SUGGESTIONS FOR MOVING TEACHING RAPIDLY ONLINE IN THE FACE OF THE CORONA CRISIS

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ABSTRACT

The Corona (COVID-19) virus outbreak has led many universities and other higher education institutions to close temporarily across the globe. In order not to disrupt exams and prolong students' enrolment periods, some such institutions are exploring the option of delivering classes online. This short paper outlines ways to rapidly and inexpensively move courses online. Recommendations in this paper are based on principles from research into communities of inquiry (COI), as well as a tried and tested content structuring framework (SCATE) developed at a large British university. They are also based on my own experiences of leading online degree programmes and teaching online courses.

Keywords: Online teaching; Online learning; Community of inquiry; Corona; COVID-19

INTRODUCTION AND BACKGROUND

At the time of writing this short paper, several countries, such as China, the United States, Italy, Spain, and Denmark have seen universities close down in order to slow down the Corona (COVID-19) epidemic. Many further governments are considering whether to close schools and higher education institutions, as these typically gather hundreds or even thousands of students into small areas, in auditoriums, libraries, and canteens. Whilst the temporary closing down of these institutions may be necessary from a national health perspective, this causes immense disruption to the teaching and learning activities taking place. For example, lectures may be cancelled, supervision of students may be disrupted, it may no longer be feasible to organise exams, and ultimately students could be delayed in their studies, leading to late entry into the job market. This in turn puts a financial strain on students. Furthermore, many students around the world depend on scholarships and stipends, that may be limited in time, or be dependent on students completing their learning activities on time. One answer to the challenge is to rapidly transfer teaching and learning activities online, something that is today technologically feasible in most regions around the world. Instructors and students can teach and learn safely from their own home. Yet for many administrators and instructors this would be a first. It is my aim in this short paper to provide such administrators and instructors with some basic tools with which to get started - rapidly, and cheaply.

The online learning environment is fundamentally different to the regular classroom environment, and drivers of learning, student engagement, and student satisfaction are not the same (Bignoux and Sund, 2018). Classroom teaching is almost invariably synchronous (real-time), whereas online learning is usually asynchronous, meaning that where classroom teaching is almost always scheduled, online teaching is most often conducted at a time convenient to the student, or as a combination of both scheduled and unscheduled activities. This flexibility is one of the big advantages at a time when students may be facing constraints due to the epidemic. By designing elements of asynchronous teaching that are offered in a Virtual Learning Environment (VLE – also commonly referred to as a Learning Management System, LME) such as Moodle, Blackboard, or whatever other environment available at a given institution, instructors can ensure that students that have constraints such as quarantine, that need temporary medical attendance, have to care for relatives etc. are not disadvantaged. Such elements can be combined with synchronous elements, such as the instructor being available for an online group chat at scheduled times. Setting all this up is quick and easy, provided you have access to a VLE that students have access to as well. My own experience is mainly with Moodle, but all VLEs work on the same principles.

The community of inquiry (COI) framework provides a useful starting point for engaging with teaching and learning in the online environment (Garrison, Anderson and Archer, 2001).

According to this framework, success in online instruction requires that you create a community of learners. In this community (analogous to the community in the physical classroom), learning takes place through three interrelated elements: (1) social presence, (2) cognitive presence, and (3) teaching presence.

Social presence is defined as "the ability of participants in the community of inquiry to project their personal characteristics into the community" (Garrison, Anderson and Archer, 1999, p. 89). Students that are accepted by other learners as a "real" part of the community have gained a degree of social presence. Kreijns, Kirschner, Jochems and Van Buuren (2011) discuss social presence as the "degree of illusion that others appear to be a 'real' physical person in either an immediate (i.e. real time/synchronous) or a delayed (i.e. time-deferred/asynchronous) communication episode" (p. 366). Ensuring that students have the possibility to engage as a real and present person in the learning community can be achieved by designing shared learning experiences and providing opportunities for student-led inputs, such as online discussions, or group assignments.

Cognitive presence is defined as "the extent to which the participants in any particular configuration of a community of inquiry are able to construct meaning through sustained communication" (Garrison et al.1999, p. 89). The online learning community can thus be viewed as a sensemaking community, of which learners, instructors, and even administrative staff are all members (Bignoux and Sund, 2018). Recent studies have linked online collaborative learning with better learning outcomes, suggesting the importance of cognitive presence (Tsai, 2013; Wu, Hsieh, and Yang, 2017).

Teaching presence is defined in terms of both the design of the educational experience and the facilitation of learning. This is typically carried out by the instructor online, or by a mix of instructor and student-led inputs. Chen, deNoyelles, Patton, and Zydney (2017) find that a systematic approach to tutoring based on the COI framework can lead to higher perceptions of cognitive, social, and teaching presences, and ultimately to learning benefits.

Based on the community of inquiry framework, it is possible to start imagining how best to tailor content for the online learning environment, how to structure this content, and how to deliver the content as an online instructor.

CREATING AND TRANSFORMING CONTENT

In the traditional classroom, teaching materials (content) typically include some combination of (1) a core textbook, (2) supplementary reading in the form of academic articles, news items, case materials and so forth, (3) slides outlining key learning points (often theory-driven), that are typically the backbone of lectures held by an instructor, (4) video or other media items, typically shown in class, (5) assignments, exercises, or cases that may form the backbone of seminars or exercise tutorial sessions, or may simply be assigned for home work. Most of these materials can be easily transferred into an online learning environment.

Textbook reading requires no transformation, as students will typically have access to these at home, either in print format, or online by accessing these through your institution's library. Unfortunately, many textbooks are today circulating online in illegal PDF versions as well. Do not encourage students to use these. In online teaching mode, it may be useful to provide students with more precise guidance on what chapters and pages should be read, as they will not get this guidance informally in class anymore. Remember that in the online environment students only know what you specifically tell them – typically in writing. You would be surprised how much information you are (often unconsciously) passing on to students verbally in the physical classroom environment. All this information disappears in the online environment.

Supplementary reading can be provided either as documents (PDF or other), uploaded on your VLE, or sent around by other means, or as deep links on the VLE, that allow students to directly access the reading in a separate browser window. You can find guidance online on how to provide deep links. Be aware that copyright rules often make it illegal to provide PDF versions of articles that you have not authored yourself. Deep links are to be preferred if you are unsure of the legality. Broken links usually cause a lot of student frustration online, so be careful to test all links you provide regularly. This includes links to videos, newspaper articles etc. Also make sure students have access and are not met by a pay wall. If students need to be logged onto a university system (for example a VPN) in order to have access to a resource, let them know and provide them with some guidance on how to do this. You would be surprised how quickly some students give up on getting access to things if it doesn't work at first!

Slides are typically not very useful in and of themselves, but can be supplemented by a voice-over, or a video inlay, with the instructor explaining what is on the slides. Given that students' attention span online may not be as long as the typical 2-hour lecture, it may be worth considering carefully what core messages you want to convey through narrated slides and cutting the content down to a shorter 10-20 minutes. Alternatively, your usual slide deck can be broken into separate short slide

decks. For example, your usual 60-minute classroom slide-based lecture could be broken into 3 shorter narrated slideshows of 20 minutes each. This allows students more natural breaks, and allows you to add content in between each slideshow, such as a short assignment, a short quiz to test their learning, a thinking exercise, a video, or whatever else you can think of. You will also find that because your online slide-based lecture is likely not to be interactive, it will take you a shorter time to get through your slides, allowing you to naturally compress your slideshow. You may find that your 60-minute lecture can be done in two 20-minute narrated slideshows. Slide creation programs such as PowerPoint contain tools for narrating slides. In PowerPoint you find these under the Slide Show tab, and you can choose to do voice-over only, or video as well. Be aware that you may need to create some space in your slides for your video inlay. Any webcam and built-in microphone will usually do the trick, if you record in a quiet place.

If you prefer to present your slides synchronously (real-time), there are numerous streaming and webcasting services available to choose from. Some are paid services that your institution may have access to, such as Microsoft Teams or Kaltura. Others are free - but pay attention to copyright rules and whether your institution will allow you to share content on these platforms. Here are some examples of services in this category: YouTube, Dreamcast, Facebook Live, Instagram Live, Periscope, Twitch, Ustream, Livestream.

The internet is full of useful **videos and other media** that can be used with great benefit in online learning (e.g. from YouTube). For example, if you teach leadership you can find historical speeches from great leader. If you teach a business course, you can find videos with interviews of CEOs. You can either provide a link to the video, or you can choose to embed the video (if there are no copyright restrictions on this) directly into the VLE. This is quick and easy to do and looks great from the student perspective. Rather than a series of links, try to provide content directly in the VLE when this is possible.

Exercises and cases can also be transferred online. However, simply putting reading materials or exercises online as documents (PDF, Word, Excel files etc.) is insufficient. Bear in mind that the students are used to the interactive nature of such sessions in the classroom. You have several options for guiding students more actively through the exercises. One option would be to create a group activity, in which you group students in pairs, or groups of 3-6, and ask them to solve an exercise or case collaboratively. The actual collaboration can take place in a tool like Microsoft Teams, if they have access to this, or even in a simple discussion forum on Moodle. Remember not to put hundreds of students into the same discussion forum as they will have a hard time following discussion threads. You may have to create a separate discussion board for each student group and provide access to only those students. So, if you have 30 students, you could create 5 groups of 6 students, and 5 discussion boards, one for each group. You then ask the groups to

discuss in their respective discussion board, which you monitor. Another option for exercises would be to post a slideshow with voice-over with the instructor going through the exercises. I would not recommend this simple approach alone, as students are unable to engage with the instructor or each other – thus missing out on social presence. Combining approaches may give the best learning experience.

In the end the success of your learning unit online depends on putting together the right combination of materials, that will engage students for the required number of study hours and help them achieve the learning objectives you have set for your course. The next question is therefore how to structure your content (for example narrated slides, plus some videos, plus a case), so they form a coherent whole.

STRUCTURING CONTENT FOR ONLINE LEARNING

A first step to moving teaching and learning to the online format is to create a space for the course on the institutions VLE. (Alternatively, a tool such as Microsoft Teams could be used, or one could consider providing a structured document in PDF format with text, links etc.). Assuming this VLE already exists at your institution, and that you (the instructor) are already using this space to upload slides, or communicate with students, this same existing space can typically be adapted rapidly to online teaching and learning. Using an existing VLE space has the advantage that you (the instructor), and the students already have access, and are already familiar with the environment.

Once you have a VLE space and have ensured that all instructors and students that need to be involved in the running of the course online have access to this space, you can divide the space into learning units. For example, a learning unit could be everything that needs to be covered in a given week. I would recommend making the learning unit reflect the learning unit size you normally use in the regular offline environment. If your teaching in class is done on a weekly basis, with one learning topic per week, using the same structure online will make everything more familiar for the students, and for yourself.

The typical structure of teaching in the classroom environment could involve a combination of reading assignments for students, group assignments, formal lectures, and exercise, practical, or case sessions. All these activities can be transferred online, in one format or another, as already discussed. The question is how to structure things in the VLE. My own experience has been with the so-called SCATE structure, which stands for Scope, Content, Activities, Thinking, and Extra

(Edwards, 2012). With this structure, each learning unit is divided into five sections (which can simply be separate boxes or sections within the VLE) as follows:

Scope: A description of the learning unit and any prerequisites. This could be provided as a series of bullet points indicating learning outcomes (knowledge, skills), or perhaps as a short paragraph outlining the purpose of the learning unit. This tells students briefly what they will learn in this unit.

Content: This is the core section of the learning unit, containing or linking to learning material. Such material could be text, slides (with or without voice-over or video inlay), videos, or other types of media, as discussed in the previous section of this paper.

Activities: This section gets students to be active. An activity could be an online group discussion on a discussion board, an exercise etc. The activity could be individual or in a group.

Thinking: This section encourages individual reflection. This could for example be a quiz or encouraging students to write a learning log.

Extra: This section contains additional activities or resources for students who are interested to take the topic of the learning unit a step further. For example, suggestions for further reading.

Each learning unit should be designed bearing in mind the amount of time you expect students to work on the unit. If your normal teaching involves students reading a chapter from a textbook at home, preparing a case study, and then listening to a 2 hour lecture, followed by a 2 hour case session, your online learning unit should be designed to take around the same time to complete. After all, the credits students earn are the same. But how you split the time could be different.

In the online environment you have the possibility of mixing synchronous (real-time) and asynchronous learning materials. For example, in your Content section you could ask students to start by reading from their textbook. You could then ask students to think about and note down in a document why what they have read is relevant to the field. You could then write a few paragraphs of text summarizing key take-aways or providing your own commentary on what they read. After that you could embed a pre-recorded slide presentation with voice-over – essentially re-using the slides you normally use in class. This could be followed up by an activity where you ask students to discuss a short case on an online discussion board you set up in the section. You could ask students to discuss at a set time, during which you, the instructor, are online too and can moderate and steer the discussion. Finally, you could provide a short multiple-choice quiz for students to take (which many textbook publishers make available free to instructors) and provide some extra reading materials in the form of links to relevant online articles. This would lead to a structure as indicated in Figure 1 below.

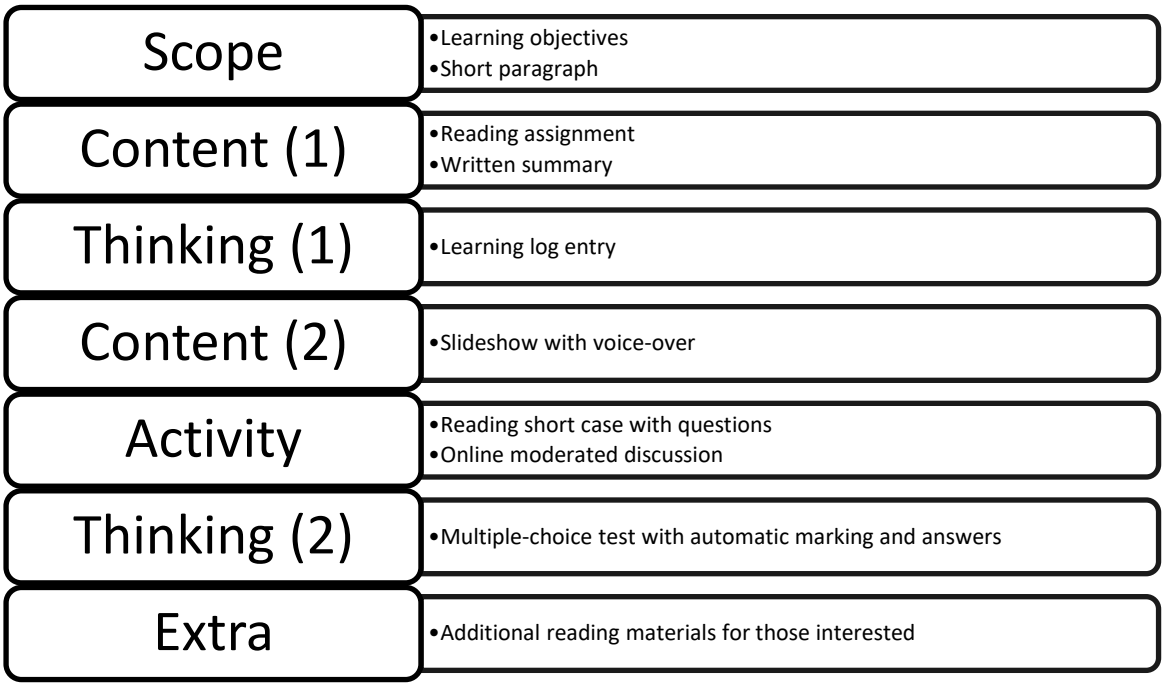

Figure 1: Sample learning unit structure and content

ORGANIZING TUTORING AND FEEDBACK

As indicated already, most teaching materials can readily be transferred online. What cannot be directly transferred is the instructor. In the classroom, the instructor not only explains materials, but often engages in a two-way dialogue with students. Students can ask questions, seek clarification, and provide counterpoints to the instructor. Case sessions offer the possibility of engaging in an even deeper sensemaking discussion with the instructor and other students (peer learning). Finally, students who do not understand something always have the option of turning to a neighbour for clarification. The impact of the social learning environment in the classroom should not be underestimated. There is plentiful evidence that students attending class learn more, and achieve higher grades, than those simply studying alone at home (Sund and Bignoux, 2018). Instructors have an impact, and so does the physical learning environment in the broadest sense.

Whilst transferring the classroom learning environment online may not be possible 1-to-1, it is possible to create a community of inquiry with some degree of teaching presence, thereby emulating some of the social learning processes from the classroom, albeit in an online setting. There are two broad ways this can be done: synchronously and asynchronously. In the synchronous

mode, activities are scheduled, whereas in the asynchronous mode students can log onto the VLE at different times, and still participate in activities. For example, the instructor could make herself available to students at a predetermined time on some form of two-way communication platform. This could be as simple as a discussion board on the university's VLE (for example Moodle), where the instructor is present for a set period of time (for example a scheduled hour each day, or two hours on a specific day). Students are then told to log onto this discussion board at the same time, and to engage in a guided conversation. For example, the instructor could provide a short case and a question, that students read beforehand, and then discuss "live" on the discussion board, with the instructor being part of the conversation. This conversation would be text-based. A more elaborate variant could be achieved with webcasting tools, as earlier discussed in the content section of this paper. Alternatively, the instructor could leave the discussion to take place over a longer time, dipping in and out of the discussions regularly, but not in a scheduled manner. This has the advantage that students and the instructor have some flexibility and will not miss the activity if they are not available at the precise scheduled time.

Regardless of the way that the online tutoring takes place, the instructor needs to plan and consider their online behaviour. Student satisfaction and learning are correlated. What online students report as important to their satisfaction include the following (Bignoux and Sund, 2018):

- Instructor attitude
    - Being motivating
    - Challenging students
    - Being helpful and vigilant
- Instructor knowledge (mastering the theories you teach)
- Instructor understanding of the student's context
    - Showing flexibility
    - Showing cultural sensitivity and language awareness
- Instructor behaviours
    - Setting direction
    - Correcting misunderstandings
    - Responding in a timely manner to queries (<48-72-hour response time to email, discussion forum and other queries)
    - Showing engagement (teaching presence – regular interaction with students every 48 hours)

One of the key findings in my own research has been the importance of teacher presence in the online environment. Students do not equate online study with self-study. They expect guidance and interaction with their instructor online, just as they would in the classroom. This is perhaps the greatest challenge – getting yourself to change your own attitude and behaviours as an instructor.

Moving from being present and available once a week for a small amount of time in class, to engaging with students much more regularly for shorter periods of time online. An unanswered email or a discussion board thread where no-one seems present are enough to discourage the online learner.

A CONCLUSION AND HOPE

In the face of a global epidemic, but occurring at a time in history when a vast majority of instructors and students have access to high speed internet from the relative comfort and safety of their own home, online learning techniques offer the hope of maintaining teaching and learning activities, even if a physical campus is closed. Rapidly transitioning learning activities online is a challenge, but one that instructors can rapidly overcome, if you follow some simple design rules. In this short paper I have presented some such simple rules, based on my own experience of running online programmes, teaching online courses, and researching the topic. My recommendations have been centred on the tried and tested community of inquiry framework, requiring instructors to nurture social, cognitive, and teaching presence. I have suggested that by creating a mix of online content and activities, structured in a coherent way, and with active instructor presence online, teaching and learning can meaningfully take place online, until it is safe to go back to campus. A permanent shift to online learning requires a lot more of higher education institutions, including securing access to many types of learning tools, sourcing specific materials for online use, training administrative support staff and IT staff etc. An online university is a very different beast. But in the short term, even an instructor with no prior online experience will be able to convert materials rapidly and cheaply to effective online use.

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