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## Medical Education During COVID-19 Pandemic

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### Abstract

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV2) is the causative agent of the coronavirus disease 2019 (COVID-19), this disease spread suddenly and quickly through many countries Causing many deaths around the world and significantly affecting various aspects of life such as economics, political, social and education, medical education one of the most fields that suffered a major defect during this pandemic. This epidemic forced people to home quarantine for a long time and this led to resorting to alternative methods for continuing education through the use of online platforms, but this procedure was not sufficient to deliver the full scientific material to the student of medical colleges. The student may be forced to compensate for what he missed until next year, and this may create other problems in the future. Online education is an important subject in numerous countries today, but it was exposed to many problems, which led to inefficiency in achieving the educational goal. This article reviews the obstacles faced by students in general and students of medical colleges especially, during this epidemic, the impact of online education on the student and teacher together, and the efficiency of the educational process in response to sudden change in the context of education in Iraq, with some suggestions that would facilitate the delivery of scientific material to the students and the urge to conduct more research to make the best use of the results of this experiment in order to develop future and creating new dimensions in Iraq education.

### Keywords

COVID-19, Medical education, Online education, Iraq education

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## 1-Introduction

Universities must take positive steps to put teachers involved in the academic area without risking their life such as teachers can do their work from home. And the current time shall be used by the universities by given teachers the free access to learning platforms or articles databases and use it from their home, the positive steps towards teachers will lead to an enhanced teaching and learning system when they return to work after COVID 2019 outbreak [1]. Many schools across china use the cloud technology for online classrooms, video learning and other means, but online teaching reproduces some difficulties, some teachers copy classroom content to online courses, overlooking personal direction, lacking interaction between teacher and student, and deprived teaching consequences also for some students online learning was not acceptable, due to lack of self-learning skill, lacked face to face teacher [2]. The fearing on the students future during Covid-19 pandemic is one of the most things that affects the quality of education and medicine around the world, most mothers reported significant fear related with the Covid-19 disease on their children [3]. To expand students learning attention to online learning it must be making alternative readiness plans for unpredicted problems, separating the teaching content into smaller components to help students concentration, highlighting the usage of voice in teaching, employed teaching assistants for online supporting, consolidation students' educational ability outside of classes and uniting online learning and off line self-learning efficiently [4].

There are elements for the effective online education in emergencies such as ensuring reliable network substructure which can holder millions of users, using responsive learning tools is helpful to learners in handling information, providing appropriate digital learning resources like online video micro courses, animations and quizzes, directorial learners to apply operative learning methods can be used in groups or individually like online social communities, endorsing effective methods to establish instruction by accepting a range of teaching strategies like experiential learning, providing support facilities for teachers and students on learning, using effective learning technologies, tools, etc. [5].

## 2-Medical Education during COVID-19:

COVID-19 pandemic have greatly affected the medical education path around the world and has experienced a big disturbing alteration as a result of the technology that has been quickly and creatively used to preserve learning and teaching, the future of medical education is undefined after the pandemic resolutions but numerous possible future scenarios are conversed to notify present choice making about the future facility of teaching and learning, the use of technology for education like artificial intelligence for virtual reality and adaptive learning are highly probable to be vital constituents of the transformative alteration and the future of the medical education [6]. Recurrent turnings between departments and hospitals make medical students possible vectors for COVID-19, many of teaching hospitals in the

united Kingdome have reported COVID-19 cases, and that will be a problem especially to some medical students in the final year, certain medical schools have reduced exposure In the last weeks before the exams to decrease the risk of the virus, this would lead to a missed chance of working in a healthcare system [7]. Universities have played a helpful role in the prevention of the COVID-19 epidemic but, they also face the problems of difficulties in economic, the risk of infection to medical saving teams and health workers , teachers and students, and the unacceptable application of technology in teaching, universities must overwhelmed problems in education, from students to teachers, and medical staffs from outside the correction, and needing to researchers to discover an active vaccine [8].

Medical education based on network that combined online interaction and team learning is a more appropriate choice to teach medical students online, female recorded had higher outlooks and were more probable to adapt well to the transformation during the COVID-19 epidemic [9]. For medical students concerned with following neurosurgery, educational rules surrounding COVID-19 existing exceptional challenges, students after COVID-19 were more probable to take a year off from school and these students want virtual surgical workshops and virtual mentorship during this time [10]. Even with training on prevention of aerosol infectious diseases, no certified information exists for dental institutions on how to efficiently follow the recommended rules with social distancing to protect dental students, colleges staff and patients [11].

There is a real need for the surgical occupation to report the instant challenges and anxieties and keep a positive position in regard to surgical training in the future, national organizations and different constituent must work together and organize efforts to harvest top consequences [12]. Health care centers in universities have had to take unique measures of containment, comprising asking unnecessary staff to stay at home, medical students working in the surgical departments find themselves indolent, as non-crucial surgical activity has been irrecoverable, universities are closed and students medical training is probable to suffer if teachers do not device vital measures to deliver ongoing education, as the students behavior and environmental limitations evolve, the importance that must be placed on educational research is modern educational tools and blended learning methods grow and can be a reply to student absence in lectures [13].

Medical training is often done through face to face conferences with academic teachers. But, the sudden social distancing during COVID-19 that planned to stop the virus spread which lead to online teaching and detached the capability to deliver personal support to the students these changes left many students socially isolated and Suffer to adapt [14]. COVID-19 has dropped clinical specialty capacity for trainees in medical field and caused a blockage in the training of medical students also lowered graduation than fully capable physicians, and it is essential to create an equivalent insurrection for graduate medical education in which will finally advantage the trainees and patients in future [15]. Medical students, equally with healthcare workers are more vulnerable to be infected by COVID-19 and medical students in Iran have high level of knowledge (86%) about COVID-19 and self-

protection behaviors with awareness of the riskiness (94 %) [16]. COVID-19 created the need for social distancing and it is led to virtual learning which has reformed how to teach medical trainees, also it has adoptive a logic of community that lessen trainee exhaustion and endorse wellness during isolation, so virtual learning may play a useful role in the learning of medical trainees [17].

### **3-Impact of online education in Iraq:**

The weakness of the Internet and the lack of experience of some teachers and students with computer systems may be a major obstacle in the path of the educational process in light of this sudden change in Iraq, As the United Nations Educational, Scientific and Cultural Organization, "UNESCO", confirmed that online learning in Iraq failed and did not succeed and this failure may be caused by poor internet service, especially some rural areas and villages that do not enjoy full coverage. An online survey on Chinese populations aged  $\geq 18$  years, detected 52.1% of participants felt horrified and worried due to the pandemic, so COVID-19 may be associated with stressful even though this pandemic is still continuing [18]. COVID-19 epidemic has carried not only infection or death but also intolerable psychological pressure, 24 % of college students in china have anxiety because of COVID-19 and it is recommended that schools and government should cooperate to resolution this problem to provide high quality psychological service to these student [19]. COVID-19 pandemic is causing draining health care systems, closing down economies, and schools, through these school closings, may worsen the epidemic of childhood obesity and increase differences in obesity danger [20].

### **4-Impact of COVID-19 on medical students in Iraq :**

COVID-19 has a big impact on medical education and needs attention from medical teachers, COVID-19 may change the future of medical education , medical students may spread this virus if they are asymptomatic and may get the virus during training, but they can be as educators to their communities and patients by using social media and other ways to help stimulus positive actions in them, students and teachers also can document the effects of existing changes in education during COVID-19 and put on new applications in the future and this may be an important step the medicine education development [21].

The new reality depends on computer applications technology that could be easier if it is united with Life Direction and life skills, and the transition from traditional classroom to a digital technology approach digital classroom Originates a new generation on a calculated direction [22]. The bulk of the quality of medical education falls on medical and laboratory skills that students of medical groups receive in hospitals or college laboratories and the total accreditation at the present time in Iraq on virtual education platforms during the home quarantine, make the students receiving only theoretical material while touching on the

practical part with the help of YouTube videos and pictures, which are offered by teachers to facilitate the understanding of practical material and this may be insufficient to accommodate students. If students of medical colleges entering hospitals to complete their Training is a dangerous matter that may accelerate the spread of COVID-19 between them and their families. Therefore, solutions must be found for this matter so that the student does not enter into another school stage and they did not achieve scientific sufficiency at the current stage, which led to losing of scientific material.

## **5-Conclusions and recommendations:**

COVID-19 outcome has had a significant negative impact on the success of the educational process in Iraq and on various levels, such as the difference in students ability to accommodate online lessons and on the failure of some teachers to manage these classes efficiently and this may lead to the result of passing this stage at a weak level, especially for students of medical groups and other colleges that depend on laboratory teaching. Educating students on the correct preventive methods that are closely related to the fear factor of infection with the virus may improve the level of self-protection that the student adopts when returning to the campuses of universities or hospitals in light of the current crisis and reduces the chances of widespread infection. These and other difficulties come due to the sudden application of this system without previous studied plans. Therefore, this experience can be benefited in Iraq and the adoption of this system in the future teaching as a supporter and an effective factor for direct teaching activities that occur within universities, which is done through conducting more research based on educational and social questionnaires, statistics and other researches to evaluate the effectiveness of adopting modern systems and electronic applications in expanding educational horizons and put effective proposals in achieving the maximum benefits from this systems among Iraqi students and teachers when they return to the traditional education in the future.

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