2009	OECD	493	496	501	0	65
	UAE (Dubai)	459	453	466	42	65
	Jordan	405	387	415	55	65
	Tunisia	404	371	401	56	65
	Qatar	372	368	379	61	65
PISA 2012	OECD	494	496	501	0	65
	UAE	434	442	448	48	65
	Tunisia	388	404	398	60	65
	Jordan	386	399	409	61	65
	Qatar	376	388	384	63	65
PISA 2015	OECD	490	493	493	0	70
	UAE	427	434	437	46	70
	Qatar	402	402	418	56	70
	Jordan	380	408	409	61	70
	Lebanon	386	347	386	65	70
	Tunisia	367	361	386	66	70
	Algeria	360	350	376	69	70
PISA 2018	OECD	487	489	489	0	79
	UAE	432	435	434	48	79
	Jordan	419	400	429	57	79
	Qatar	407	414	419	62	79
	Saudi Arabia	399	373	386	67	79
	Morocco	359	368	377	75	79
	Lebanon	353	393	384	76	79
	Tunisia	-	-	-	-	-
	Algeria	-	-	-	-	-

Table (3) The scores achieved by Arab countries in PISA (2003-2018) in mathematics, reading, and science.

Source: The researcher based on OECD, PISA, database and publications

3.2 The Motivations for Joining PISA:

Why countries are joining PISA? To find the answer for the first research's question it is necessary to explore the motivations behind the initiatives of educational leaders across the world to join this programme. Baird, et al. (2011:4) stated that the need to fill the gap of information about education systems is one of these motivations. He explained that the reason why PISA has a presence nowadays relates to the provision of indicator-based data regularly from OECD. In other words, over the time and through the OECD's annual reports, educational leaders will be able to track the improvement of their own educational systems. The information provided by these indicators helps countries to assess their students' performance and according to the outcomes, policy-makers will find the gap of their educational system. For example, in Germany, the participation in PISA 2009 was successful after the shock of the previous test. The role of PISA was clearly obvious for the remarkable influence on German schools and how the data of this test was useful to reform the system and it pointed to the main problems of education. PISA helped and healed the German schooling greatly and raised the rank of education when it had previously placed at the end of the table in somewhere near Mexico and Portugal. (Kerstan, 2010)

Further, the incentives for UAE to participate in PISA have emphasised by Emirati policy-makers who pointed out to the essential role of the collected data from PISA and the attained results from students. The participation of more other Emirates "provinces" with Dubai has gained more chances to get more comparable data to use them locally and globally which help the educational leaders to develop the educational system. The data produced by the international tests such as PISA motivate the country to maximize the efforts to help students to get better learning, teachers to teach better and headteachers to lead their schools more effectively. Additionally, PISA helped UAE to measure and compare the differences in their education system where more than 20 different curricula included in their system. (MOE, UAE, 2013:14-15)

Whereas the Qatari experience in PISA was apparently successful according to the policy-makers. The Supreme Education Council (SEC) declared that PISA has given many indicators about the progress of education in the schools which is reflected by the results of students which show signs of improvement from the latest participation (SEC, 2013). Equally, Tunisian policy-makers asserted that the exam was fruitful and helped the education in the country. The director of evaluation in the Ministry of Education said "We added an extra hour per week of mathematics and introduced physics lessons to primary schools" (Plackett, 2014:1). Consequently, the policy of education has directly responded according to the results of the test.

In short, PISA shows positive signs for all participated countries and that helps educational leaders to make the necessary adjustments to improve their schools in the future. However, the bad results should alert policy-makers to put a clear road map to their education and call for new improvement (Plackett, 2014:1).

CHAPTER FOUR

4.1 Critiques About PISA:

Researchers must not be biased when done their research and never follow their assumptions. The researcher is easily "fall into the bias trap, for example by selecting only those items in the literature review which support your point of view" (Bell, 2005: 166). Therefore, the researcher has not focused only on the positive side of international exams, but also, he tried to find critiques about PISA as it is important to be addressed in this research.

PISA has been critiqued for many various reasons and many educators are skeptical about its accuracy as a key mean for international comparison and some critics said it is hard to depend on PISA scores for international comparison. One of the fundamental issues is associated with language and the translation process. Despite the fact that PISA has declared that the programme offers "strong quality assurance mechanisms for translation, sampling and test administration" (Baird, et al. 2011:7), however, PISA is predicting that the used language suits all countries, ignoring the differences in their cultures. Critics maintain that reading is not comparable skill especially when this involves international comparisons which compare different languages. The original used language in PISA is usually English then the materials translate to more than 40 different languages (Baird, et al. 2011:8). For instance, Tunisian students have depended on the Arabic translated version of the test and survey which used in Qatar, however, many vocabularies, sentences, and technology-related expressions were uncommon for Tunisian students and they are not used in Tunisian dialect as in Tunis they mix between Arabic and French language in their education (Bloem, 2013:19).

Another important aspect is focusing on the results which might lead to eliminate the spirit of creativity and ambition in students. It had been argued that PISA helps nations to measure the cognitive skills in their students but that eradicates their creativity and entrepreneurship. For instance, Attributes such as resilience, social skills, confidence, grit and incentives have nothing to assess with PISA (Zhao, 2014). Similarly, Strauss (2014) had shown concerns about giving the result more attention than individual creative activities by saying “the more we focus on tests, the more we kill creativity, ingenuity, and the ability to think differently. Students who think differently get lower scores. The more we focus on tests, the more we reward conformity and compliance, getting the right answer” (Strauss, 2013).

Critics have also questioned the relationship between the economy and education, and showed concerns whether education leads to a fruitful economy or not. Hanushek, et al. (2008:62) highlighted that there is no enough evidence about the alleged common sense understanding of successful economies must be based on good schools, and there is scarcity of evidence which links the economy with what students learn in schools. He contended that if education leads to a prosperous economy, why USA in 2008 is under-performing and in a position that is somewhat below the average of OECD, while it has the most powerful economy in the world?

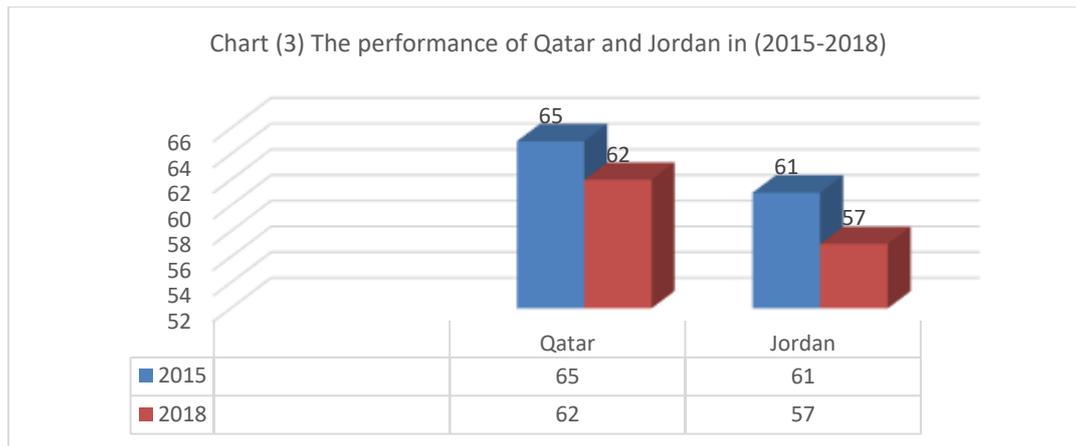
Countries such as Finland, Canada, Korea, Hong Kong and Taiwan all performed better than USA and earn minimum of 50 points higher than the United States. All of these economies are lower than USA's economy, thus education has not necessarily lead to boosting country's economy. (Hanushek, et al., 2008:69)

Moreover, issues about accuracy and reliability may be considered through PISA processes of comparison and assessment. Baird, et al. (2011:7) argued that there are issues about implementing the Rasch model which may limit the validity of the test. This is due to applying this model gives a strong assumption that individuals have fixed abilities and assumes that the items have fixed difficulties as well. Rasch model had been almost categorised as an opaque technique, which then locates students and items on a scale with no probability of zero. Further, the impact of this model on the results will result in exaggerating the smallest variances in the estimated performance of the country. Hence, these results might be “over-interpreted by policy-makers and politicians, leading to unnecessary concerns about their countries' relative standards” (Baird, et al., 2011:7).

4.2 The impact of PISA on educational policy:

The second research question is focusing on the impact of international tests on the educational policy of Arab countries. To find out the answer related to this question, it is important to refer to the main points mentioned in previous part of this research. Linking back to the data extracted from PISA and OECD publications, the third chapter of this research presented the Arabic participation in PISA. For instance, by looking to the participation of Tunisia in PISA through the time it showed that there are indicators about improvements in students' performance. In this regard, it seems that policy-makers in Tunisia after 2003 have made many modifications according to the data gained from PISA in order to improve their education system. More precisely, in 2012 Tunisia “placed ahead of nine other countries” (Plackett, 2014:1) if compared with previous participations. Thus, PISA was good motivation for policy-makers to think and make some changes to fix the failure. In the same way, Tunisian officials in education declared that the participation in this exam was useful. The Director of evaluation in the Ministry of education has said that the Ministry of education in Tunisia made some amendments such as adding one extra hour per week in mathematics. (Plackett, 2014:1)

The challenges which faced the Arabic countries by participating in PISA could be described as a good attempt to reform the education and at least to know the level of education of a country among other nations. The reported data in this research supports Schleicher's assumption when he stated that “Some of the countries with the lowest results in the initial PISA have seen the fastest improvements” (Plackett, 2014:1). By looking through the Qatari participation in PISA, the outcomes of Qatari students showed a notable improvement as they obtained 60 score points within only three years (Bloem, 2013:14). Furthermore, the results of Qatari participation support what Khatri (2013) has referred to as there were indeed few signs of improvement could be seen when comparing Qatari outcomes with previous cycles of PISA. Chart (3) clarifies the fast improvement in students' performance for both Qatar and Jordan in 2015 and 2018 PISA cycles. it shows that within only 3 years the Qatari position has raised from 65 to 62 while for Jordan it raised from 61 to 57 level in the international league table.



Source: The researcher, based on data collected from PISA, OECD publications (2015-2018)

Not only the Arabic countries have proven that there is a positive impact of PISA for their participation. international countries have also shown that international tests have helped educational decision makers to correct the path of their strategy in education. Take for example the experience of Germany which emphasised by Kerstan (2010) as it highlighted the importance of data provided by PISA and its role in reforming schools after 2009.

4.3 lessons learned from the participating countries

Through the wide range of data provided by OECD and PISA, many lessons can be extracted from the participating countries that answer the third question of this research:

- PISA participates in identifying the level of a country across the world in the educational world map, and it draws a road-map to reform the schools (Plackett, 2014:2).
- Officials at under-performing countries should be less afraid about achieving low scores in the international level, however, it would be better if they focus on improving their educational system (Plackett, 2014:2).
- The participation in PISA should not be only for scoring high in the three domains of the test, but to resolve educational problems and improve it by getting benefit from the provided data.
- Fostering the creativity of students and encourage them to develop attributes like social skills, confidence, ingenuity, resilience and incentives because focusing only on the results in PISA might lead to eliminate all the mentioned attributes due to PISA is unable to assess such attributes. (Zhao, 2014).
- It is important that countries should not interpret the results in isolation, instead, educational leaders should pay more attention to the readiness and preparation of their students. The test could play the role of good motivator or a lever for policy-makers to compete with other nations, but politicians should dig deeper through the results and take the right decisions which lead to real improvement.
- It is not necessary that any development in education must be combined with economy improvement for the country (Hanushek, et al., 2008:69). For example, Qatar and UAE are known as rich-oil countries classified within the group upper-middle-income countries. However, the performance of their students still low if compared with other middle-income nations (Bloem, 2013:10)

4.4 Conclusion:

This research has discussed the concept of international exams and the participation of Arab countries in PISA. The aim of the research was to find out the impact of these tests on the Arabic educational systems through PISA results. Also, it aimed to identify the motivations lie behind the increasing participation of Arabic countries in international tests. The researcher presented in his study the importance of the international tests and the role of organisations which supported and sponsored these tests. The data extracted from PISA and OECD tables regarding the Arabic participation showed that all Arabic countries are performing under the average of OECD countries.

The results revealed that a large number of countries, in particular Arabic countries are joining PISA to gain adequate data about their educational systems to identify their position on the educational world map. The outcomes also outlined another important reason which is to make local and international comparisons. Moreover, the outcomes showed that international tests affect positively educational systems and participates in reforming

schools. This has been confirmed by the experience of Germany as a global country and most participated Arab countries. In addition, the researcher has reviewed the literature related to the international tests and also reviewed the published database of PISA and OECD and he extracted a set of lessons learned from the experience of participated countries. The most prominent lessons for countries are represented by the necessity of complying to PISA's provided data in order to correct the path of education. Also, countries should not focus only on the results, but the concentration should be on the fundamental goal which is reforming educational system. It is also worth noting that correlation between the economy development and the educational achievement of students is still unproven.

4.5 Recommendations:

The researcher recommends the following:

- Increasing the participation of countries in the international examinations to benefit from the results in reforming the educational system.
- Arabic countries should abide by the PISA's advice and its indicators to improve schools and the school's environment in general, and not focusing only on increasing students' marks in the test.
- Under-performed Arab countries should focus firstly on the outcomes of the Arabic countries which achieved near to OECD average (UAE for example) and make initiative to review their educational systems as an attempt of exchange experience and knowledge in education.
- Educational decision makers should take the advantages achieved from international exams' results and using them cleverly for the aim of competition. Especially, to compete with Arabic countries as most of them achieved almost equal attainments. The competition will encourage the spirit of challenge to spend more efforts to achieve progress.
- Education policy-makers in high-income countries should invest in education wisely and concentrate on the aspects that lead to gain a tangible improvement in educational performance, particularly, in the schools.

4.6 Suggestions:

The researcher suggests the following:

- Conducting future studies focusing on the participation of an Arabic country which performed poorly to highlight the lessons from this participation, due to most previous studies have focused only on the superior countries.
- Conducting a comparison studies to compare the performance between two Arab countries in an international exam and investigate the result deeply.
- Carrying on a similar research that deal with the participation of Arabic countries in TIMSS
- Conducting a future study concentrate on the participation of high achieving Arab country in PIRLS and make a comparison with top performed country across the world.
- Conducting a research explaining the role of EGMA and EGRA in reforming education.

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