

Corona pandemic and its impact on academic achievement

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Abstract

With the aim of revealing the impact of the Corona pandemic on academic achievement, this study came to answer the following problem: What is the impact of the Corona pandemic on the academic achievement of middle school learners? Which is divided into the following sub-questions:

1- What is the effect of the hourly size on the academic achievement of middle school learners?

2- What is the impact of the promotion system on the academic achievement of middle school learners?

In order to answer this problem and its sub-questions, a field study was conducted in Trad Lagha Intermediate School in Bir El Ater, Tebessa, in November 2021

according to the requirements of the descriptive approach, using a questionnaire consisting of 26 questions, distributed to the research community. The number of its members was estimated at 30 middle school teachers. After collecting and analyzing the data, the following was found:

The Corona pandemic has positively affected the academic achievement of middle school learners

1- The impact of the hourly volume positively on the academic achievement of middle school learners.

2- The grouping system has a positive impact on the academic achievement of middle school learners.

Keywords : Corona pandemic, achievement, academic achievement, hourly size, grouping system.

*** Introduction**

The international community stands at a crossroads, grappling with the monumental challenge of salvaging and rebuilding social, economic, political, and educational institutions amidst the coronavirus storm.

Temporarily, academic pursuits within educational institutions have been placed on hold as a safeguard for the educational community. Having established an array of precautionary measures, educational institutions throughout the world have gradually recommenced operations in a modified and adjusted format to accommodate the altered landscape. Following suit, the Algerian Ministry of National Education has spearheaded stringent health protocols to mitigate the spread of the virus.

While these crucial measures ensured education's continuity, their effectiveness and impact on teaching methodologies and learning outcomes demand further investigation. Analyzing academic performance data, taking into account mediating factors like educational levels and individual

learner characteristics at each stage, is key to unlocking this understanding. The intermediate education level, having witnessed the implementation of all these measures, provides a unique opportunity for study. Therefore, posing the following question allows us to examine the reverberations of these interventions on academic achievement levels at Tradd Lagha Middle School in Bir El Ater, Tebessa, Algeria, paving the way for future improvements:-

What is the impact of the COVID-19 pandemic on the academic achievement of students at Tradd Lagha Middle School in Bir El Ater, Tebessa?

*** Subquestions**

1- What is the effect of the hourly volume on the academic achievement of Tradd Lagha Middle School students in Bir El Ater, Tebessa?

2- What is the effect of the group teaching system on the academic achievement of Tradd Lagha Middle School students in Bir El Ater, Tebessa?

*** Research Hypotheses**

1- The hourly volume has a positive effect on the academic achievement of Tradd Lagha Middle School students in Bir El Ater, Tebessa.

2- The group teaching system has a positive effect on the academic achievement of Tradd Lagha Middle School students in Bir El Ater, Tebessa.

*** Rationale**

This study holds vital significance on both theoretical and practical fronts. Theoretically, it sheds light on the impact of the COVID-19 pandemic on academic achievement, contributing valuable insights to the existing body of knowledge. Practically, it empowers decision-makers, educators, and policymakers to comprehend the ramifications of implemented health protocols within educational institutions on student learning, performance, and ultimate outcomes. By unearthing this understanding, they can strategically craft impactful and evidence-based approaches to surmount the obstacles and challenges emerging from the pandemic, thereby safeguarding the educational process and system's stability.

*** Objectives of the Study**

The study aims to investigate the impact of hourly volume on the academic achievement of middle school students.

Additionally, it aims to examine the effect of group teaching

on the academic achievement of middle school learners.

*** Conceptual clarifications**

*** COVID-19 pandemic**

The International Committee on Virus Classification officially announced the name "Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2)" for the new virus on February 11, 2020. This name was chosen because of its genetic association with the coronavirus that caused the severe acute respiratory syndrome (SARS) outbreak in 2003. However, despite their genetic connection, the two viruses are different. The World Health Organization and the Food and Agriculture Organization of the United Nations have designated "COVID-19" as the official name for this new disease, following guidelines previously established. (Al-Noor, 2021, p. 112)

The pandemic caused by the coronavirus can also be defined as a wide range of viruses that can cause disease in animals and humans. It is known that several coronaviruses can cause respiratory illnesses in humans, ranging from common colds to more severe and life-threatening conditions such as Middle East Respiratory Syndrome (MERS) and severe acute respiratory syndrome (SARS). The recently

discovered coronavirus, known as SARS-CoV-2, causes the disease COVID-19. (Trish, Tabani, & Khudhur, 2021, p. 104).

Procedurally: It is an infectious disease caused by the coronavirus, which began spreading in the Chinese city of Wuhan in December 2019. COVID-19 has turned into an ongoing pandemic that has negatively affected many countries and caused a crisis in all sectors, including the education field, which has experienced a complete paralysis and halt.

*** Academic Achievement**

Salah Allam defines it as the level of knowledge and skills acquired by an individual in a specific subject or educational field. It is also the level of success achieved in that subject, as determined by tests or grades assigned by teachers or both.

Mohammed Al-Sayed Abu Al-Nil believes that academic achievement, in a specific sense, refers to academic attainment. In this specific context, it is used to indicate the ability to meet the requirements for academic success, whether in terms of general or qualitative achievement in a specific subject. (Abu Al-Nil, page 85).

As per Chaplin's definition, it is understood as a specific level of

achievement, competency, or performance in academic work, assessed by teachers or through standardized examinations. (Bin Laden, 2001, page 210)

In a procedural sense, it refers to the level of success achieved by the learner in a specific subject or instructional unit, attained through multiple assessments prepared and administered by teachers to measure the learners' proficiency at each educational stage they go through.

The concept of hourly volume procedurally refers to the specific time period adopted by the Algerian educational system for teaching students following the COVID-19 pandemic, in order to ensure the smooth continuation of the educational process and the transition of students from one educational stage to another.

The concept of cohort system, procedurally, refers to the division of students into educational cohorts as a precautionary measure within the framework of COVID-19 prevention, ensuring the continuation of in-person education while adhering to the principle of physical distancing within the Algerian educational system.

*** Previous studies**

The first study, conducted by Fawzia Chenafi and Mohamed

Amimi Brahim, titled "The Algerian School and Distance Learning during the COVID-19 Pandemic:

The study aimed to explore the level of academic achievement attained through distance learning during the quarantine period imposed due to the COVID-19 pandemic. The study utilized an electronic questionnaire as the primary data collection tool and was conducted on a sample of Algerian families with varying geographic locations, socio-demographic characteristics, and economic backgrounds, involving 243 students from 114 households.

The field study concluded that 80% of the students either showed improvement or maintained the same level of academic achievement out of a total of 243 students, allowing us to generalize this experience. It even suggests the possibility of adopting "distance learning" as a complementary teaching method to traditional in-person education as a new instructional approach (Chenafi & Brahim, 2021).

The second study focused on evaluating the implementation of physical education lessons during the COVID-19 pandemic (COVID-19) from the perspective of middle school teachers:-

The aim of the study was to evaluate the process of implementing physical education lessons during the COVID-19 pandemic from the perspective of middle school teachers. The researcher sought to assess the teaching performance of physical education teachers during the pandemic and also examine the students' responsiveness and interaction during these lessons. Additionally, the study aimed to determine the extent of support provided by educational institutions to physical education teachers in implementing these lessons amid the pandemic. The researcher used a descriptive method, employing a survey-based approach on a sample of middle school teachers.

The researcher utilized the descriptive method, employing a survey approach, which was applied to a deliberately selected sample of 50 teachers from middle schools in El Bayadh. The study concluded that:-

- 1- The administrative staff does not collaborate and does not provide suitable conditions for the teachers.
- 2- Some teachers in El Bayadh receive limited and inadequate support and assistance for effectively delivering physical education lessons during the COVID-19 pandemic.

3- Some teachers in El Bayadh demonstrate a remarkably high level of organizational and pedagogical commitment in order to ensure the success of physical education lessons, despite receiving only moderate support from the administrative staff.

4- The students actively engage, contribute, and assist greatly in ensuring the success of physical education lessons, despite receiving only moderate support from the administrative staff.

Researchers highlighted the necessity of providing national education institutions with complete protective supplies and fostering collaboration between the administrative team and physical education teachers (Ghazghoz, 2021).

*** Discussion of Previous Studies :-**

Building upon a foundation of prior research, the first of which explored distance learning experiences within Algerian schools during the COVID-19 pandemic, and the second focusing on evaluations of physical education implementation from the perspective of middle school teachers navigating the same crisis, this current study seeks to illuminate the interconnected relationship between these earlier works and its own

investigation. Recognizing the pandemic's undeniable impact on the Algerian educational landscape, this research specifically delves into the interplay between implemented health and safety protocols, such as reduced hourly volume and a cohort system, and their influence on middle school learning. The ultimate goal remains focused on achieving a delicate balance between ensuring student safety, maintaining the quality and effectiveness of the educational process, fostering academic achievement, and facilitating a smooth transition between educational stages within this uniquely challenging period.

This study leverages a survey tool to investigate the pandemic's impact on middle schoolers' academic achievement and ensuring a smooth conclusion to the academic year, particularly during this critical juncture characterized by restricted teaching hours and a shift to cohort learning. Additionally, the descriptive methodology aligns with the study's thematic focus, and the selection of participants draws on insights from prior research. Furthermore, previous studies informed the conceptual framework, sample construction, instrument development, and its assessment of validity and reliability. Notably, this

study shares methodological and contextual similarities with a prior investigation conducted in the same field.

*** Methodological Procedures of the Study :-**

1- Research Methodolog : This study employed a descriptive approach, aligning with the inherent nature of the investigation and adhering to established methodologies within educational research.

2- Study population: The study population consists of teachers working in the middle school stage at Tarad Lagha Middle School in the city of "Bir El Ater, Tébéssa Province". This study includes all the teachers, totaling 30 male and female teachers.

3- Study population: Since the study population consists of 30 individuals, the researcher conducted a comprehensive survey that was applied to all the teachers in the educational institution. The characteristics of the population were as follows.

Table number (01) illustrates the characteristics of the study population.

	Sample	Repetition (R)	Percentile (P %)	Total
Gender	male	09	% 30	30
	female	21	% 70	
Age	from 25 to 34	12	%40.00	30
	from 35 to 44	10	%33.30	
	from 45 to 54	06	%20.00	
	55 and above	02	%06.70	
Marital status	single	04	%13.30	30
	married	24	%80.00	
	divorced	02	%06.70	
Educational level	University graduate	21	%70.00	30
	National School graduate	04	%13.30	
	Technical institute graduate	05	%16.70	
Professional experience	Under 10 years	08	26.66	30
	From 10 to 19 years	14	46.66	
	20 years and above	08	26.66	
Professional status	Tenured	27	%90.00	30
	Probationary	00	%00	
	Substitute	03	%10.00	

The quantitative evidence presented in Table number (01) reveals differences in the gender distribution of the participants. We find that 21 female participants, accounting for approximately 70.00% of the study population, were included in the sample of 30 participants. This is a relatively high proportion compared to the estimated 30.00% of male participants.

Regarding age, it is evident that 40.00% of the study population falls within the age range of [25 to 34 years], followed by 33.30% of participants in the age range of [35 to 44 years]. The next category comprises individuals aged between [45 to 54 years], accounting for approximately 20.00% of the

participants. Finally, there is a group of participants aged 55 and above, amounting to 06.70%.

Regarding the marital status of the participants, it is found that approximately 80.00% of the research population is married. Immediately following that, the estimated percentage of singles is 13.00%. Furthermore, the percentage of divorced participants is 06.70%, while there is no percentage for widows.

The data presented in the above table indicates that the percentage of teachers who have obtained a university-level education is estimated at 70.00%, which is the highest percentage overall. In contrast, we find that graduates of the technological institute make up 16.70% of the total sample, followed by graduates of the higher normal school with a percentage of approximately 13.30%.

Based on the professional experience in terms of years of seniority in the workplace, it is found that 14 participants, accounting for 46.66%, have a service period ranging from 10 to 20 years. In contrast, 08 participants, representing 26.66%, have a service period of 20 years or more. The same applies to those with less than 10 years of service.

Finally, when it comes to the professional status indicator of the participants, the percentage of those who hold permanent positions is estimated at 90.00% for 27 participants at the Tarad Al-Agha Intermediate School in the city of Bir Al-Aater. Meanwhile, the number of participants holding the rank of substitute teacher is estimated at 10.00%, represented by only 03 participants out of the total number of the study population. However, the percentage of trainees is nonexistent.

*** Study tools**

The study utilized the questionnaire tool as the primary tool to obtain the necessary data and information. The questionnaire consisted of 26 questions divided into two main sections. The first section included the first axis, which focused on the participants' primary data. The second section included two axes: the second axis addressed the measurement of hourly volume and its impact on academic achievement, while the third axis focused on the cohort system and its impact on academic achievement.

5.5 The results of the axis related to measuring hourly volume and its impact on academic achievement.

Table 02: The Impact of hourly time on Academic Achievement.

Phrase number	Scale responses					Arithmetic mean	Standard deviation	Response level	Ranking	
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree					
01	R	06	15	01	06	02	2,43	1,22	Low	10
	P %	20.00	50.00	03.30	20.00	06.70				
02	R	05	10	00	12	03	2,9333	1,36	Medium	09
	P %	16.70	33.30	00.00	40.10	10.00				
03	R	03	10	04	10	03	3,0000	1,23	Medium	08
	P %	10.00	33.30	13.30	33.33	10.00				
04	R	01	07	04	13	05	3,4667	1,13	High	06
	P %	03.30	23.30	13.30	43.30	16.70				
05	R	02	06	01	14	07	3,6000	1,24	High	05
	P %	06.70	20.00	03.30	46.70	23.30				
06	R	00	01	09	15	05	3,8000	0,76	High	02
	P %	00.00	03.30	03.30	50.00	16.70				
07	R	00	04	05	18	03	3,666	0,84	High	03
	P %	00.00	13.00	16.70	60.00	10.00				
08	R	00	10	01	10	09	3,600	1,24	High	04
	P %	00.00	33.30	03.30	33.30	30.00				
09	R	04	05	02	13	06	3,400	1,35	High	07
	P %	13.30	16.70	06.70	43.30	20.00				
10	R	00	02	04	14	10	4,066	0,86	High	01
	P %	00.00	06.70	13.30	46.70	33.30				
Total						4,8172 3	0,77	High	-	

Table number (07) shows the descriptive statistics of the study's responses on the second axis phrases (the effect of hourly volume on academic achievement). The obtained results indicate that the arithmetic means of most phrases in this axis are higher than the overall average expressed by the value 03. The same table also shows the following:-

Statement number (10), "The reduction of the curriculum's content density to align with the allocated hourly volume constitutes a prudent decision," was ranked first.

The average score for this statement was 4.06, with a standard deviation of 0.86. This suggests that the majority of the surveyed sample

believe that the reduction of the implemented curriculum's content to adapt the learning material to a specific hourly volume during the pandemic falls within the realm of objective and sound strategies. This implies that the pandemic compelled the educational system, through hourly volume reduction, to re-prioritize the content of the lessons by reducing the size and scope of the curriculum and focusing on the most critical units.

Under these exceptional circumstances, it became incumbent upon the teacher to deliver the content in a manner consistent with the exceptional plan, ensuring the continuation of learning by distributing it over the school year and taking into account the unfinished learning.

This ensures that students acquire a diverse set of information and experiences that the teacher provides to them within a specific timeframe, taking into account the students' cognitive abilities and ensuring the continuity of the learning process during the Corona pandemic, while assisting teachers in carrying out their role in a sound and proper manner, which positively impacts the students' performance within the classroom and ensures that they achieve good results,

enabling them to successfully transition from one educational stage to the next.

1- Phrase number (06) ranked second, stating that “the hourly volume during the COVID-19 pandemic has helped students achieve good academic performance, ensuring their transition from one educational stage to another.” The average score for this phrase is 3.8, with a standard deviation of 0.76, and this indicates that the majority of the sample participants believe that teachers work according to a specific time frame that ensures the success of students and their transition from one educational stage to another. Because the educational process has recently been surrounded by ambiguity, uncertainty, and lack of clarity in light of the current crisis, and to prevent the worsening of the education crisis, the ministry has imposed the implementation of a specific time frame as an effective and rapid precautionary measure to address various losses. This is important to move forward and prevent these gaps from widening and school dropout rates from increasing. This helped the teachers contain the situation by providing the most important lessons within a short period of time and using the best possible methods. This had a

positive impact on the students' performance and contributed to them achieving good grades, leading to a noticeable improvement in their academic achievement. This is evident from the final results during the previous academic terms.

2- The phrase that ranked third is number (07), "The impact of reducing the hourly volume during the COVID-19 pandemic on implementing physical education and sports classes from the perspective of the subject's teachers," with an average score of 3.66 and a standard deviation of 0.84, this indicates that the majority of the surveyed sample believe that reducing the class time to 1 hour and 30 minutes due to the COVID-19 pandemic has affected the implementation of physical education class. The limited time does not allow for dividing students into groups and maintaining social distancing, as there is not enough space in the school environment to facilitate physical activities and adhere to the health protocols, such as regularly sanitizing the used equipment. As a result, the teacher has to teach the class as a whole without following the designated health protocols to prevent the spread of infection during the scheduled class.

3- The phrase that ranked fourth, number (08), states that "reducing the hourly volume has had an impact on students' academic achievement during the pandemic." With an average of 3.60 and a standard deviation of 1.24. This indicates that the majority of the surveyed sample believe that reducing class time has had a significant positive impact on students' final results during the COVID-19 pandemic. This is due to the use of cohorts, which has made a difference in the level of academic achievement among students. It has helped align the core teachings with the scheduled hours of instruction, which allowed for the adaptation of the educational process according to each student's abilities, granting them the opportunity to build and acquire knowledge at an academic achievement level. For this reason, the reduction in the number of students in the classroom has helped teachers to teach more comfortably, which has had a significant impact on the level of achievement and contributed to raising the students' level. It has also presented a challenge for teachers to complete the curriculum within a short period of time, taking into consideration the diagnostic and objective assessment of students who have not been examined in three terms. The

educational system only considered the grades of two terms for their transition from one level to another.

4- The phrase that ranked fifth (05), "teaching according to the hourly volume imposed by the pandemic has impacted performance in a good manner." With an average of 3.60 and a standard deviation of 1.24. This indicates that the majority of the researched sample believe that the teaching system according to the hourly volume imposed by the Ministry of Education due to the COVID-19 pandemic has positively affected the teacher's performance. This is considered a key motivator that helps the teacher in their work, improves their performance, and increases their sense of responsibility towards their students. The new teaching system has eliminated most of the professional pressures and work problems that hindered their role and performance. This allows the learning process to continue and enables the teacher to achieve the highest levels of competence during educational tasks, leading to a smooth educational process and positively impacting educational outcomes.

5- Ranking tenth and last, is the phrase number (01), "The new hourly volume imposed on students is sufficient to complete the

curriculum in light of the COVID-19 pandemic." With an average of 2.43 and a standard deviation of 1.22. This indicates that the majority of the researched sample believe that the hourly volume is not sufficient to complete the programmed curriculum for middle school students in light of the COVID-19 pandemic. This is due to the density of the curriculum and the fact that completing a lesson within a 45-minute period does not help the teacher cover the material effectively. As a result, there has been a reconsideration and reduction of the curriculum, initially requiring teachers to provide limited and concise information. This has made it difficult for them to adapt to the current situation, which has added significant pressure to their work at the beginning, negatively impacting their performance.

5.6 The results of cohort teaching and its effect on academic achievement

Table (08) The effect of cohort teaching on academic achievement

Phrase number	Scale responses					Arithmetic mean	Standard deviation	Response level	Ranking	
	Strongly agree	Agree	Neutral	Disagree	Strongly disagree					
01	R	06	10	11	03	00	2,8333	1,39	Medium	09
	% P	20,00	33,30	36,70	10,00	00,00				
02	R	04	08	02	14	02	3,0667	1,25	Medium	05
	% P	13,30	26,70	06,70	46,70	06,70				
03	R	02	04	07	10	07	3,5333	1,19	High	04
	% P	06,70	13,30	23,30	33,33	23,30				
04	R	01	13	03	09	04	3,0667	1,20	Medium	06
	% P	03,30	43,30	10,00	30,00	13,30				
05	R	00	07	04	13	06	3,6000	1,06	High	03
	% P	00,00	23,30	13,30	43,30	02,00				
06	R	00	00	00	11	19	4,6333	0,49	Very high	01
	% P	00,00	00,00	00,00	36,70	63,30				
07	R	00	01	02	18	09	4,1667	0,69	High	02
	% P	00,00	03,30	06,70	60,00	30,00				
08	R	01	11	06	11	01	3,0000	1,01	Medium	07
	% P	03,30	36,70	20,00	36,70	03,30				
09	R	10	07	02	08	03	2,5667	1,45	Low	10
	% P	33,30	23,30	06,70	26,70	10,00				
10	R	03	10	06	07	04	2,9667	1,24	Medium	08
	% P	10,00	33,30	20,00	23,30	13,30				
Total						3,34	3,57	High	-	

Table number (13) shows the descriptive statistics of the study's responses about the third axis phrases (the impact of the cohort system on academic achievement). The results obtained indicate that the means of most of these phrases are higher than the overall average expressed by the value of 03. The table also shows the following:-

1- The phrase number (06) ranked first, stating that "The cohort system imposed by the COVID-19 crisis has had a positive impact on academic achievement." With an arithmetic mean of 4.63 and a standard deviation of 0.49. This indicates that the majority of the researched sample believe that the cohort system imposed by the COVID-19 pandemic has had a positive impact on the academic achievement of middle school students. This is due

to the fact that this cohort system and physical distancing, included as a health protocol, have helped teachers provide effective explanations of lessons and deliver as much information as possible to students. It has also aided in their understanding and comprehension through various methods and means. Additionally, it has enabled students to focus and better understand the lessons due to the reduced class size, which has had a positive impact on test results and overall academic achievement.

2- Statement number (07), "Effective pedagogical frameworks within educational institutions played a significant role in the success of the school year," was ranked second. The average score for this statement was 4.16, with a standard deviation of 0.69. This suggests that the majority of the surveyed sample believe that the implementation of effective pedagogical frameworks within middle schools was a key factor in the success of the school year, which was achieved through the collaborative efforts of the Ministry of Education, the administrative staff, and the teachers within educational and pedagogical institutions, through the strict enforcement of the health protocol, which included providing

sterilization tools such as masks, various disinfectants, and vaccines to create a safe environment for all members of the educational community, and promoting a smooth progression of the academic year.

3- Phrase number (05) ranked third, stating that "Inspectors helped teachers in adjusting targeted competences to align with the implemented cohort system." With an arithmetic mean of 3.60 and a standard deviation of 1.06. This indicates that the majority of the researched sample believe that inspectors have guided teachers towards adjusting targeted competences to align with the size, pace, and teaching system of cohort groups imposed by the COVID-19 pandemic, because the process of guidance and direction has helped teachers in adjusting the main competences, streamlining the curriculum, and eliminating some non-essential units to address the delay in completing the syllabus and assist students in achieving the best results despite the exceptional circumstances imposed by the health situation. However, everyone's goal is to ensure the success of the academic year in the most effective ways to facilitate the transition of students from one educational stage to another.

4- In the fourth position, phrase number (03) states that "The cohort system allows students to acquire additional competences that enhance their academic achievement." With an average score of 3.53 and a standard deviation of 1.19. This indicates that the majority of the sample participants believe that the cohort system allows middle school students to acquire additional competences that enhance their academic achievement. This system is considered a realistic approach to avoid the health consequences of in-person education, while prioritizing physical well-being and achieving psychological harmony within the educational community, as well as combating overcrowding. The cohort system facilitates the teacher's assessment of students' cognitive, practical, analytical, and psychological abilities in all dimensions. This system helped achieve academic balance, starting from the curriculum and ending with the evaluation process, which was dependent on the availability of many criteria, such as employing an adequate number of teachers to cover all the sub-educational cohorts, consisting of no more than 25 students. The curriculum has also been made to align with the students' cognitive abilities, which has

contributed to their achievement of good results and an improvement in their academic performance.

5- Phrase number (02) ranked fifth "the implementation of the cohort system during the COVID-19 pandemic has had a positive impact on instructional hours", with an average of 3.06 and a standard deviation of 1.25. This indicates that the majority of the researched sample believe that implementing the cohort system during the pandemic has had a positive impact on instructional hours. Previously, education was conducted for a minimum of 6 to 8 hours per day. However, due to the COVID-19 crisis, the timing has been divided into two sessions, morning and evening, with an average of 4 hours per day. This has alleviated many problems and pressures on teachers, students, and their parents, in addition to contributing to the completion of the implemented curriculum. Furthermore, it ensures quality education for all students due to the reduced class size, which has led to an improved level of supervision and a balance between learning and academic achievement within the classroom.

6- Phrase number (09) ranked tenth and last. "Continuing with the group system will have a negative impact

on students' final results, with an average of 2.56 and a standard deviation of 1.45. This indicates that the majority of the sample believe that continuing with the group system will not have a negative impact on students' final results. This is because reducing the number of students in classrooms, implementing physical distancing between students and teachers, and adopting a cohort system have a positive effect on official exam results. This is especially evident in the results of the Middle School Certificate exam. Because students are able to focus more and follow lessons without the noise and disruption of overcrowded classrooms, they have the opportunity to have a better comprehension of the material inside the classroom, which will positively impact their performance.

*** Partial results**

1- The Corona pandemic compelled the Ministry of Education to reduce the number of teaching hours in order to ensure the continuation of the educational process, the success of the school year, and to mitigate the impact of the COVID-19 outbreak on middle school education. This involved the implementation of all preventive measures and health precautions as

an effective and rapid precautionary measure to address the various potential losses and ensure the success of the school year.

2- The reduction of the teaching time to 1 hour and 30 minutes during the Corona pandemic had a negative impact on the implementation of the physical education lesson. This was due to the lack of time, which made it difficult to comply with the health protocol for preventing infection during the lesson, despite the assistance and contributions provided by the administrative staff.

3- The Ministry reduced the teaching time as a precautionary measure and adopted it as a health protocol for educational institutions to protect educational actors from the threat of the pandemic and prevent middle schools from becoming hotbeds for the spread of the virus.

4- The Corona pandemic helped the educational community to work more effectively by reducing the teaching time. This allowed teachers to work more comfortably and in better conditions, which ultimately benefited the students.

5- The cohort system in educational institutions has imposed on the ministry the provision of a set of conditions, including the establishment of sufficient vacancies to cover all subgroups, based on

what is referred to as curriculum mapping.

6- The cohort system imposed due to the pandemic crisis has clearly and explicitly led to a balance between the hourly volume and curriculum requirements, thereby reducing the intensity of the educational programs annually that previously burdened teachers and exhausted students.

7- The cohort system allowed the authorities and educators to conduct a comprehensive and unhurried evaluation of the exceptional plans and gradations imposed by the Corona crisis. This evaluation helped to identify gaps and imbalances, which could then be addressed and corrected.

8- The cohort system has aided educators and other authorities in evaluating their exceptional measures and progression manner imposed by the COVID-19 crisis, without haste, in order to address any gaps and imbalances, thus rectifying and fixing them.

9- The COVID-19 crisis has helped decision-makers completely reconsider the educational system by earnestly working on revisiting the reforms, starting with elementary education as the foundation, through middle, and up to high schools.

10- Reducing the hourly volume and adopting the cohort system during the COVID-19 crisis has made many teachers optimistic about better results in final exams. This is due to the system allowing teachers to explain lessons more effectively thanks to the reduced number of students as well as enabling students to have a better understanding of their subjects.

11- Adopting the cohort system has increased the academic achievement of students which was well noted from their good performance in their finals.

12- The concerned ministry has followed specific measures regarding the manner of moving from one grade to the next, which was displayed in taking into consideration only two terms instead of three, and lowering the medium average to 9/20.

13- When it came to the Middle School Certificate, pupils were tested exclusively about lessons they were taught, which helped a high number of them to pass to the High School stage.

*** The general results of the study**

After careful analysis and discussion of the hypotheses, the study reached the following conclusions:

1- the COVID-19 crisis has had a positive impact of academic achievement.

2- the implemented hourly volume positively impacted the academic achievement of middle school students.

3- the cohort system proved efficient amongst middle school students.

4- there's a wide consensus amongst teachers that the hourly volume has had positive impact with a value of 4,81. The same attitude is noted towards the cohort system, by a value of 3,43.

5- The impact of the hourly volume on academic achievement during the COVID-19 pandemic ranked first with an average score of 4.81, while the impact of the incentive system on academic achievement during the same sanitary crisis ranked second with an average score of 3.34.

*** Discussion of the results in light of previous studies:-**

The current study, in its theoretical aspect, touched upon some similar studies on the topic. Based on these frameworks, we will attempt to discuss the results of the current endeavor in light of what other studies have concluded, each in its respective field, as follows:

1- Building on the findings of Fawzia Chenafi and Mohammed Lamine Brahmi's study on the

Algerian education system and remote learning during the COVID-19 pandemic, their research suggests that 80% of the 243 students sampled either improved or maintained their academic performance. This allows us to consider generalizing this approach. This aligns somewhat with the conclusions of the current study, which found that despite the current critical situation of the Algerian education system, the COVID-19 pandemic had a positive impact and significantly contributed to raising the academic achievement of middle school students.

2- Muhammad Qazqouz's study, "Evaluating the Implementation of Physical Education and Sports Lessons During the COVID-19 Pandemic (COVID 19) from the Perspective of Middle School Teachers," concluded that the administrative staff failed to provide adequate support or suitable conditions for teachers to deliver effective lessons. Additionally, some Al-Bayedh middle schools received small support, further hindering the quality of physical education instruction during the pandemic. However, despite receiving only moderate assistance from the administrative staff, some Al-Bayedh middle school educators

employed their organizational and pedagogical skills to ensure the success of their physical education lessons with the help of their students. These findings align with a partial conclusion that indicates reducing instructional time during the pandemic negatively impacted physical education. The previous study and the current one differ in the sense that the COVID-19 pandemic has a positive impact on the overall academic achievement of middle schoolers.

*** Conclusion**

The COVID-19 pandemic has irrevocably transformed the educational landscape. The Ministry of Education now faces the imperative of adapting to this new reality, necessitating the development of innovative mechanisms, alternative strategies, and phased plans to equip educational institutions for the continued delivery of education. In response, a stringent health protocol was implemented alongside the development of solutions based on implementing cohort learning, and reducing the hourly volume of classes. This temporary, in-person teaching method serves to facilitate student completion of lessons while maintaining alignment with academic terms and schedules.

These changes have demonstrably led to a qualitative leap in the educational level of students, positively impacting their academic achievement rates within middle school education. Consequently, this has ensured smooth transitions between educational stages, maintaining the integrity of the educational process and securing the success of the academic year.

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