

Synchronous or Asynchronous Online Teaching

Previous discussions on synchronous or asynchronous teaching focused on technical and didactical aspects. But the decision on online teaching formats is also highly relevant to a school's strategy. **Thomas Bieger** and **Samuel Heer** explore its impacts on long term value for students, resource planning, and in the end the positioning of the school in the academic value chain



A question of strategy for business schools in the aftermath of COVID-19.

1. Underused disconnection of place and time of teaching and learning

Since its origins, traditional teaching at institutions of higher education happened face-to-face in lectures. Schools operated on a value chain with the key elements of research, translating research into teaching content, teaching by professors to their students, selecting and developing of junior researchers. Since the origins of media technology – basically since printing technology was invented in the 15th century and textbooks theoretically could replace lectures – a process of ongoing decoupling of time and place of teaching and learning took place. Important steps in the process are highlighted in the table on p7.

Only the most recent virtual conferencing technologies allowed for simultaneous teaching of classes in an interactive distant format.

Despite the technologies available in class, lectures and seminars kept their position as the dominant form of teaching at traditional business schools. Classroom teaching allows interactive, very personal formats which support the development of class spirit and transformational learning experiences. Traditional classroom teaching also allows the schools to protect their most important resources, faculty and students, because with face-to-face lectures schools are in full control of access to lecture halls and thereby to their teaching product. Schools can protect their

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teaching competencies and students have unique access to the scientific and didactical competencies of their professors. On the other hand, schools and professors have a monopoly regarding their students. They are protected from direct competition on the module and course level. As a consequence, despite some dedicated online programmes mostly on the level of graduate programmes, teaching was not really affected by global competition and there was no real disruption to the academic teaching value chain so far.

2. Covid and the fast implementation of AOT and SOT

COVID-19 forced universities to move to online formats on very short notice. In many cases this was not an organised and strategically led process. Initiatives were left to the individual professors. Schools would have been satisfied if online teaching worked technically and without major complaints from the students. Some professors were uploading lectures on learning platforms which students could enjoy as podcast lectures. Others were holding live lectures and seminars online with more or less direct interaction based on video conferencing tools like Zoom or MS Teams. Thus, the two forms of online distance teaching, synchronous and asynchronous teaching and learning, very often emerged side by side.

Asynchronous Online-Teaching (AOT) is based on the decoupling of the place and time of teaching. Students can follow the teaching and consume learning materials autonomously

according to their own schedule. Learning materials may consist of reading material, videoclips, recorded lectures, or instruction movies. Interaction takes place with time delays through blogs, discussion forums, mails, or recorded messages. The platforms used are Learning Management Systems like Moodle or Canvas LMS. Synchronous Online-Teaching (SOT) is a form of teaching which relies on decoupling of place but not time. Students are not autonomous in scheduling their learning process. Interaction takes place simultaneously, similar to traditional classroom teaching. Often, in smaller groups at least, there is a camera-on policy and even cold calls are possible. Supporting learning materials can be delivered like with AOT. Teleconferencing tools like Zoom or MS Teams are used which also allow recording of the teaching elements.

From a student's perspective, literature shows different advantages and disadvantages for both formats (see, among others, Bernard et al., 2004; Hratinski, 2008 or 2020; Murphy et al., 2011):

- Asynchronous online teaching supports cognitive processes and shows positive effects on learning success and the attitude of students, mainly because students can follow teaching at their own speed or even repeat sequences at the times that best suit them. Accordingly, asynchronous teaching might be best suited for analytical knowledge learning (learning goal "know") like knowing quantitative methods. However, without support of the students' learning schedule with intermediate quizzes, there is the risk that students postpone learning to the latest possible date because there is no enforced learning rhythm – they disengage from the course. To be successful, AOT requires substantial investments in pedagogical concepts.
- Synchronous teaching strengthens the students' motivation thanks to interactivity, and consequently success rates tend to be higher and drop-out rates lower. Synchronous teaching might be best suited for higher learning goals like application or transformational goals ("do" and "be") involving didactical formats like case study discussions or debates. Quality of media technology (platforms and



communication channels with chats, cold and warm calls) as well as didactical qualities of the moderation are critical success factors to draw on the full potential of interactive exchanges and the presence of fellow students as well as professors. If synchronous teaching is performed just as an online version of traditional one-way lectures it misses its potential. SOT also structures the learning process through ritual events and supports students' engagement with regular participation improving learning success.

The course "Introduction to Management Studies" at the University of St. Gallen was delivered in a synchronous online teaching setting in fall 2020. Even with groups of 700 students an interactive format could be achieved thanks to chat and cold calls. In a post-lecture survey 97% of the students answered that they visited at least 80% of the modules (the highest possible response). Students who were more critical of SOT wanted recorded lectures to have more flexibility and follow their own learning cycle (times and speed):



2020

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Time	Technical formats	Didactical Formats	Decoupling of place	Decoupling of time	Interactivity
Since antics	Lecture halls	Lectures (initially based on handwritten manuscripts) Seminars	-	-	possible
Since invention of book printing in the 15th century	Textbooks	Self-study of textbooks	+	+	-
With upcoming gramophone/film technology end of 19th century)	Audiovisual tools like recorded lectures or instruction movies	Self-study with audio/video	+	+	-
Radio from early 20th and TV mid-20th century	Broadcast lectures and demonstrations on radio and TV	Audio/video self-study	+	-	-
Internet 1.0, end of 20th century	Web platforms with text, additional material and quizzes, later video tutorials, podcast lectures	Extended self-study with lecture elements	+	+	-
Internet 2.0 about 2010	Web platforms with asynchronous interaction with blogs, comments/ feedback from instructors and peers	Interactive self-study	+	+	+ (only with time lags and non-personal)
Since about 2015	Video conferencing which allows synchronous interactive formats	Interactive lectures and seminars	+	-	+

"The course should be recorded and be available for one day. The course was the only one at 8:15 in the morning and the only lecture that was not recorded. The argument was that by not recording it, you want to make the day more structured for the students, but if all the other courses are recorded, it doesn't make sense – in my opinion. Either all courses have to be recorded or none."

An impressive number of students explicitly mentioned that the simultaneous setting supported their learning rhythm and engagement thanks to a time structure:

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Synchronous online teaching allows a school to strengthen interactivity in teaching, and to provide a unique setting where students can learn from each other

"The lecturer's decision not to record the lectures has helped me personally a lot to get into a 'rhythm' on the day of the lecture. Also, lecturer's personal interactions with students via chat or direct questions give me a certain sense of normality regarding studies, despite the current situation."

A mixed version – of synchronous teaching with recording and the possibility to follow the lecture at a later, self-chosen moment – seems not to be feasible for different reasons. Without any pressure or incentives students might tend to switch to the recorded version for personal convenience. Consequently, the richness of synchronous teaching is eroded. Rich, interactive group discussions seem to have properties of a “club good”. Positive external effects of rich and interactive synchronous delivery only occur if there is a sufficient degree of participation. Since no members of the “club” (or class) can be excluded from the benefits of the synchronous teaching when it is recorded, there is no (or limited) benefit of participation. Additional incentives for participation like points and grades for oral participation could help but might conflict with the didactical concept of the course.

3. The choice of online teaching formats – a decision of strategic importance to the school

While the forms of online teaching are heavily researched for their impact on learning success there has not been deeper discussion of their impact on the school's strategy and and competitive position. Nevertheless, the two different forms of online teaching show completely different strategic opportunities, but also threats:

Excellent **asynchronous online teaching** can be marketed on a larger scale and thereby be leveraged beyond the school. But it sets the school in full competition for best course modules. If quality is bad, students turn to better modules on the market. Why should

a student follow a second class “canned” production with lower technical and didactical quality from the home university when there are top courses available and accessible? The opportunity of a greater reach therefore requires significant investments in pedagogical concepts.

Synchronous online teaching allows a school to strengthen interactivity in teaching, and to provide a unique setting where students can learn from each other. Thanks to interactive formats and stronger student engagement higher learning goals like application or even transformational goals can be achieved – beyond just “knowing” also “doing” (application) and even “being” (change of attitudes and beliefs). It also strengthens the personal links among students and with faculty. It thus has a higher potential for creating bonds to the school. Also, it makes it possible to protect unique combinations of content and didactics. But the opportunities for teaching quality and bonding require didactical quality of lecturers and robust media technology. This format also enables collaborative teaching formats with different schools sharing courses.



97%

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	Content quality	No content quality
Faculty teaching skills	Opportunistic AoL or Sol	Focus on optimal interaction quality – share courses with close partners - SoT
Limited faculty teaching skills	Develop courses on areas of strengths – sell them and source external for weaknesses - AoL	Degrade to a broker for students

Therefore, based on the strategic goals and the resources available, a school must decide whether to favour and encourage an AOT or rather SOT. The following generic strategies can be discussed:

Grow beyond

A school that wants to grow beyond its geographical markets and therefore take advantage of economies of scale might want to encourage their faculty to use AOT. This requires competitive advantages in content and pedagogical concepts. Technical support is required for creating video sequences and supportive teaching instruments. Collaboration between researchers, specialists in pedagogy, and technical support staff is crucial.

Campus first

A school that wants to follow a quality strategy for its teaching and to encourage interactive formats which also promote long-term student and graduate loyalty might foster SOT. This requires investments in the didactical skills of lecturers as well as interactive media technology.

Opportunistic “laissez-faire”

Schools which have both excellent content quality as well as faculty with didactical skills, might allow an opportunistic process. To leverage the strategic advantages of both AOT and SOT, deliberate decisions and investments might be needed to reinforce strengths and develop top courses that might be opened or even sold externally and at the same time invest in the didactical quality of their faculty.

Without any strengths or investment capacity in either content quality or in faculty didactical skills, AOT and also SOT might not be successful in the long term. Online teaching makes teaching exchangeable. If a school is not able to deliver modules to the market because lack of quality and is also unable to generate proper interactive teaching quality, it might be better to become a broker for students, pre-selecting appropriate external courses, compiling and marketing them efficiently. Like in other industries, important questions will be:

- What is the institution able to produce itself, and what would it rather source from the market?
- What added value does the institution deliver to the students?



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