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Instructional Designers as "First Responders" Helping Faculty Teach in the Coronavirus Crisis

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Abstract: The spring of 2020 brought a necessary pivot to emergency remote teaching for all faculty. As a team of instructional designers at the Indiana University School of Public Health, we developed a rapid response protocol to analyze faculty's instructional design needs and provide effective and efficient support strategies. In this reflective essay, we share the innovative strategies and practices we used to respond efficiently and effectively to the faculty's identified needs. We provide a detailed account of a toolkit and the methods used to support faculty members, so they could quickly pivot to emergency remote teaching. We conclude with insights on how the pandemic challenged our current instructional design practices.

Keywords: instructional design, remote emergency teaching, online teaching, COVID-19, instructional design and faculty collaboration, public health.

Many higher education institutions in the United States had to implement a rapid pivoting strategy from face-to-face to emergency remote teaching (ERT; Hodges, Moore, Lockee, Bond, & Jewett, 2021) in response to the global 2019 coronavirus disease (COVID-19) pandemic in spring 2020. Face-to-face learning posed a high risk of uncontrolled spread of the virus, as evidenced by Leidner et al. (2021); thus, classes had to switch rapidly to a remote mode of instruction that leveraged online learning technologies. The rapid pivoting from face-to-face to ERT posed unprecedented challenges.

It is widely accepted among the communities of instructional designers, educators who teach online, and higher education administrators that designing online courses requires more than mirroring face-to-face courses in the online environment (Watson, Bishop, & Ferdinand-James, 2017). In this case, we have to refer to the teaching and the learning experiences that occurred in the spring 2020 semester—right when universities decided to close—as "emergency remote teaching," and not as "online teaching/learning," as Hodges, Moore, Lockee, Trust, and Bond (2020) aptly remarked. Online learning has its opportunities and limitations due to the nature of its delivery format. Thus, it calls for instructional design approaches and strategies pertinent to this specific delivery format (Baldwin, 2019; Watson et al., 2017) and responsive to the learners—mostly nontraditional students—who opt for online learning experiences. Instructional strategies adopted in face-to-face instruction are not as effective in online learning environments, as research has shown (e.g., Baldwin, Ching, &

Friesen, 2018) and as students have remarked.[1] As Baldwin (2019) asserted, teaching practices used for face-to-face instruction will most likely be ineffective in online courses. Therefore, the application of instructional strategies tailored for online learning ensures meaningful learning experiences (Watson et al., 2017) and a quality online learning experience for students. For example, quality online learning experiences do not require weekly meetings, because students live in different time zones. It adopts an asynchronous approach to learning that ensures flexible and equitable access to course materials. However, providing faculty support for a rapid pivot from face-to-face to ERT, with limited time and instructional design resources, is uncharted territory. As the number of coronavirus cases exploded around the world in early 2020, faculty and instructional designers were challenged to develop high-quality learning experiences through ERT design in less than 2 weeks at almost every campus globally.

Instructional Design Steps in Response to COVID-19

The institutional response to the outbreak of COVID-19 required a timely response to the crisis. When it comes to designing online courses, systematic planning and thought processes are employed to ensure courses are aligned with learning outcomes and accessible to students with diverse learning needs (Hodges et al., 2020). While we cannot speak for every institution, thorough planning and thought processes for online course design have been the norm for online learning at Indiana University School of Public Health (SPH), where we do not treat online students as an afterthought.[2] When we needed to expeditiously support faculty members' transition to the online delivery format, we needed to act quickly, devise clear steps to support faculty, and maintain fidelity with good instructional design practice. Working as a team of instructional designers, we constructed a six-step toolkit to respond to faculty members' instructional needs as they faced the quick pivot to ERT.

Step 1: Rapid Assessment

The director of our Office of Online Education sent an initial email to all SPH faculty members offering assistance in the mandatory transition to ERT. The email included a link to a three-item online questionnaire to assess the faculty's perceived needs, such as using specific instructional technologies, recording lectures, and/or designing collaborative activities. The questionnaire included an item that stated, "No help needed, I've got this," which allowed us to focus on the faculty who needed support.

Step 2: Triage

We designed a triage framework that allowed us to conduct a just-in-time analysis of responses. We set an alert on the questionnaire for each new response. A 6-hr response window was set as a baseline for the maximum allowed response time lag. As quickly as possible, after each new questionnaire response was received, a specified team member analyzed and categorized the response by the level of support needed and level of current preparedness (Figure 1). Faculty coded as "high support" were those teaching large-enrollment courses or teaching courses under review by the School of Public Health accrediting body. The first priority was also given to faculty who were also "unprepared": They had no previous experience teaching online. Unprepared faculty identified needs such as delivering

[1] See opinion piece by an Indiana University student at https://www.idsnews.com/article/2020/04/opinion-online-learning-due-to-covid-19-shows-the-limits-of-technology-in-education

[2] See an article by Indiana University Director of the Office of Online Education Chris J. Foley at https://news.iu.edu/stories/2020/02/iu/inside/19-from-the-desk-director-says-online-education-is-universitys-heart-and-lungs.html

content, meeting with students, and administering tests and quizzes. Faculty categorized as a low priority were teaching small-enrollment courses and/or already had experience teaching online and needed only minor additional resources.

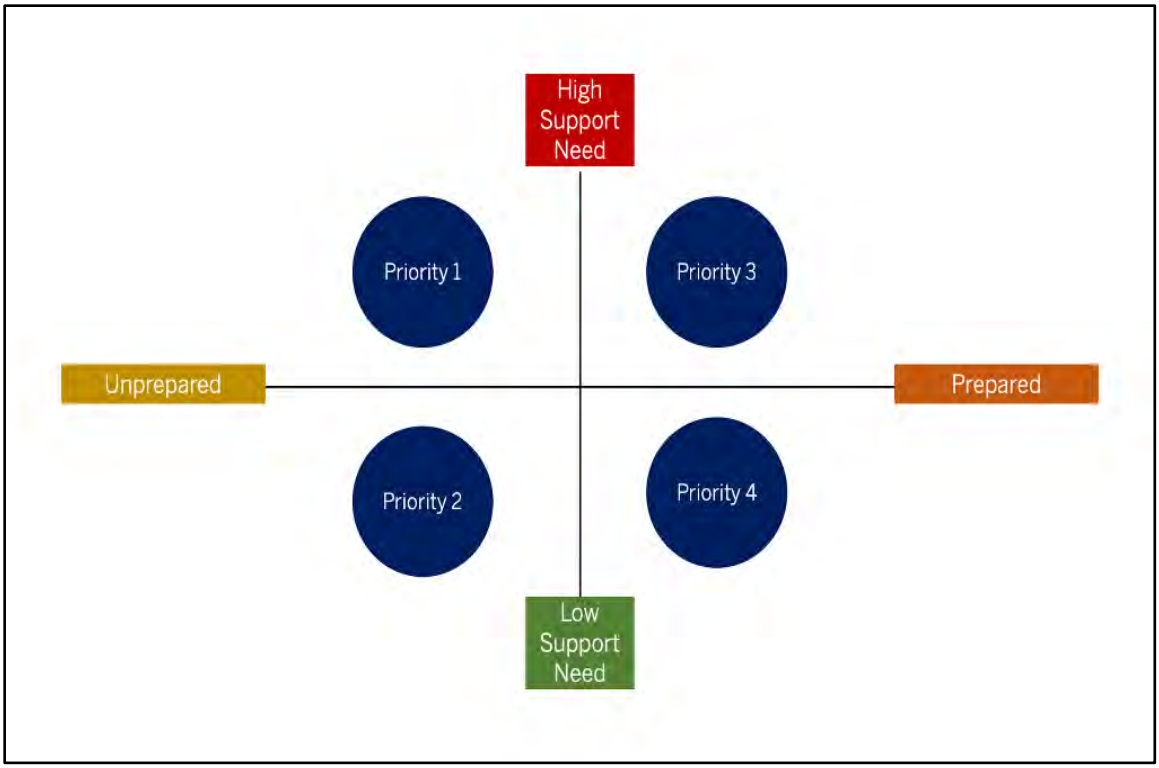

Figure 1. Classification of faculty preparedness. The *x* axis is the spectrum of preparedness, and the *y* axis is the spectrum of support need.

Step 3: Design an Initial 15-Min Instructional Design Consultation

The next step was to assign one of us (instructional designers) to faculty members and coordinate a kick-off meeting to provide instructional design support—an initial 15-min instructional design consultation. Each instructional designer was assigned to a faculty member. The rationale for a short initial consultation was to keep the conversation focused and consistent with what faculty members voiced in the questionnaire, rather than providing a general consultation on what the design of online courses would involve. As a team, we agreed on the guiding principles of the initial consultation. We were prepared to answer frequently asked questions and immediately make design decisions on the best course of action. Most importantly, we were prepared to communicate to faculty what we could help them with and what fell beyond our unit's scope (e.g., assisting in grading students, troubleshooting technological equipment and/or campus-wide cloud applications, providing technical support to their students). We clearly understood the need to rethink traditional instructional design processes, minimize faculty stress, and help as many faculty members as we could and as fast as we could.

The initial instructional design consultation took place as a video conference on Zoom. The director of the Office of Online Education created a tracking document to better manage our workflow and workload. After we were informed whom we needed to contact, we emailed faculty members asking to meet for the consultation. The key goal of the initial consultation was to explain

the role of the instructional designer as a source of support, which involved a flexible and responsive approach to the faculty's needs. The initial consultation session provided options for ERT, so that instructors did not have to modify their primary learning outcomes but rather could achieve the same goal with the use of different resources. This approach also allowed us to provide faculty with equitable and fair access to our team and resources.

During our consultations, we provided just-in-time support by showing concrete examples of what an online course looked like and how it was organized. We referred faculty members to helpful resources. In 2 weeks, we created resources, such as a COVID-19 course template on Canvas, the university's learning management system, and handouts about Canvas features and tools. We prepared these resources—to be shared in an online format—before our scheduled meetings with faculty according to their expressed needs in the questionnaire. A top priority was to ensure that all online content and course websites met requirements for accessibility.

Additionally, we leveraged external resources, such as the emergency remote instruction checklist (Quality Matters, 2020) and Knowledge Base, our campus's searchable repository of information about specific technologies (https://kb.iu.edu), as well as tutorials from the company websites of Canvas, Zoom, and Kaltura. The COVID-19 Canvas course template hosted newly created materials as well as external resources (Figures 2 and 3).

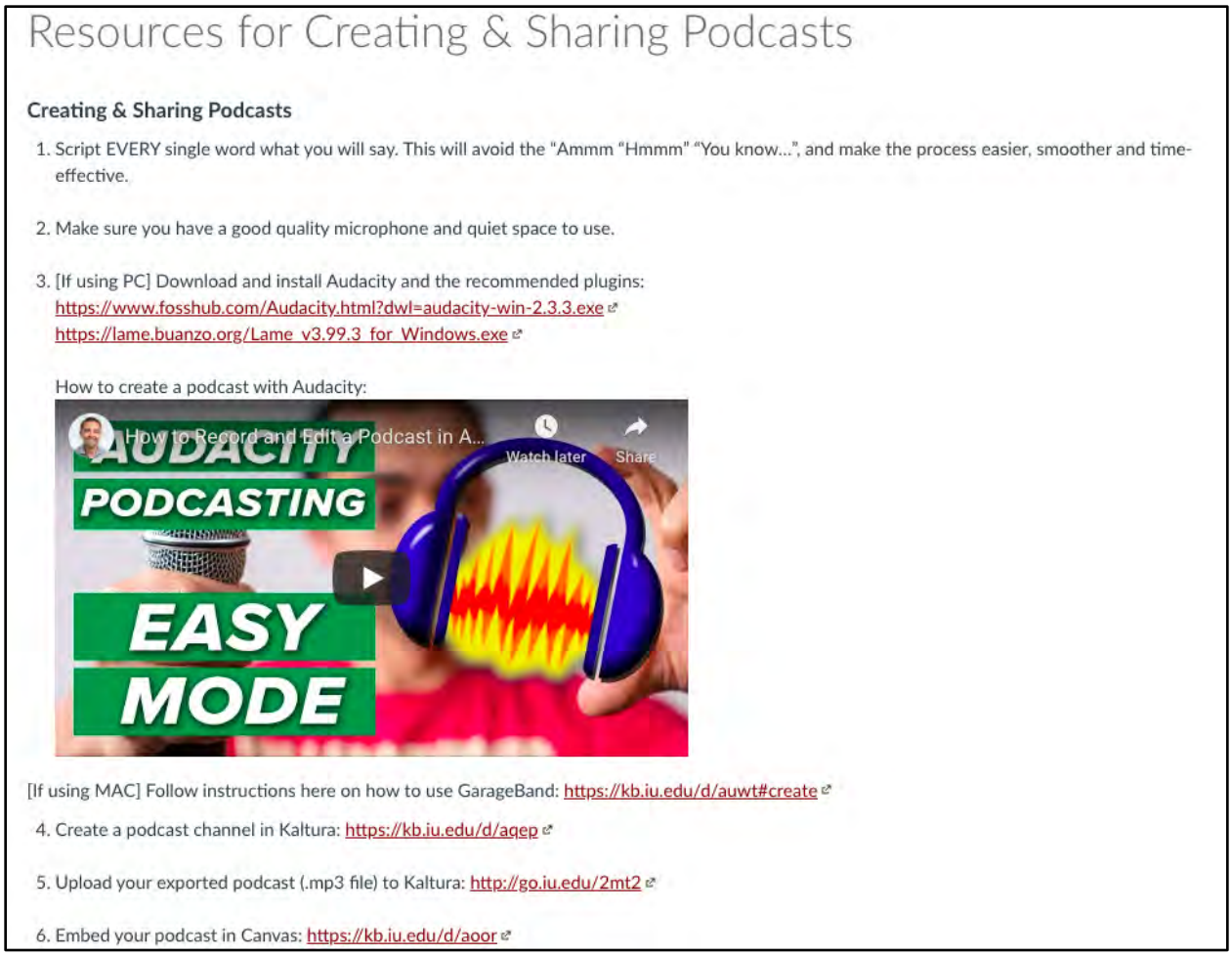

Figure 2. Example of a resource page on the COVID-19 Canvas course site template. This page shows resources for creating and sharing podcasts created upon a faculty member's request.

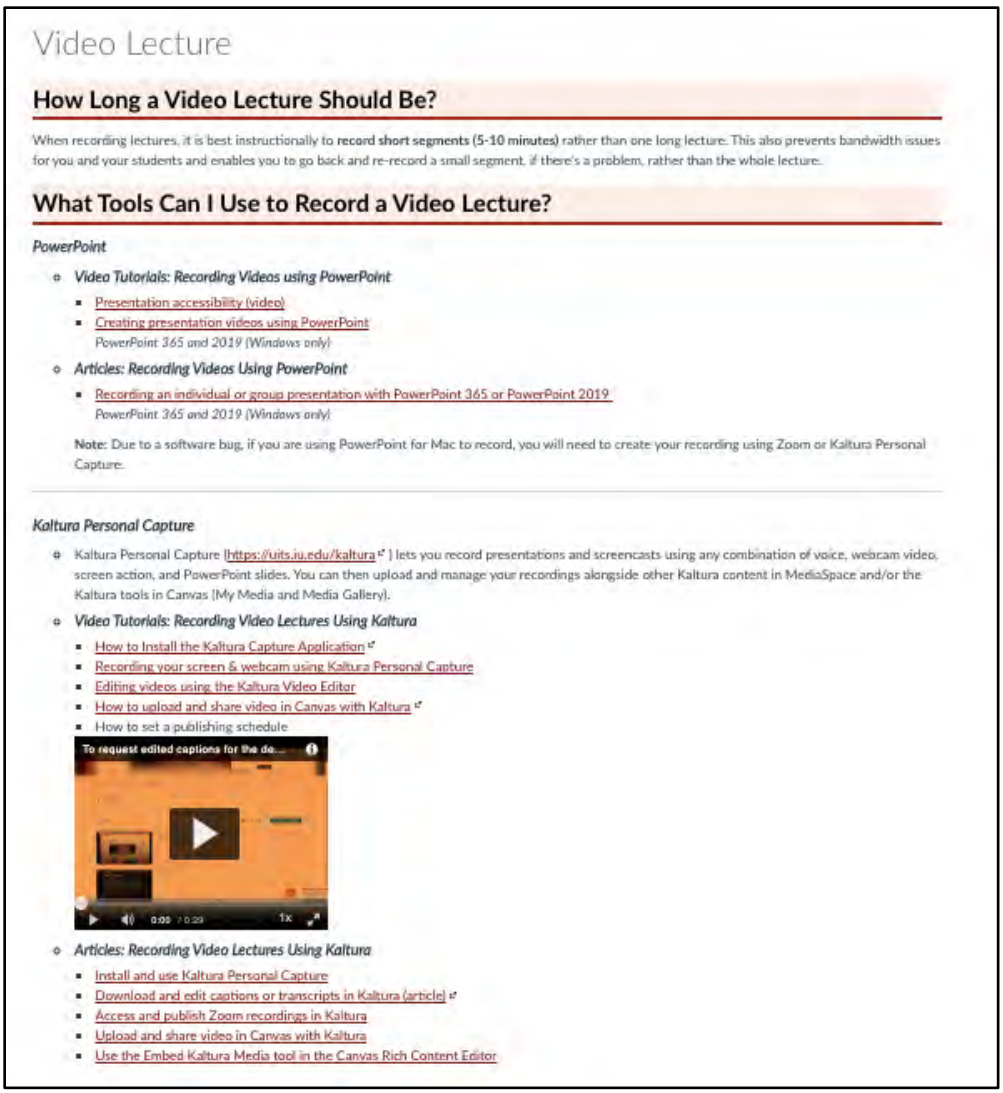

Figure 3. Example of a resource page on the COVID-19 Canvas course site template. This page shows resources for recording video lectures, which most faculty asked for.

Last but not least, we leveraged university-wide resources, such as keepteaching.iu.edu, keeplearning.iu.edu, and the events hosted by Indiana University's Center for Innovative Teaching & Learning. Further, we designed and ran webinars that were specific to the SPH context to inform faculty about existing resources and our unit's services and processes.

Step 4: Conduct 15-Min Design Consultations

During the consultation process, we—as designers—made sure to employ ethical design judgments based on our experience and collection of design precedents (Boling, 2020). It was crucial for us to show empathy with faculty and an understanding of their needs, rather than acting as an authority controlling the quality of courses. Empathy and understanding were manifested in a collaborative nature of working with faculty members through mutual brainstorming, focused discussions, and making the best design decisions efficiently.

We collaborated with faculty members during these very short consultations to come up with the most appropriate options. For instance, for courses where experiential components were crucial, such as yoga classes, we advised instructors first to provide several meeting times for students to meet and second to have breakout sessions for individual demonstrations and consultations. Another example is a high-enrollment course that served as a hands-on professional development event for future health care professionals. Usually, this professional development event takes place in a face-to-face format in a large auditorium. Alternatively, we helped faculty members design an online learning collaborative space on Canvas, which allowed students to complete all the activities remotely. We concluded the initial consultations with an action plan, to-do lists, and an agreement on "next steps" to design/create resources that met standards for quality online learning (Quality Matters, 2020).

Step 5: Designing and Developing Quality Resource

The design and development of quality resources involved creating user-friendly Canvas pages to provide clear and necessary information and instructions for students. For example, in the large professional development event, we designed a Canvas course site that included multimedia resources, such as videos of real-life cases that students needed to work on and provide their solution to a patient's medical issues (Figures 4 and 5). We employed usability principles, such as simplicity (e.g., simple wording, begin each assignment with a verb, including only essential tools in the navigation menu, place tasks within modules to complete), a clear communication process (e.g., streamline steps for completing assignments), and additional resources (e.g., technology resources, orientation to a learning management system, and course policies; Hovde, 2015). In addition to reactive interactions on the course's Canvas site, such as clickable buttons to go over the content, limited control of video lectures or audio presentations, and quizzes with generic feedback, we also utilized proactive interactions (Hong, Clinton, & Rieber, 2014). Proactive interactions included tools for students to think with, reflect, discover, and actively participate in learning, such as team discussions, reflections, and meetings. We relied on templates that we had already built for previous online courses, which allowed us to efficiently create resources under a tight timeline.

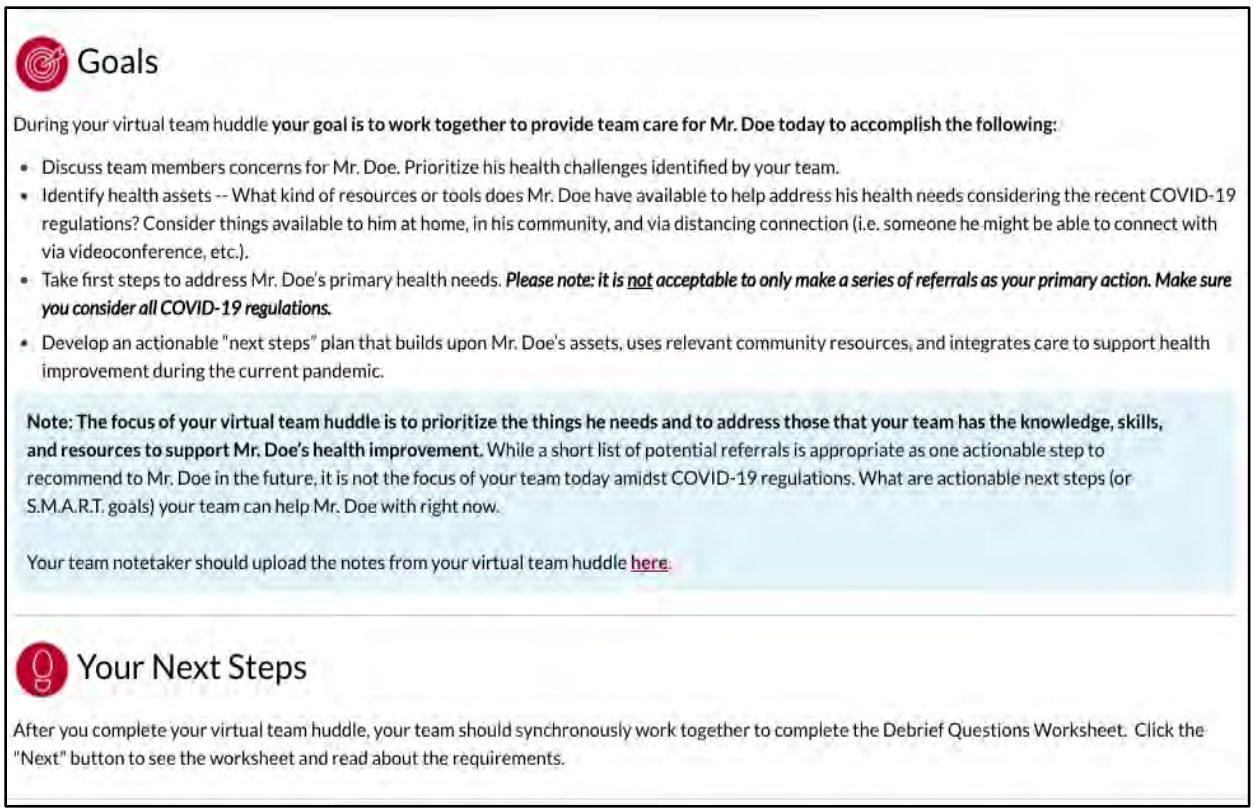

Figure 4. Example of a Canvas page providing instructions for students' online meetings. The instructions are aimed at fostering collaboration and reflection.

In addition to designing and creating quality resources for students, we created necessary faculty resources that they could reuse at their discretion. The COVID-19 Canvas course template—a repository of resources and instructions that we could share with each other or directly with faculty—included resources on delivering content and student–instructor/student–student interactions in online courses (e.g., how to set up Zoom meetings, how to record Zoom meetings, how to prevent Zoom bombing, and how to record video lectures using Kaltura Caption; see Figures 3 and 5). We branded this Canvas course site the "COVID-19 Canvas course template" to make it clear to faculty that this form of instructional design was specific to the emergency at hand. Therefore, the resources were designed for the moment at hand and represented best practice for ERT before transitioning to online learning/teaching.

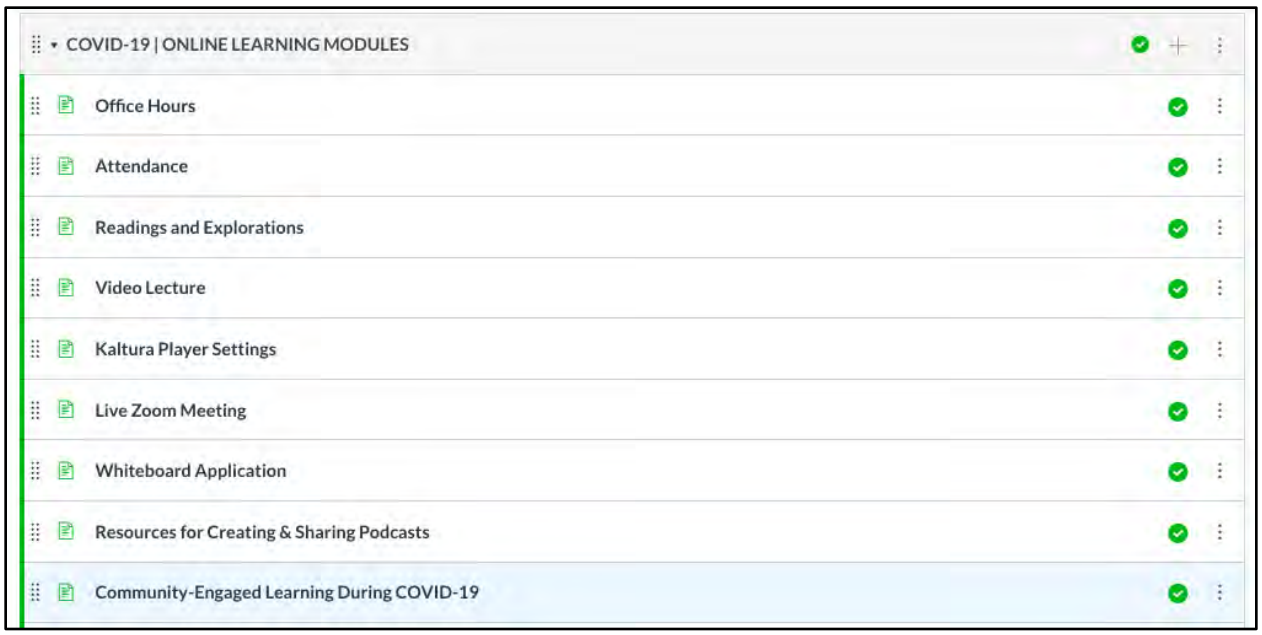

Figure 5. Example of content provided on the COVID-19 Canvas course site template. The content is structured in a module that can be copied and repurposed easily.

Step 6: Closeout and Follow-up

We followed up with faculty as needed to ensure that we met their support needs and that students were receiving an acceptable quality of ERT. We made ourselves available for follow-up meetings and email inquiries. We attended synchronous Zoom meetings to provide pedagogical and technical support for faculty who were new to instructional technologies. Faculty who informed us that they needed no further support from us were marked as "completed consultation" in our tracking document and received a closeout email with an open invitation to reach out to us if they needed further support.

Outcomes of Designers' Interventions Using the Six-Step Toolkit

In sum, 59 faculty responded to the online questionnaire that prompted them to indicate their support needs. We provided support for 88 courses, each with an average enrollment of 15 students. The faculty identified 10 types of instructional design needs to pivot their courses to a remote format of instruction (Table 1). Most faculty members needed support with setting up meetings with students using Zoom (31 of 59 faculty). The least frequently submitted requests were about grading/providing feedback to students, as well as sharing printed materials with them. There were some additional ad hoc requests (labeled "Other"), such as developing quizzes/exams on Canvas and conducting physical performance-based assessments through Zoom. We also addressed some unique requests, such as cross-departmental collaboration and large scholarly meetings for faculty. Afterward, faculty members expressed their appreciation of our support as they emailed us to express their gratitude. Following are a few examples of faculty feedback (edited to fix minor typographical errors)[3]:

[3] The feedback was not solicited as we are planning to conduct an evaluation of our work later in 2021.

Faculty Member A
I just wanted to thank you very much for your assistance during this stressful time. You helped us tremendously to get our professional event online. We believe this will be an outstanding experience for the students. We could not have done this without your support and assistance. Many, many thanks to you. Once again delivered a professional product!

Faculty Member B
Although this situation has presented many unique challenges, I am grateful for the opportunity to partner with each of you. Thank you for supporting our team and for helping us provide meaningful learning experiences to students during this time.

Faculty Member C
During this particularly challenging time with the COVID-19 crisis, I've been communicating even more than usual with my adjunct faculty members, offering encouragement and support. Yet, as IUB has abruptly converted from in-person to online instruction, I felt the need to improve my own skills in online education so I could better support them. To this end, I sought training from our SPH Office of Online Education (OOE) for the courses I currently teach, hoping to help impart those skills to our adjunct faculty members. To make a long story short, it worked. The OOE moved so quickly in response to my request for online training, Victoria was so patient and thorough in her instruction, and I am far more confident in navigating through this online territory in which we increasingly find ourselves. I was mildly aware of how great Amaury and Lesa's Team has been, simply by watching the increased numbers of folks seeking their help from across the IUB campus, but it's wonderful to share this testimonial of how well this can work when we listen to our experts. This has immediately positive consequences, as I am able to share connections to OOE and their resources with our AHS adjunct faculty members, particularly if they've ever been reticent to step boldly into the online sphere. Our adjunct faculty members have always been skilled and highly motivated, but this just adds even more tools to their respective toolkits! During this time of major transition and academic adjustment, I am happy to express my appreciation to our Online Education Team in the School of Public Health. I'll continue to call on you all for support for our department, and will do so with great confidence in your excellent work.

Faculty Member D
As the new semester starts, I would like to thank you for your extraordinary service/help for my online courses. You have gone above and beyond the call of duty in helping me as I have transitioned from a traditional courses which require in-person to online formats. You have been most considerate, and paid attention to all the details that are foreign to a traditional teacher like me. Your work ethic, diligence, perfectionism and professionalism are very much appreciated! I would like to thank Lesa, and Amaury for hiring dedicated colleagues like you! Best wishes to you for much future success.

Faculty Member E
I want to thank you and the Indiana University School of Public Health for the fantastic support during the second part of the semester. I would not be able to

> successfully transition my courses online without your help and expertise. Very much appreciated. Wishing you a wonderful summer. And a great end of the semester. PS: I am copying this email to my supervisor. I think it is important to recognize the effort that you put in helping us in this difficult time. Thanks again.

Table 1. A summary of support requested by faculty.

Support requested	Number of faculty requests
Meeting my students synchronously, once or twice a week, as if I were meeting them in class	31
Delivering lectures to my students	27
Discussing with my students the course content synchronously and/or asynchronously, once or twice a week, as if I were talking to them in class	22
Watching my students deliver presentations	18
Providing alternatives for students' group projects	17
Helping students create videos instead of in-class presentations	16
Other (please specify)	14
Setting up office hours with students	10
Communicating with my students	10
Collecting students' assignments/quizzes	9
Grading and providing feedback to my students	5
Sharing printed materials with students	5

Note. $N = 59$ faculty.

Concluding Thoughts and Reflection

While working with faculty members to help them transition to ERT, we clearly understood that it was not the process that we usually followed when designing online courses. That is, as mentioned above, designing online courses requires considerable forethought and planning, which means that online courses are courses that are designed as such from the very beginning. We were also aware that courses that were transitioned from a face-to-face to an ERT format could not be called online courses for the reasons described above. However, it was crucial to help faculty members make their courses compliant and accessible. In making this process effective and efficient, we relied first on our combined design expertise, which entailed evoking our ethical design judgments (Lachheb & Boling, 2020). We also relied on design tools in a "designerly" manner (Lachheb & Boling, 2018), such as the emergency remote instruction checklist (Quality Matters, 2020). During our consultations with faculty, this checklist helped us focus on key elements that were especially crucial for the ERT mode of instruction, such as accessibility. Therefore, we made sure the Canvas sites were clearly structured, links to all essential learning resources were clearly labeled, and video lectures were closed captioned.

Reflecting on the resources that we used during this time, we appreciated the university-wide resources designed by technology services and teaching and learning units. They provided clear instructions and walk-throughs on using necessary technology that we could readily share with faculty members. At the same time, we felt the need to design additional resources, specifically for faculty members at the SPH. Therefore, we designed and delivered two webinars (SPH Webinar 1: OOE Consultation Processes Overview, and SPH Webinar 2: Using COVID-19 Canvas Course Template

for Your Course) for faculty members as a follow-up and a walk-through of available support services that we offer.

As we reflect on the entire experience of helping faculty transition rapidly to ERT, it is important to point out that using the above-described six-step toolkit was extremely instrumental in responding to faculty needs in a timely manner. Rapid response to instructional design needs during a crisis event required an operational framework to inform the support response. This six-step process helped us effectively support faculty members during this period of transition from face-to-face to ERT. This process that we invented was not described in an instructional technology and instructional design textbook, which speaks to our ability to make solid design judgments that allow us to create our internal design tools (Lachheb & Boling, 2018).

Finally, acting quickly in such a crisis is necessary. Therefore, it could help make the consultation process more efficient. Acting as a collaborative team of designers made it possible to share concerns and generate appropriate solutions within a limited timeframe, enabling us to provide as much support as necessary for faculty members to feel comfortable teaching in the ERT mode of instruction.

Epilogue

In retrospect, would we have done something differently during that time of facilitating a smooth transition to ERT? As it was an unprecedented situation, it is really hard to imagine what we could have done differently to be more effective or efficient. In the moment, we all lacked a feeling of certainty and confidence that this quick pivot to ERT would work. At the same time, it encouraged us, even more, to think about questions of sustainability and equity. Therefore, this crisis led us to reflect on our practices to identify sustainable instructional design elements that could result in continued seamless and meaningful experiences.

Further, now that more classes are offered in different formats (face-to-face, hybrid, HyFlex, online), we also think about providing equitable access to learning. Thus, online interactions should not be considered of lesser quality or a poorer learning experience than face-to-face instruction. Finding adequate ways to ensure access to equitable and high-quality learning experiences requires constant reflection on instructional design and teaching practices with a view to improving them.

After the spring 2020 semester, we focused our design efforts on redesigning face-to-face courses that underwent an ERT approach to a fully online format. Having enough time during the summer and not being pressured by an "emergency" allowed us to work with faculty members to re-envision their courses as an online format. This approach entailed adopting new instructional strategies that faculty members had never tried before (e.g., asynchronous lectures and discussions), relying on open-educational resources instead of textbooks (open-access articles, books, and media), and leveraging the use of university-supported instructional technologies (e.g., Canvas, Kaltura, Zoom). The ERT experience made online learning and teaching a viable solution for several faculty members and allowed them to experience what a rigorous and ethical online course design entails.

References

Baldwin, S. J. (2019). Assimilation in online course design. *American Journal of Distance Education*, *33*(3), 195–211. https://doi.org/10.1080/08923647.2019.1610304

Baldwin, S. J., Ching, Y. H., & Friesen, N. (2018). Online course design and development among college and university instructors: An analysis using grounded theory. *Online Learning*. http://dx.doi.org/10.24059/olj.v22i2.1212

Boling, E. (2020). The nature and use of precedent in designing. In J. K. McDonald & R. E. West (Eds.), *Design for learning: Principles, processes, and praxis*. EdTech Books. https://edtechbooks.org/id/precedent

Hodges, C. B., Moore, S. L., Lockee, B. B., Bond, M. A., & Jewett, A. (2021) An instructional design process for emergency remote teaching. In D. Burgos, A. Tlili, & A. Tabacco (Eds.), *Radical solutions for education in a crisis context* (Lecture Notes in Educational Technology, pp. 37–51). Singapore: Springer. https://doi.org/10.1007/978-981-15-7869-4_3

Hodges, C. B., Moore, S., Lockee, B. B., Trust, T., & Bond, M. A. (2020, March 27). *The difference between emergency remote teaching and online learning*. https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning

Hong, Y. C., Clinton, G., & Rieber, L. P. (2014). Designing creative user interactions for learning. *Educational Technology*, *54*(2), 20–25.

Hovde, M. R. (2015, July). Effective user experience in online technical communication courses: Employing multiple methods within organizational contexts to assess usability. In *Proceedings of the 33rd Annual International Conference on the Design of Communication* (Article 30). New York, NY: Association for Computing Machinery.

Lachheb, A., & Boling, E. (2018). Design tools in practice: Instructional designers report which tools they use and why. *Journal of Computing in Higher Education*, *30*(1), 34–54. https://doi.org/10.1007/s12528-017-9165-x

Lachheb, A., & Boling, E. (2020). The role of design judgment and reflection in instructional design. In J. K. McDonald & R. E. West (Eds.), *Design for learning: Principles, processes, and praxis*. EdTech Books. https://edtechbooks.org/id/design_judgment

Leidner, A. J., Barry, V., Bowen, V. B., Silver, R., Musial, T., Kang G. J., ... Pevzner, E. (2021). Opening of large institutions of higher education and county-level COVID-19 incidence—United States, July 6–September 17, 2020. *Morbidity and Mortality Weekly* Report, *70,* 14–19. http://dx.doi.org/10.15585/mmwr.mm7001a4

Quality Matters. (2020, March 13). *QM emergency remote instruction checklist for higher ed.* https://www.qualitymatters.org/qa-resources/resource-center/articles-resources/ERI-Checklist

Watson, F. F., Bishop, M. C., & Ferdinand-James, D. (2017). Instructional strategies to help online students learn: Feedback from online students. *TechTrends*, *61*(5), 420–427. https://doi.org/10.1007/s11528-017-0216-y