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OPINION ARTICLE

From Copyright to Copyleft to CopyCovid: An opportunity for democratization of medical education [version 2]

Vildan Ozeke[1,3], Işıl İrem Budakoğlu[2], Yavuz Selim Kıyak[2], Özlem Coşkun[2]

[1]Tokat Gaziosmanpasa Universitesi
[2]Tokat Gaziosmanpasa University
[3]Gazi Universitesi

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Abstract

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The COVID-19 (Coronavirus Disease of 2019) pandemic, as the modern world's gravest health crisis, has rapidly required more health facilities and health care providers (HCPs). The education system in general and medical education, in particular, has also changed dramatically with the school closures. Teaching and learning activities are undertaken remotely and on digital platforms. Academicians, HCPs, and medical students have gained new skills and experienced to manage their own learning process online. Many sources became easily reachable, open, and free. Open and democratized medicine, as we have seen during this pandemic, offers an interactive, egalitarian educational model. Governments, global organizations, and companies collaborated in order to keep all students learning and all instructors teaching. Many societies are faced with the digital divide and exclusion of learners. In this paper, we discussed the effect of COVID-19 on medical education at all levels and its' democratization and shared our recommendations for sustaining these achievements after the pandemic.

Keywords

COVID-19, pandemic, democratization of medical education, open-access, online learning

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1. **Keith Wilson**, Dalhousie University
2. **Ken Masters**, Sultan Qaboos University
3. **Julie Hunt**, Lincoln Memorial University

Any reports and responses or comments on the article can be found at the end of the article.

Corresponding author: Vildan Ozeke (vildancevik@gmail.com)

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What is happening? A snapshot of the Covid-19 pandemic

The COVID-19 pandemic, as the modern world's gravest health crisis, has rapidly required more health facilities and health care providers (HCPs). In some countries, the health systems were inadequate and became unable to perform efficiently in terms of COVID-19 challenges such as "the number and spread of cases, the social, economic and healthcare capacity to manage disruption" (Tolsgaard *et al.*, 2020). After people realized the fact that the virus is spreading by contact and micro-particles in the air, it caused daily life routines and all social dynamics to blow up. We all migrated to the digital world. For the Organization for Economic Co-operation and Development (OECD), the COVID-19 crisis not only threatens human health but also stagnates human capital (Williamson, 2020).

The education system in general and medical education, in particular, have changed dramatically. The United Nations Educational, Scientific and Cultural Organization (UNESCO) announced the COVID-19 outbreak as a major education crisis. Teaching and learning activities are undertaken remotely and on digital platforms. In-person courses transformed into virtual courses, clinical rotations have been suspended, the clinical responsibilities and educational opportunities of residents have been altered (Woolliscroft, 2020).

In another perspective, the COVID-19 outbreak provided a big chance for education technology companies to show what they can do, and most of them made their resources freely available. The shareholders had an opportunity for experimentation of technology-supported learning environments. The video conferencing platforms (Zoom, Microsoft Teams, Google Classroom/Meet), learning management systems, and cloud-based education services were widely used around the world to collaborate and to set/to perform remote learning tasks (Williamson, 2020).

Many selected digital resources, archives, and museums became open to the public during lockdowns (Audible by Amazon, British Museum, The Museum of Modern Art, The Metropolitan Opera, and The Berlin Philharmonic, etc.). Some libraries, databases, and publishing companies (e.g. Cambridge University Press, EBSCO, Elsevier, JSTOR, Sage Publishing, Springer, Wiley, and Wolters Kluwer) allowed free access (mostly related to COVID-19, pandemics, and virus) to their databases for this uncertain period in order to accelerate the diffusion of information across the scientific area. Medical College Admission Test (MCAT) Collection became freely available on the Khan Academy, sponsored by The Association of American Medical Colleges (AAMC).

During the coronavirus pandemic, as part of synchronous communication the video/web-conferencing tools, webinars became popular to manage meetings (Macgilchrist, 2020; Ozeke *et al.*, 2020). Association for Medical Education in Europe (AMEE) hosted a webinar that focused on the impact of the pandemic across the continuum of medical education and training (Cleland *et al.*, 2020). Many academicians have organized webinars to contact and help medical students and fellows and to continue education over this unprecedented period as part of "Emergency Remote Teaching" (Hodges *et al.*, 2020). These meetings have catalyzed free and interactive education with few exceptions (i.e. need a password to be able to participate in the meetings). It provided an opportunity for physicians, fellows, and medical students from all around the world to join and listen to unique lessons by well-known academicians and physicians (Almarzooq, Lopes, and Kochar, 2020).

In terms of undergraduate medical education, it was a chaotic process with a lot of trial and error involved. The high number of students (greater than 300) in a class made it impossible to join synchronous sessions. On the other hand, dividing the classrooms into manageable sizes and conducting synchronous sessions increased the workload of instructors. Problem-based learning and case-based learning sessions were carried out with small groups through webinars. Unfortunately, the clinical clerkships of undergraduates were canceled and medical students were pulled out of clinical environments for infection control purposes (Tolsgaard *et al.*, 2020).

Where we were before the pandemic?

Indeed, the wide and freely accessible information has always been restricted. The cost of accessing medical content remains a challenge in developing countries, and many physicians cannot afford access to updated medical information (Gibson, 2017). The inequality of the distribution of educational resources exists not only between countries but also within countries (Acemoglu, Laibson, and List, 2014). Although the internet has decreased the cost of sharing and storing information, the barriers of expensive or closed distribution of educational content remain an issue (Ozeke *et al.*, 2020). At this stage, there are some efforts the understanding this ignored problem.

Acemoglu *et al.* (2014) emphasize the major impact of web-based educational technologies as the democratization of education. Everybody benefits from the educational resources which are distributed more equally. The democratization of medical education is characterized by two major factors: the equal distribution and access to educational resources without discrimination in terms of economical and geographical limitations, and the opportunity to connect and engage

with well-known physicians (Ozeke *et al.*, 2020) in order to raise the standards of medical students and HCPs. Learning and collaborating through online discussions, conferences, and consultations across different locations (even in low-income countries) at no cost is making education available to all (Comeau & Cheng, 2013).

WikiDoc platform, a nonprofit foundation, launched by Dr. Gibson in late 2005 as the world's largest medical textbook, allows people all over the world to access the same high level of advanced medical information. He also developed http://www.clinicaltrialresults.org as a website to share PowerPoint slides among physicians as part of the open-access (OA) movement and gave several presentations about the importance of the democratization of medical knowledge and social media on medical education (Gibson, 2014; Gibson, 2017; Gibson, 2020). Openness, flexibility, continuity, integration, and humanism (Bondarenko & Kozulin, 1991) offered by the democratization of education allow decentralization of education and respect the diversity.

Free Open Access Meducation (FOAM) movement (Cadogan *et al.*, 2014) is another free accessible collection that holds blogs, podcasts, Google Hangout sessions, online videos, text-based documents, images, social media posts (tweets, Facebook groups), etc. about medical topics. Health 2.0 or Medicine 2.0 has shifted from displaying static webpages with a one-way direction of information flow to participatory communities with bidirectional flow of information (Gibson, 2017; Gibson, 2020) between HCPs, academicians, medical students, and patients.

The Human Diagnosis Project (Human Dx) aims to join medical professionals and trainees in a coordinated way for building collective intelligence with machine learning.

Massive Open Online Courses (MOOCs) (e.g. Coursera, Khan Academy) are the result of the OA course materials initiative of some big universities in the USA. Khan Academy's mission is to provide the same unified sources to learners and support them to participate in a free global education (Williamson, 2020). The MOOCs aim to present free access to the course materials (pre-recorded videos, online discussion boards, assessment tools (test, exam, quizzes)) to the huge numbers of students from all around the world. Some of these courses don't cost any money, and even they offer free printable certificates when completed. Some researches (Barger, 2020; Comeau & Cheng, 2013) affirm that MOOCs are powerful platforms for the democratization of education in the era of "digital tsunami" in education (Comeau & Cheng, 2013).

Some academicians in Europe announced the 'Plan S' as a radical OA initiative to make all scientific works free to read as soon as they are published (Else, 2018). The benefit of OA is its global impact and broader audience. As we mentioned above, if the publishing companies allow free access, they benefit from citations which increase their impact factor. Recent policies tackle OA philosophy as an urgent priority to maximize these benefits for science, society, and the future.

Each step towards the democratization of knowledge not only contribute to the correction of social inequalities but also creates an opportunity for HCPs, academic physicians, residents, and medical students to stay updated on the latest medical topics and to bridge disciplines (Bondarenko and Kozulin, 1991; Colt and Quadrelli, 2006).

Time changes things: From Copyright to Copyleft to CopyCovid

Indeed, it is an interesting story of the origin of the term "copyright". After the printing press came into use in Europe, it allowed the rapid distribution of large volumes of printed work, some of which could be critical of the English government (Gibson, 2020; Patterson, 1968). In reaction to the printing of "scandalous books and pamphlets", the English Parliament passed the Licensing of the Press Act 1662 which was for regulating unlicensed and disorderly Printing (Patterson, 1968). According to the act, all intended publications are required to be registered with the government-approved company (Stationers' Company) which has the right to allow which material could be printed (Patterson, 1968). The King permitted only certain people the "Right to Copy" work, therefore, the original copyright law was a censorship law from the beginning of the printing press (Gibson, 2020; Patterson, 1968). The establishment of Copyright Law in the 1710s, also known as the Statute of Anne (Deazley, 2004), England caused the low-price mass printing market to vanish, and fewer, more expensive editions were published (Patterson, 1968). Publishing was the only way to reach a wider audience in those days. Scientific and technical information was greatly reduced due to accessing and distribution issues (Patterson, 1968). A rigid paternalistic educational model was dominating science.

The term "Copyleft" was first used by Dr. Li-Chen Wang in 1976 in the Tiny BASIC program (Rauskolb, 1976) as opposition to "Copyright". The term was described in 1985 by Richard Stallman, who is a programmer and a free software movement activist (Vaidhyanathan, 2001). The Copyleft guarantees that every user has the right to freely use, modify, copy, and distribute work and modified versions of it with the stipulation that the same rights be preserved in derivative works created later (Stallman, 2018). In the digital world, the dissemination of information is very rapid and information

sources have a high degree of diversity. Nobody wants to start from zero which is seen as a waste of time. Copyleft licensing is another way of collaborating as a win-win situation. The copyleft philosophy forms a basis for Dr. Gibson's attempts in terms of the democratization of medical education (Gibson, 2017; Gibson, 2020).

Open and democratized medical knowledge, as we have seen during this pandemic, offers an interactive, egalitarian educational model (Colt and Quadrelli, 2006). We may call this case "CopyCovid" in particular and "Copydemic" in general. Although the COVID-19 pandemic triggered all these interactions, we can also use "Copydemic", because it is more inclusive. In the CopyCovid/Copydemic times, "all the red tape that keeps things away is gone and people are looking for solutions that in the past they did not want to see" says Andreas Schleicher who is the head of the education division at the OECD (Schleicher, 2020). There were many OA digital resource initiatives in Medicine 2.0 for more than a decade, however, COVID-19 is a milestone that has broken taboos on teaching and learning in digital environments. People are interacting and communicating with technology at each moment. Nowadays most of all academicians, HCPs, and medical students gained new skills and experienced to manage their learning process online. Furthermore, especially medical academics are under the influence of attractive informal processes; they are continuing lectures, joining courses outside of their formal education in the context of continuous medical education (CME). The global pandemic may be seen as an experimental opportunity to set the stage for long-term digital transformations in the education system (Williamson, 2020). We agree that Copyright and Copyleft are licensing ways of original material such as a manuscript, an audio/video recording, a visual element (picture, photograph, drawing), etc. CopyCovid is not about licensing but its featured dimension is more about "access and use" freely. The material may be under the protection of Copyright or Copyleft license and allow free access to the learner under CopyCovid. We created Table 1 to compare these terms from the point of medical education.

We tried to summarize some of the radical changes during the COVID-19 pandemic from different angles.

Organizational Changes

Nearly all of the annual meetings are shifted towards organizing completely virtual events because of the pandemic. AMEE 2020 held virtually for the first time in its 20 year history. It means that without accommodation and transportation fees it was more affordable for low-income academics.

In the CopyCovid/Copydemic times, the international organizations (Global Partnership for Education, OECD, UNESCO, WHO, and World Bank) and some companies (e.g. Google, Microsoft, Zoom) made a coalition not only as short term support of sustaining education but also as a long term investment for future education (Williamson, 2020). School closures showed again the fact that various inequities in accessing technology exist all around the world (Cleland *et al.*, 2020). This alliance, COVID-19 Education Coalition, aimed never to stop learning and to maintain inclusion of each student no matter what their socio-economic status is. For example, Google's hub of information and tools called "Teach from Home", which is consisting of the standard Google G Suite of apps for education, is launched in partnership with UNESCO's Institute for Information Technologies in Education and the International Society for Technology in Education (ISTE) to help instructors and learners during the pandemic.

Table 1. The comparison between Copyright, Copyleft, and CopyCovid in terms of medical education

Attributes	Copyright	Copyleft	CopyCovid/Copydemic
Access and Use	Owners only	Free	Free
Reproduce	Owners only	Free	N/A
Create derivative works	Owners only	Free	N/A
Distribution	Owners only	Free	N/A
Ownership	Personal/team ownership	Communal ownership	Connection and collaboration
Sources	Mostly printed materials	Mostly printed materials and software	Mostly Audio-visual materials (Zoom meetings, e-conferences, virtual tours, social media, etc.)
Interaction	Mono-directional	Mono-directional	Multidirectional, active participation (live and on-demand)

Financial Changes

Open-source and free Learning Management Systems (LMS) are featured for interacting during the pandemic in many universities. However, the main issue was the Internet quota limits of users. In Turkey, The Council of Higher Education (CoHE) agreed with GSM operators to add an extra 6 GB quota while using pre-determined distance education sources. However medical education courses are not included in these pre-determined digital sources. Our university made a protocol with GSM operators to add an extra 8-10 GB quota for supporting especially low-income students. Although students need additional quotas for the Internet (if they don't have free Wi-Fi), they economize paying on textbooks and other non-web resources (Acemoglu, Laibson, and List, 2014).

Instructional Changes

The CopyCovid/Copydemic times pushed medical educators to rapidly convert their in-person didactic lectures and tutorials to virtual courses (Woolliscroft, 2020) or using existing videos and lectures on the Internet. However, these interactions still need to be complemented with one-on-one discussions provided by local educators (Acemoglu, Laibson, and List, 2014). This situation forced educators to innovate and think out of the box to maintain quality medical education (Liang, Ooi, and Wang, 2020).

Although it uses the sources of distance education, the term "emergency remote teaching (ERT)" is the best term to define what teachers, instructors, and academics are trying to achieve. The dynamics of ERT are very different from usual distance/online education in terms of its philosophy. The ERT is trying to translate familiar forms of face-to-face teaching into remote learning by using online education tools (Macgilchrist, 2020; Hodges *et al.*, 2020).

Technology-mediated remote teaching has so many platforms between unstructured to well-structured. At this stage, instructional design specialists are giving us a warning about the focus should be on learning rather than on technology or tools (Spector, 2020).

Changes in Collaboration Tools

Interdisciplinary collaborations are needed more than ever before to design and develop well-structured learning environments. Because the new forms of teaching and training (e.g. e-learning, online learning, flipped learning, emergency remote learning) require new instructional approaches, strategies, methods, and evaluation metrics. The effective, social, and cognitive aspects of teaching, learning, and assessment should be considered by mixing and varying synchronous and asynchronous tools while connecting with medical students as independent learners.

Among the social media platforms, Twitter has been an important part of disseminating scientific and empirical knowledge between physicians, HCPs, and medical academics to exchange ideas, tools, learning activities, and to follow webinars and new sources. The COVID-19 crisis is a story of collaboration and social interaction while social distancing (Macgilchrist, 2020; Cleland *et al.*, 2020).

What do we need to sustain the democratization of medical education after the pandemic?

We will not know the full impact of COVID-19 on medical education (Ferrel and Ryan, 2020), the horizon is not clear enough. Nevertheless, the earned gains, such as digital literacy, self-regulation, collaboration, etc., during the pandemic hopefully will continue to move forward on the path of democratization of medical knowledge. When the pandemic completely ends, we should not simply return to our teaching and learning practices and habits before the COVID-19 (Almarzooq, Lopes and Kochar, 2020; Hodges *et al.*, 2020).

The societies realized that this COVID-19 pandemic with such a widespread impact is first in the digital era, but not to be the last, so countries should be ready for another serious outbreak. The coalitions are developing new long-term policy plans for future education systems worldwide (Williamson, 2020). The practices we interact with today are just a demonstration, first-draft outline of existing emergency policy developments that are still on the move (Williamson, 2020).

Learning from others' experiences

Sustaining the momentum towards a more democratized medical education system, the best practices should be shared worldwide to improve the performances of all participants. For example, the "Learning Keeps Going" portal (https://www.learningkeepsgoing.org) is a good initiative to support communities with help desk, webinars, podcasts, and many other ways about online learning during school closures.

On the other hand, medical academics are testing out different digital learning environments and tools maybe for the first time. Universities should empower instructors in terms of using these tools, provide help desks in designing and developing course contents and encourage them to think creatively (Williamson, 2020).

Medical educators around the world may form their "communities of practice" to engage in a process of collective learning. So they will teach themselves while trying to teach the students effectively. All actors in the environment related to medical knowledge can be called a "community of practice" (Lave and Wenger, 1991). To let novices go through their identity journey and to let them arrive at their target on the way of legitimate peripheral participation, we may choose the way we build "a Rawlsian system of cooperation" among a community of practice. As Rawls' Theory of Justice proposed (Lovett, 2010), we need to determine the basic structure of our community. Rawls defines it as "how the major social institutions distribute fundamental rights and duties and determine the division of advantages from social cooperation" (Lovett, 2010).

The distribution of sources

What we have seen during CopyCovid/Copydemic times may be the first global footsteps of the egalitarian distribution of fundamental rights such as reaching education to strengthen cooperation. In order to democratize medical education, the distribution of information, courses, digital sources, and tools need to be more free than it is currently.

ICT Integration at all levels

The clerkships need to be transformed into virtual learning environments with augmented reality or simulation technologies. Governments and scientific foundations should spend more on educational technology projects and support all kinds of initiatives to develop tools, simulations, databases, and learning environments, especially in medical education.

Leaving no one behind

The digital divide, not having related technology or insufficient access to digital sources, cause some students to exclude from learning. Universities, public libraries, schools should offer solutions by opening/sharing their facilities and/or Internet connections free to these students.

This COVID-19 pandemic period clearly showed and taught that open and free sources, collaborating virtually through digital tools, sharing precious experiences for helping others, etc. are very important values. The scientific openness, as mentioned in "CopyCovid", accelerated the diffusion of trustable information, and people alerted and guarded in a short time. The restrictions such as copyright, intellectual property rights, and patents about COVID-19 make this crisis bigger. Medical education in general and vaccines, in particular, should be accessible and affordable for all humankind. Unless we hold to such human rights principles as everyone has equal rights to health and to benefit from scientific progress, our success against COVID-19 is at risk (Commissioners *et al.*, 2021).

In conclusion, digital transformation, which started a long time ago in medical education, gained great momentum with the CopyCovid/Copydemic times and provided equality and democratization for students and academicians in terms of accessing valid information. The industry providing services in this field has put their profit anxiety on the second plan in the difficult days of the world, and the main reason for their existence - giving priority to providing information- has come to the fore in service delivery. It is anticipated that students, academics, and administrators who gain knowledge and skills on accessing the right information sources, critical thinking, designing/developing e-learning materials, and self-learning will restructure medical education in the following years and nothing will be the same.

Take Home Messages

- COVID-19 pandemic has transformed medical education into digital platforms.
- The lockdowns gave an opportunity for democratization of medical education in terms of open access sources, free online courses etc.
- "CopyCovid/Copydemic" term, which is transformed from Copyright/Copyleft, has been born during the pandemic.
- In order to sustain the achievements after the pandemic, some recommendations were shared.

Notes On Contributors

Vildan Ozeke is an Assoc. Professor in Tokat Gaziosmanpasa University, Department of Educational Sciences, Curriculum and Instruction in Tokat, Turkey. She also studies as a postdoctoral researcher in Gazi University, Department of Medical Education and Informatics, Ankara, Turkey. Her areas of interests include instructional design, ICT integration in medical education. ORCID ID: https://orcid.org/0000-0003-1827-1258

Isil Irem Budakoglu is a Professor in Gazi University, Department of Medical Education and Informatics, Ankara, Turkey. She is Head of the Department since 2011. Her areas of interests include clinical leadership and management, healthcare professionals and communication skills, medical education at all levels, curriculum development and problem-based learning. ORCID ID: https://orcid.org/0000-0003-1517-3169

Yavuz Selim Kiyak is a faculty member of Gazi University Faculty of Medicine, Department of Medical Education and Informatics. He is also PhD student at Medical Education. He dedicated himself to spread the information regarding Medical Education. ORCID ID: https://orcid.org/0000-0002-5026-3234

Ozlem Coskun is an Assoc. Professor in Gazi University, Department of Medical Education and Informatics, Ankara, Turkey. Her areas of interests include medical education (face-to-face and e-learning), instructional design, curriculum development, rational drug use, evidence-based medicine, leadership and crisis management, mentoring, coaching, and consulting in medical education. ORCID ID: https://orcid.org/0000-0001-8716-1584

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Julie Hunt
Lincoln Memorial University

This review has been migrated. The reviewer awarded 4 stars out of 5

The authors describe the changes to copywrite practices that have occurred recently as a result of the COVID-19 pandemic, offer their opinions on the suitability of these changes for medical education and in particular in resource-constrained environments and for resource-constrained people. The authors also offer insight as to where they see the field of medical education going with respect to open access and democratization.I found figure 1 helpful in understanding the features of copywrite, copyleft, and copycovid as defined by the authors. Overall I think that this article would be of interest to those in the field who are openly sharing educational resources, or those who are re-considering whether to openly share these resources as the pandemic (eventually) draws to a close.

Competing Interests: No conflicts of interest were disclosed.

Reviewer Report 03 October 2021

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Ken Masters
Sultan Qaboos University

This review has been migrated. The reviewer awarded 4 stars out of 5

I am pleased to see that the authors have addressed all of my major concerns related to Version 1 of the paper, and have produced a paper that is much easier to read, follow and understand. Although some readers may take issue with some of the arguments presented, it is a worthwhile contribution to the field.The full impact of Covid on the issue of copyright still has some time to play out, and this paper will allow people to understand the developments surrounding the issues.

Competing Interests: No conflicts of interest were disclosed.

Version 1

Reviewer Report 04 February 2021

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Ken Masters
Sultan Qaboos University

This review has been migrated. The reviewer awarded 2 stars out of 5

The paper discusses the impact of COVID-19 on copyright issues and the resultant implications for medical education.Overall, the authors do make several valid points regarding changes and the potential for change, but the paper suffers from several problems that need to be addressed.• Many of the paragraphs consist of a listing of events. It would help the authors if they broke some of their longer paragraphs into smaller pieces, and more directly used the events to develop an argument throughout the paper. Often the events are listed, with little indication of the connections, relationships or their role in developing the argument. Having sub-headings may help the process.• Although it is true to say that many of the academic publishing houses allowed access to some of their material, one should also be somewhat sceptical of this, as it does not indicate any change of heart. This was a very temporary, specific and targeted exercise, accompanied (motivated?) by a great deal of self-advertising, and, no doubt, commercial expediency. It should be noted that academic publishing houses have repeatedly and successfully sued Sci-Hub for copyright infringement, and have not reduced their efforts during the COVID-19 crisis. In fact, right now, Elsevier, Wiley and the American Chemical Society are suing Sci-Hub in the Indian courts, and will probably be successful. (While that suit continues, Sci-Hub has agreed to not upload any new articles and books, so there is already some success.) • The bullet point above is a specific example of a more general problem in the paper – while the removal (or even reduction) of copyright will bring great benefit, it will also have drastic negative consequences, and the authors have not raised these at all. For an opinion piece to have validity, opposing positions do need to be considered.• I would

suggest that Wikipedia is not a good source to cite in an academic journal (in fact, Jimmy Wales has said as much). It would be far preferable for the authors to trace the sources of the information, and cite those sources).• Along these lines, it would be better to refer to Richard Stallman by name (and cite his work), rather than refer to him as merely “a programmer”. (And it might be a good idea to note that the term copyleft had been used as early as 1976 by Li-Chen Wang, and to cite that source also.)• An area that the authors really do need to correct is the language. The paper suffers from a large number of language errors. Most of them are minor, irritating, but some are grave enough to interfere with the message. (Sometimes, the error may be language, or may be simply incorrect, so a statement like “The societies realized that this pandemic is first in digital era” can only be taken as a very vague statement, and is not easily supported – during the digital era, there have been several pandemics, although none have had such a widespread impact as COVID-19). Many sentences require re-reading, and I would warrant that many readers would simply not make the effort to complete reading the paper. I would suggest that Version 2 of the paper could benefit from a very careful and close proof-read before submission.So, overall, I think that the paper has a kernel of an argument, which appears to be that the events surrounding COVID-19 should give us pause to consider the negative impact of copyright restrictions on medical education, and that, after the pandemic, we should continue with efforts to make medical information more easily accessible, particularly through a reduction of these copyright restrictions. While there are weaknesses to the argument, the problem is that that the paper does not express this very well. I look forward to Version 2 of the paper in which the issues I have raised are addressed.

Competing Interests: No conflicts of interest were disclosed.

Reviewer Report 02 February 2021

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Keith Wilson
Dalhousie University

This review has been migrated. The reviewer awarded 2 stars out of 5

The authors of this opinion piece make the case for sustaining the momentum towards a more democratized medical education system worldwide. They draw on numerous examples that emerged during the COVID pandemic including the breaking down of traditional barriers to educational materials and other resources.One of the most important aspects of the paper is its highlighting of the challenges that are faced in limited resource settings. This forms the foundation for making the case to share resources more uniformly. The authors use the term “democratization of medical education” in numerous contexts within the paper. I feel that readers would be very appreciative of a framing definition located

early in the paper to help orient the reader to the rest of the arguments being put forth.As suggested by the title by the title of this paper, the authors illustrate the differences between copyright, copyleft and a more recent term copycovid. The progression of these concepts could use some expansion of the explanation of how they are interrelated. In particular, examples were given that highlight a number of the strides that occurred during the pandemic to improve access. This section of the paper ("Time Changes Things") would benefit from some restructuring to group the ideas together (e.g. under organizational, educational, human capital, etc. headings). The narrative would benefit from a more linear flow of the ideas to reach the conclusion. There are so many excellent observations highlighted in the paper – to this end, it would be very beneficial to group them more clearly. I worry that without more structure, the astute messages that the authors are trying to convey may get lost. I would recommend some reworking of the flow to make the conclusions more compelling for the reader.The authors of this paper cite many good examples and insights that support their argument for the notion that everyone benefits from resources being distributed more equally. They are to be commended for bringing together a number of different observations on how COVID has reshaped the way we develop educational opportunities now and for the future.

Competing Interests: No conflicts of interest were disclosed.