

Clinical Letter

Corona pandemic: Teachings for dermatological teaching

Supporting information for this article is available on the WWW under <https://doi.org/10.1111/ddg.14282>

DOI: 10.1111/ddg.14282

Dear Editors,

In the 2020 summer semester, all German universities were compelled by the corona pandemic to rapidly adapt their teaching to a digital format. The “Forum for Academic Teaching” (*Forum akademische Lehre*) of the German Dermatological Society (DDG) has endeavored for years to support the chairs of dermatology in their teaching activities [1–3]. Clearly, in the current situation, an attempt should be made to identify available resources for short-term solutions. In April 2020, before the start of the summer semester, a survey was conducted at German university dermatology clinics to assess the situation regarding the availability of digital courses and the willingness of participants to cooperate.

A short questionnaire was developed (online supplement), deposited in LimeSurvey, distributed to the ordinary professors of the 39 university skin clinics by the office of the DDG on 8.4.2020 and evaluated on 14.4.2020. On the same day, all participant professors received the results for their own use.

Of the 39 addressee faculties, 27 responded. Twelve universities were bound by regulations regarding the

implementation of digital teaching (primarily asynchronous formats [n = 6], synchronous formats [n = 3], video > audio or audio > video [n = 1 each], recording prohibited [n = 1]). Fifteen could decide freely on the implementation (Figure 1). Eleven faculties already had digitalized lectures (video recordings or audio-enabled presentations). Six others had plans to provide audio accompaniment to PowerPoint presentations, two planned to offer virtual lectures with no audience. The duration of these individual elements was 20 [n = 1], 45 [n = 4], 60 [n = 3] and 90 [n = 2] minutes. Active cooperation by students was compulsory in five skin clinics (for example, case work using Casus [n = 4], video conferencing [n = 2], use of Cyberderm [n = 1]). Six academic chairs were willing in principle to make their existing content available to others, although there were legal concerns in some cases. Thirteen stated that they already had digital alternatives to lectures (Cyberderm, online dermatology courses, online seminars, video conferences, online examination courses, self-study slides [n = 2], lecture videos [n = 3], e-learning cases [n = 3]). Four of these clinics were willing to share their digital content.

An encouraging 70 % of the university dermatology clinics responded. All of them had to change their course offerings, almost half were bound by regulations regarding implementation. The scope of university instruction, its integration into the curriculum and thus the proficiency of the students as well as the type of courses available all differed from faculty to faculty. Hence, the responses regarding availability and type of digital content were correspondingly heterogeneous. As a result, a single, uniform standard solution could not be established. Instead, and with only a few exceptions, every clinic produced its own digital content.

In this context, smaller, modularized teaching units along the lines of Reusable Learning Objects (RLO) provide a possible alternative [4]. Noteworthy examples are case

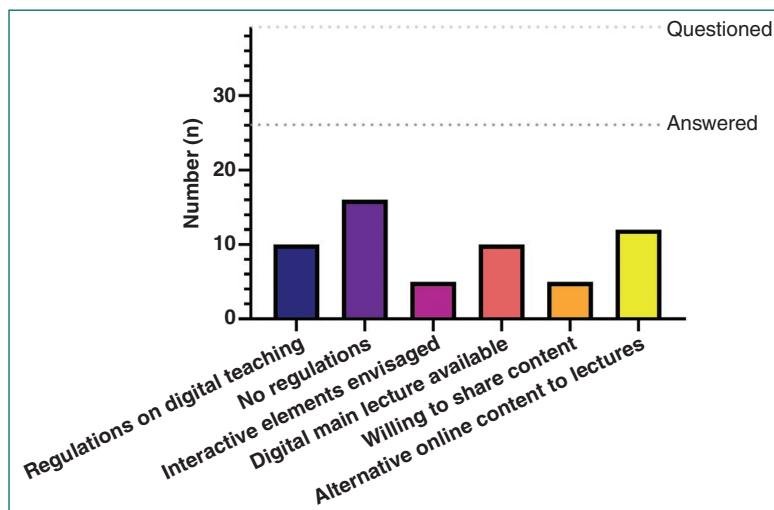


Figure 1 Results of the field survey: Lectures in Dermatology for Human Medicine.

vignettes or videos of standard procedures such as patch tests, similar to those that have already been successfully implemented for certain procedures (e.g. biopsies) (<https://www.juderm.de/juderm/videos/lehr-videos-dermatologie.html>, last accessed 24.07.20). The survey recommended *ad hoc* networking: Especially for teaching purposes, where content and requirements are ultimately the same, the joint development of resources was an obvious choice. Yet despite the current, exceptional situation, only a few were willing to make their existing resources available. Apparently, many harbored fears regarding legal (copyright) or other, unspecified aspects. A possible solution would be to post innovative content as Open Educational Resources (OER) with appropriate licenses (<https://open-educational-resources.de/>), which would guarantee the authors' rights.

Forty percent of the academic chairs already had digital course material (lectures as video, PowerPoint presentations with audio). These were able to rapidly adapt their course offerings. A clear curricular concept which provides several implementation strategies helps to ensure instruction in critical situations such as the current crisis or during personnel shortages. Such concepts need not only include purely digital formats but might also incorporate other options such as self-study with subsequent assessment,

virtual patients or the use of the RLOs mentioned above (Table 1).

For a rapid response, further improvements in the exchange of information would also be helpful. Since lecturers frequently rotate, the routine availability of contact persons at the DDG office could help to shorten future reaction times.

Even when there was a willingness to provide materials, the actual use thereof proved difficult. At some locations, eligible visitors were unable to access the university's own digital learning platform, and in some cases this was not even possible within the university itself. Often it was unclear by whom access permission could be granted, existing courses administered, or digital elements managed. A standardized procedure involving the responsible persons from the university datacenters could be beneficial here.

The university locations provided numerous digital aids of their own. In addition, the "Digitalization" committee of the German Association for Medical Education (GMA) is constantly updating a list of available resources for, among other things, videoconferencing, creation of instructional videos or online voting (<https://docs.google.com/document/d/1RQOU PnY0kDroXrXWeTuxxf11WqaCLxlwObNZwB4XE-M/edit>; last access 18.06.2020). These extensive resources are helpful, albeit somewhat overwhelming. There is also usually not

Table 1 Lessons from the Corona-crisis for dermatological teaching.

Present situation	Preferable scenario
Heterogeneous situation (requirements, existing resources, curriculum)	
Individual solutions	Reusable Learning Objects (RLO) <ul style="list-style-type: none"> – Standard procedures – Short teaching units (10–20 minutes) – Case vignettes
<i>Ad hoc</i> solutions	Clear overall concept <ul style="list-style-type: none"> Multiple implementation strategies <ul style="list-style-type: none"> – alternative digital format (online lectures, digital self-study units, online cases) – analog alternatives: virtual patients, task sheets, test scenarios
Everyone develops everything independently	Cooperation (e.g. RLO) Coverage through OER
In-house learning platforms/programs	Uniform regulations on access and mutual use
An overwhelming number of digital resources (web pages, programs)	Development of a viable digital concept
Locally defined responsibilities	Ensure transparency for the specialist society (regular information from the DDG office)
Focus on technical aspects	Focus on content and didactic aspects. "What do I want to teach whom, where and how?" → technology relates only to the "where" and "how"

enough time for familiarization with the individual programs. Finally, the difficulties posed by inevitable technical complications cannot be underestimated.

Apparently, in the current situation, it was the external aspects of an online presence, e.g. “How do I launch my event and with which program?” that were given the greatest importance. Effectively, this meant attempting to directly transpose a previous, familiar structure to a digital format. Yet the real issue is achieving the learning goals of the respective event - whereby the students do not attend “live” on site, but can only be reached with digital aids. The primary question to be answered is therefore: “What do I want to teach whom, where and how? ([5] p. 21 ff). The core aspects here are knowledge transfer (such as verbal or visual content), activation (such as exercising skills) and mentoring (such as feedback). In this regard, technically simple solutions that strongly support the learning process are preferable over complex solutions that primarily deal with technical aspects (<https://gabi-reinmann.de/?p=6797>, last accessed 18.06.2020). Especially in the current situation, a reduction in complexity along the lines of “Didactics equals material reduction” is key ([5] p. 69 ff, p. 154)!

Digital instruction cannot and will not replace direct contact with patients [6]. The recording of subtle reactions during a conversation, the description of overall and detailed findings, immediate tactile feedback, and the execution of procedures all require contact with real patients. Yet if properly implemented, digital offerings created now could make more time available for this very purpose in the future.

In other words, emergencies do not foster good teaching, but planning does. Should it be possible to jointly develop digital solutions in the future, then the Corona crisis will nevertheless have had a positive impact on dermatological teaching.

Acknowledgements

Open access funding enabled and organized by Projekt DEAL.

Correction added on 8 October 2020, after first online publication: Projekt Deal funding statement has been added.

Conflict of interest

None.

Falk Ochsendorf, Thomas Kollewe, Roland Kaufmann

Klinik für Dermatologie, Venerologie und Allergologie, Universitätsklinikum Frankfurt am Main

Correspondence to

Prof. Dr. med. Falk Ochsendorf, MME
Klinik für Dermatologie, Venerologie und Allergologie
Universitätsklinikum

Theodor-Stern-Kai 7
60590 Frankfurt am Main

E-mail: ochsendorf@em.uni-frankfurt.de

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