The Shift to E-Learning during Covid -19 in Algeria: Case study of YouTube and ONEFD website for Baccalaureate students

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Abstract

This study explores the efficiency of the shift to E-learning strategy during Covid-19 circumstances in Algeria. It is concerned with the E-learning measures taken by the Algerian authorities through reviewing official publications and a webometric analysis on a sample of educational channels and websites. The results have shown that the online learning started to show a very slow and weak online traffic with a negative rate of views, subscribers and visitors. This negative rate was despite of the daily updates of the channels and websites with online courses. The researchers called for further studies.

Keywords: E-learning, covid19, webometric analysis, ONEFD, schools lockdown.

التحوّل إلى التعلم الإلكتروني خلال كوفيد-19 في الجزائر: دراسة حالة موقع *YouTube* ONEFD لطلاب البكالوريا

ملخص

تكشف هذه الدراسة عن فعالية التحوّل إلى استراتيجية التعلم الالكتروني في الجزائر خلال ظروف كوفيد-19، وقد اهتمت بالتدابير المتخذة من قبل السلطات الجزائرية في مراجعة المنشورات الرسمية وتحليل قياسات الويب على عينة من القنوات والمواقع التعليمية. أظهرت النتائج أن التعلم عبر الأنترنت عرف حركة بطيئة وضعيفة للغاية، بالتزامن مع معدّل سلبي للمشاهدين والمسجلين والزائرين، وقد جاء هذا المعدّل السلبي على الرغم من التحديثات اليومية للقنوات والمواقع للدروس المقدّمة عبر الأنترنت. يوصي الباحثان بإجراء المزيد من الدراسات.

الكلمات المفاتيح: تعلم إلكتروني، كوفيد 19، تحليل الويب، ديوان وطني للتعليم والتكوين عن بعد، إغلاق المدارس.

Le passage vers e-learning pendant le Covid-19 en Algérie: Etude de cas du site YouTube et de l'ONEFD pour les élèves du Baccalauréat

Résumé

Cette étude explore l'efficacité du passage à la stratégie d'apprentissage en ligne dans les circonstances de Covid-19 en Algérie. Elle s'intéresse aux mesures d'apprentissage en ligne prises par les autorités algériennes à travers une revue des publications officielles et une analyse webométrique sur un échantillon de chaînes et de sites Web éducatifs. Les résultats ont montré que l'apprentissage en ligne commençait à montrer un trafic en ligne très lent et faible avec un taux négatif de vues, d'abonnés et de visiteurs. Ce taux négatif était malgré les mises à jour quotidiennes des canaux et des sites Web de cours en ligne. Les chercheurs ont appelé à de nouvelles études.

Mots-clés : E-learning, covid-19, analyse webométrique, ONEFD, confinement des écoles.

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Introduction:

"After coronavirus: the world will never be the same . . . in some ways it may be better" [1]. This title published on the British newspaper "The times" asserts that many changes and measures are to be taken at different levels to cope with the issues that Covid-19 has yielded; the challenges that are facing the world today are not only confined to the medical sector, but also the serious challenges that the world is facing, including but not limited to recession in the global economy, paralysis in industry, stagnation in tourism, and lock down of education institutions.

The latter challenge facing education is the hub of this study attempts tries to shed light on how this pandemic affected education globally and Algeria in particular. The researchers observed a paralysis in the educational system in Algeria and the world since the outbreak of the virus in the end of 2019. Be it in schools or universities, education seemed to be literally paralyzed and the solutions offered by the Algerian government are hypothesized to not be sufficient as to meet the learners' pedagogical needs. Thus, two questions were worth answering through this research:

• What were the measures that countries around the world, including Algeria, took to sustain learning during the closure of schools?

• Did E-learning succeed to replace direct learning in Algeria?

1- Background of the study

1-1- Covid-19, social distancing and the need for schools lockdown:

The Coronavirus pandemic appeared first in December 2019. It was China that recorded the first case in the state of Wuhan on December 30th. Other countries were soon affected and the virus showed a potential contagious capacity among people in the five continents of the world. This unprecedented rapidity in the spreading of the virus worldwide led the World Health Organization to announce it as world pandemic on March 12th[2].

This critical situation in the world led governments worldwide to take measures as to limit the spread of the virus. Social distancing was the flagship of many recommendations from the World Health Organization to governments and large public. The organization stressed the importance of maintaining at least 1 meter distance between oneself and others, because "when someone coughs, sneezes, or speaks they spray small liquid droplets from their nose or mouth which may contain the coronavirus"[3]. Avoiding crowded places was also a recommendation by WHO, since when people come together in crowds, "they are more likely to come into close contact with each other and it becomes, therefore, more difficult, to maintain a physical distance of 1 meter" [4].

However, some research found these measures to be inefficient among young people, namely children and teenagers, who were reported to have about three times as many contacts as adults, and three times as many opportunities to become infected [5]. This age category, thus, is at a higher risk of infection which results in serious complications as to limit the spread of the virus via social distancing principle. As a result, decisions were worldwide taken to close any place where children or teenagers might gather. This closure concerned playgrounds, Gyms, libraries, discos and particularly schools.

1-2- Covid-19 and the educational challenges in Algeria:

The development of any nation is grounded on the stability and the flourishing of its educational system. Although many challenges were facing education permanently, either by political issues or ideological shifts that changed the curriculum continuously, or even the teachers' strikes to claim some social and professional rights, education has never seen a similar challenge to that of Covid-19 [6]. Schools started to close their doors all over the world to avoid the spread of the virus among learners. Algeria among other worldwide countries preferred to opt for a localized closure whilst the majority of countries imposed more stringent measures as to close all schools nation-wide[7].

According to the UNESCO, more than a billion learners were affected; 87.2% of total enrolled learners were not following their education at schools in more than 144 countries[8].

These statistics do not only reflect the critical situation that is facing education worldwide, but also make us think of possible remediation to cope with such an issue that is threatening more than the half number of the world's societies. In this sense, many international organizations namely the World Health Organization (WHO) and the UNESCO elaborated, in cooperation with the local authorities, programs to provide psychosocial support, learning management systems and other Self-directed learning contents. Meanwhile, the Global Education Coalition was created by UNESCO as a network of companies, and media corporations in collaboration to enhance distance-learning solutions for the more than 1.5 billion learners (87% of all of them worldwide) whose schools are closed[9].

In Algeria, the case was not quite different from the rest of the world[10]. The outbreak of the virus started at the beginning of March 2020. Soon after two weeks, the first decision concerning the closure of schools was announced by the president of the Algerian republic "Tabboune"; the authorities advanced the spring holidays by a week earlier than its predefined date on March 19th. Later, series of schools lockdown were made to keep the schools closed. Furthermore, the official exams (BAC and BEM) were postponed to September, whilst the primary school certificate was cancelled.

Amidst these decisions, the need for psychological support for the learners in this crucial and unprecedented situation became urgent, since the pupils and the teachers alike were uncertain about their academic year[11]. Some of the measures that the Algerian authorities took, in this regard, were the introduction of distant learning through You tube, public and private channels devoting some of their programs to offer class-like lessons, and ultimately the creation of a number of channels devoted completely to learning in different cycles, especially exam classes[12].

The abovementioned solutions that were offered to learners in Algeria and worldwide have one thing in common; they are electronic documents, software, applications and on-air/ online channels. This feature is claimed to be efficient in such circumstances when social distancing becomes a must to prevent the spread of Covid-19. These materials and channels are commonly called E-learning platforms[13].

To sum up, this section answered the first question of the study which was about the measures that were taken to cope with the problem of schools closure. In this sense, it is worth reminding that the outbreak of the coronavirus had direct impact on education worldwide. Schools were closed because young learners present a higher probability to be infected by the virus, therefore the lockdown of schools came as an inevitable choice as to limit the spread of the virus following the social distancing principle. Consequently, e-learning became an adopted alternative to face-to-face or direct learning in a bid to assure that learning is sustained and undertaken remotely. Algeria was not an exception to all of these circumstances, schools were closed and official exams were postponed. However, to keep the learners within the environment of learning, the Algerian authorities created online/on-air channels assuring virtual learning in favor of learners of all levels, and more particularly those who are participating in official exams, namely BEM and BAC.

1-3-E-learning in Algeria:

It is evident that online education or e-learning has become an imperative method of learning within this age of technology. From primary education to higher education, people can have knowledge straight from the horse mouth. Yet, e-learning is considered as one of the main traits of globalization. In this sense, Sundar (2008, p. 29) writes:

"Now higher education is available on the doorsteps, rigidity in earlier education became flexibility; the educational degree can be achieved while at work. All these happen due to the globalization effects. It is the globalization which empowers people to think in a rational and wider way, to see for a larger benefits, to use technology to do their task more efficiently, effectively, comfortably, and quickly."[14]

The benefits of E-learning are numerous. For example, according to Guemide, Benachaiba, & Bouzar (2012)[15], e-learning encourages learner-learner interaction; it fosters learners'

motivation and brings about new techniques to teaching, especially the teaching of languages. This importance and the benefits of E-learning on education were perceived in the integration of e-spaces, e-rooms and other related e-learning platforms in the educational institutions' websites. This could help the teachers and learners alike to access the information rapidly and under different circumstances[16]. As far as Algeria is concerned, it was in 2001 that the official authorities i.e. the Ministry of Education created the National Office of Education and Distant learning or the ONEFD (standing for: "Office National de l'Education et la Formation à Distance").

This office is intended to help learners who cannot reach schools to follow online courses designed according to the national curriculum, as well as preparing them to official examinations[17]. The given examples like "Avicenna Virtual Campus" launched in 2002 introduced many years before the pandemic which is a 4 year project coordinated by the UNESCO, it was aiming at developing e-learning by improving online courses and setting virtual library in many languages for Algerian learners Weber & Hamlaoui (2018)[18]. Another project was the "Algerian Virtual University" containing adapted courses and self-evaluation tools for learners.

1-4-E-learning measures during the closure of schools in Algeria:

On April 5th, within the decision of keeping the schools closed, the Algerian authorities took urgent measures to offer learners distant learning through multiple digital platforms. The ONEFD which is the first official institution concerned with e-learning and distant learning [12] was assigned the role to create online channels on YouTube offering virtual lessons from the national curriculum[19].

17 YouTube channels were available to learners and their parents on YouTube. Five channels for the primary cycle; one channel for each level. Also, the middle level has its four channels for its four levels. The rest of the channels were devoted to secondary level, since the courses should take into account the different existing streams.

2- Methodology:

2-1-Sampling:

The sample of this study was purposefully selected since only the official E-learning platforms, which are established by the Algerian ministry of education, are likely to be used by learners. In this regard, this study monitors the traffic of the websites for both the ministry education and the ONEFD. These two official websites are officially assigned the role of distance learning. Concerning the educational YouTube channels, the researchers selected the channels that are devoted to the terminal level i.e. Baccalaureate exam candidates (BAC). The following reasons were behind such a choice:

a. Learners at this age would be more autonomous and they are more motivated to learn than their younger fellows; this motivation could be according to Dornyei (1994) either instrumental to pass the BAC exam and carry their higher education at the university and find a job, or it could be integrative since learners at this age start to develop their self-concept identity and praise themselves with academic success[20];

b. Besides of the fact that this category of learners does not need the assistance of their parents, learners at this age would master better e-learning environment [21].

2-3- Research design and data gathering tools:

This research follows the descriptive design which is adopted, herby, through a webometric analysis to monitor the traffic of the selected websites and YouTube channels (devoted to e-learning) using recognized web analytics tools. The generated data including traffic rank, pages viewed, speed, links, bounce percentage, time on site, search percentage, and the data collected were analysed and tabulated to reveal findings in accordance with the desired objectives.

First, the social media analytics website SocialBlade.com was used to extract related data from Algerian Educational channels on YouTube. The SocialBlade.com tracks and collects detailed statistics on YouTube channels such as number of views or followers[22].

Second, Alexa databank is used with the official websites devoted to E-learning and adopted by the Algerian ministry of education. According to Naheem (2016) [23], Alexa Internet is "the most well-known tool for evaluating websites. It offers a free- of- charge evaluation service. Alexa continually gathers various types of information from all public websites such as traffic rankings, number of page views, links pointing to sites, average time on site per user, etc."

3-Results and discussion:

After conducting a webometric analysis of ONEFD Educational channels on YouTube, table.1 bellow summarizes the data that were felt relevant to the objectives of our study.

Table n°1: A Webometric analysis of ONEFD Educational channels on YouTube

| Name of the channel with the corresponding streams	Electronic link	General statistics until 06/27/2020				
		Videos	Subscribers	Total views	Rate of views in last 30 days	Rank in Algeria
WEB_TV_ON E D 25 3rd scientific stream: Technical Maths Maths	https://www.youtube.com/channel/UCMHSrEZcZpywTzbw13_eZ9w/	180	13600	284362	93.5%	3614th
WEB_TV_ON EFD 06 3rd scientific stream: Experimental sciences Economy and management	https://www.youtube.com/channel/UCMkBQqN9RIXfUH3N_rX7yGA	147	34900	623635	89.3%	1880th
WEB_TV_ON EFD 15 3rd literary streams Philosophy Languages	https://www.youtube.com/channel/UCQLM9s3Z7rqKmlXp9HzdlJQ	139	16600	315066	85.5%	3148th

In the first week since their online creation, the three YouTube channels were noticed to count the highest rate of their weekly number of subscribers and video views. This may be due to many presumed factors. First, this rate would be due to the media advertising of these channels in official public and private channels, social media, and the official statements from the authorities namely the ministry of national education [24]. Additional factors that might have led to such a number of subscribers (around 6000 subscribers in the first days) are hypothesized to be due the learners' sense of curiosity to explore and deal with such a new method of learning i.e. distant learning, which was only confined to independent learners. Furthermore, during the first week (April 6th to April 13th), the third term lessons had not yet been canceled, the official authorities had not yet specified the nature of these online lessons to whether they were compulsory or optional for third term exams..

From the second week onward (since April 14th), however, a negative rate was noticed concerning the weekly number of subscribers and video views for the three online channels. For example WEB_TV_ONEFD 06, that counts the highest number of subscribers and views among its two channel counterparts, recorded approximately 8400 subscribers in the first week. Only 1500 subscribed to this channel in the second week, whereas during the third week the number of weekly subscribers was some 400 subscribers. More interesting, was the number of some 500 users who unsubscribed from the channel in the month of May; to

unsubscribe from a YouTube channel means that the user is no longer interested in the content of the channel. In addition, the number of the weekly videos viewed decreased proportionally with the decrease of the number of subscribers, although the channel continued to add new videos daily. Concerning the rest of the channels i.e. WEB_TV_ONEFD 25 and WEB_TV_ONEFD 15, similar results were found concerning the number of weekly subscribers and views.

The obtained data concerning the number of weekly subscribers and weekly video views for WEB_TV_ONEFD 25, WEB_TV_ONEFD 06, and WEB_TV_ONEFD 15 is represented respectively in fig.1, fig.2 and fig.3. The figures were obtained and extracted from the SocialBlade.com website. Direct source to the website is given through an electronic link.

Figure n°1: Weekly subscribers and video views gained for WEB_TV_ONEFD 25
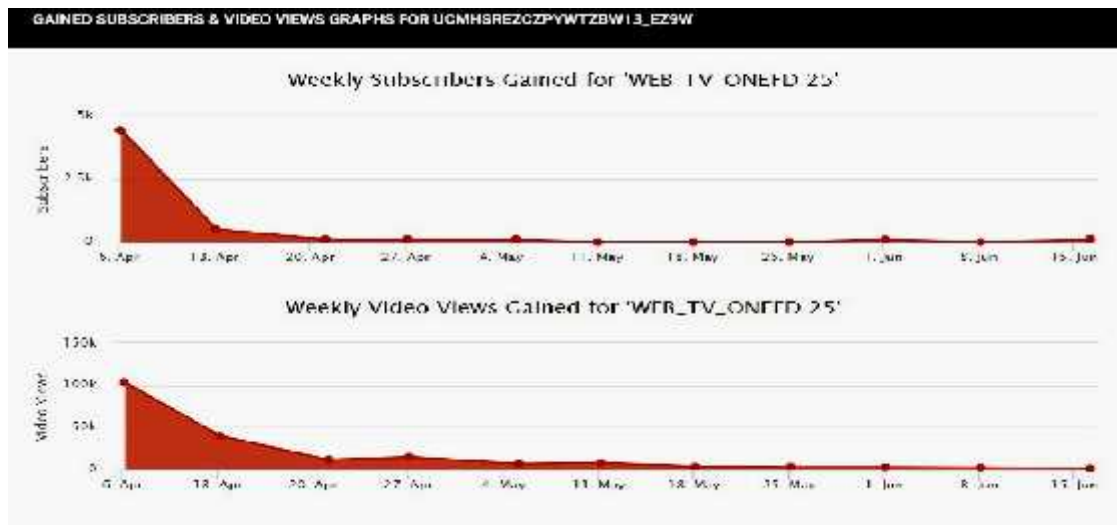

Source: https://socialblade.com/youtube/channel/UCMHSrEZcZpywTzbw13_eZ9w/monthly

Figure n°2: Weekly subscribers and video views gained for WEB_TV_ONEFD 06
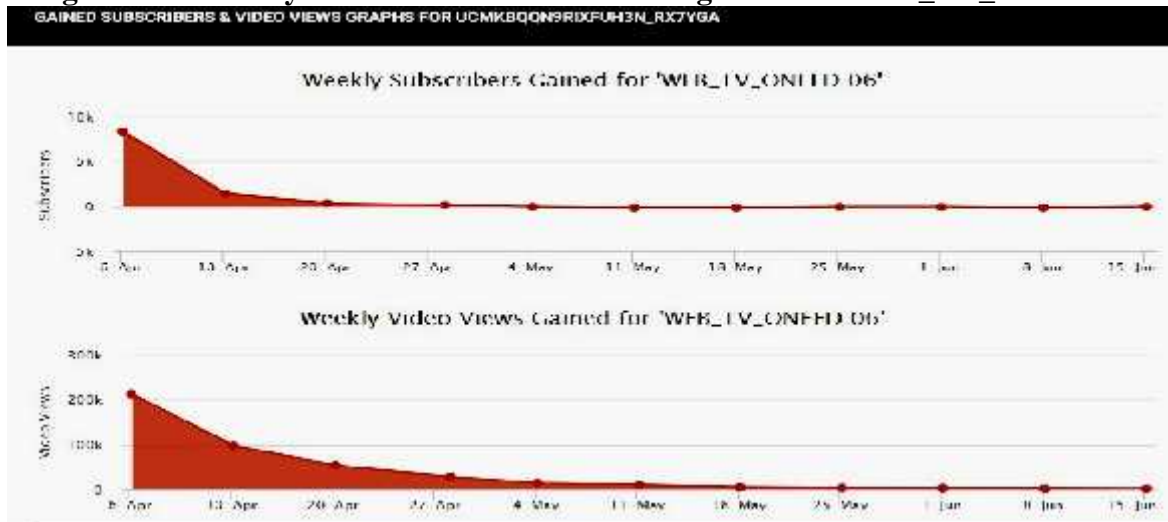
Source: https://socialblade.com/youtube/channel/UCMkBQqN9RIXfUH3N_rX7yGA/monthly

Figure n°3: Weekly subscribers and video views gained for WEB_TV_ONEFD 15

Source: https://socialblade.com/youtube/channel/UCQLM9s3Z7rqKmlXp9HzdlJQ/monthly
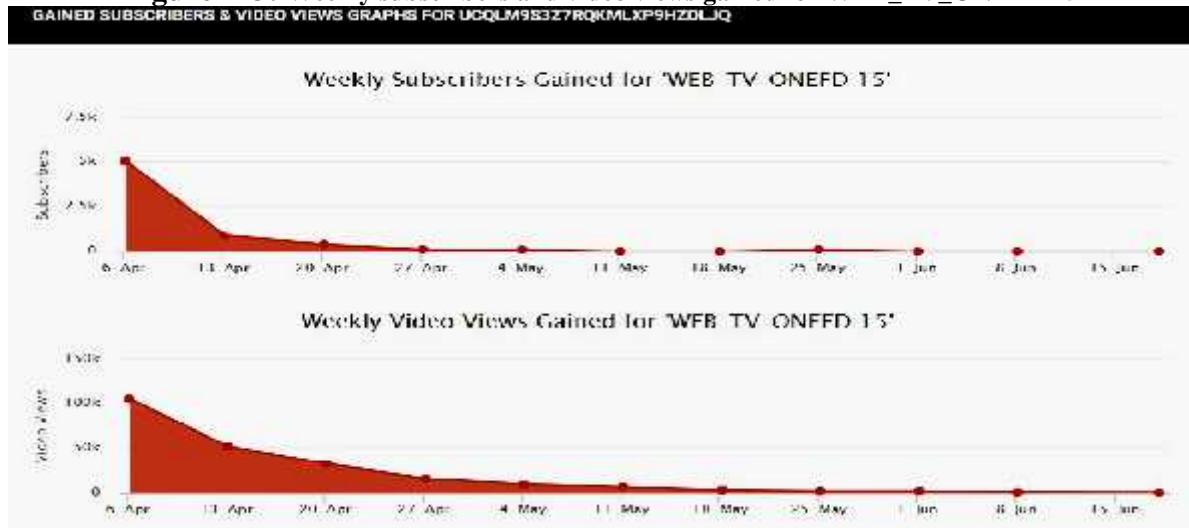
The reason of this negative rate in weekly views and weekly subscribers could be attributed to many presumed factors that this study can neither confirm nor disprove.

Indeed, some days before the end of spring holidays, another official decision was taken to keep the schools close. Rumors spread after this decision; a strong debate in the social media about a possible delay of official exams with an eventual cancellation of the third term lessons could affect learner's interest to continue learning online. This debate led, again, the official authorities to publish a clarifying statement about the situation of the academic year in terms of measures set to save third the academic year[25]. This situation of conflicting news might have affected learners' interest especially after the statement of the minister in which he asserted that the measures taken to cope with the schools closure (You –Tube channels in our case) cannot replace the direct learning.
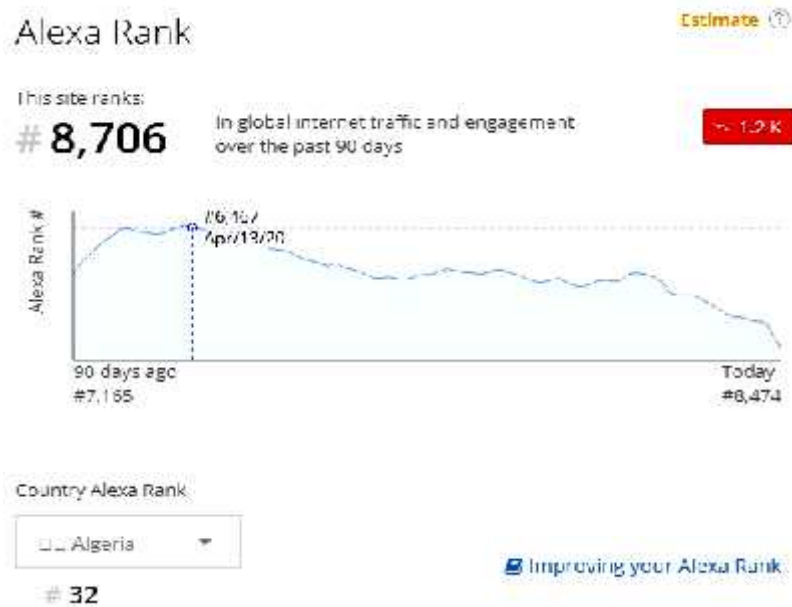
Concerning other e-learning official websites, the online traffic of the ONEFD and the ministry of education have shown practically similar results to those encountered with Educational channels; the websites rank decreased significantly since April 14th onwards which reflects the decrease of the number of visitors.

The obtained data concerning the rank of ONEFD and the ministry of education websites is represented respectively in fig.4, fig.5. The figures were obtained and extracted from Alexa.com website. Direct source to the website is given through an electronic link.

Figure n°4: Alexa rank of ONEFD website

Source: https://www.alexa.com/siteinfo/onefd.edu.dz
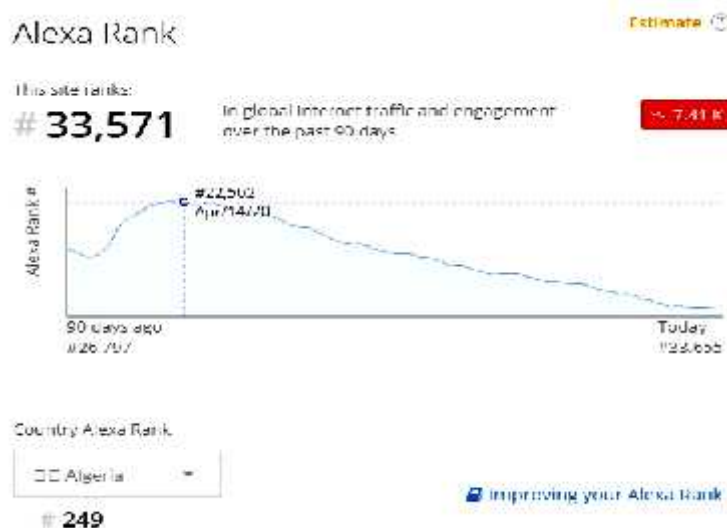
Figure n°5: Alexa rank of the website of the Ministry of Education

Source: https://www.alexa.com/siteinfo/education.gov.dz

To sum up, these results could answer, to some extent, the second question of the study which was about whether E-learning succeeded to replace direct learning in Algeria. The results which were obtained from the webometric analysis on the official e-learning websites and YouTube educational channels, have shown that starting from the second week since the announcement of e-learning measures (ONEFD educational channels on YouTube), the channels did not gain satisfying number of weekly subscribers and videos views. Furthermore, in the same period when the educational channels on YouTube were showing a small number of weekly subscribers, the website of ONEFD and the website of the ministry of education were degrading in their rank because of the decrease of their daily visitors. The announcement of the ministry also stressed the fact that the measures taken to maintain learning cannot replace direct learning.

4- Limitations and recommendation for further studies:

Due to its descriptive nature, this study cannot investigate or predict the reasons behind the negative rate encountered when monitoring the number of visitors to the ONEFD website as well as the number of weekly subscribers and videos views of the educational channels on YouTube. However, the researchers hypothesized some reasons that need to be confirmed in further research. Therefore, the researchers call for further studies in as much to the following points:

-Conducting surveys based on questionnaires administered to BAC learners in order to investigate their attitudes towards E-learning in general and the ONEFD YouTube educational channels in particular;

-Conducting interviews with educational authorities and decision makers to foresee the place of E-learning in the Algerian educational system after Covid-19.

Conclusion:

Algeria was obliged to close schools during Covid 19 pandemic as to limit the spread of the virus among young learners. As a response to schools closure, Algeria decided to implement urgent measures to cope with this challenge, this was in collaboration with international entities such as UNESCO. E-learning, in this regard, was the most common measure to be adopted. Many E-learning educational platforms were used in favor of affected learners worldwide. In this line, the official authorities adopted the same approach as the rest of the world through E-learning YouTube channels which were created under the supervision of ONEFD. These channels offered online lessons to learners of all levels. Therefore, the researchers hypothesized that E-learning did not succeed to replace direct learning in Algeria. This hypothesis is backed by the announcement of minister of education that the measures

taken within E-learning cannot replace direct learning. This study was mainly based on webometric analysis and a content analysis of official announcement. Finally, the researchers called for further studies in this field to assess the attitudes of learners towards E-learning and its integration in the educational system during and after covid-19.

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