14.1 Trends in Education and Teaching

According to UNESCO, the outbreak of COVID-19 has disrupted the education of 1.5 billion learners across the world, this is 91% of the world’s student population. In the university and college sector, institutions have been forced to close the doors to their campuses. Students studying practical courses have had to put their learning on hold. Those studying theoretical courses have had to shift to learning at home, with teaching moving online (IAU, 2020). This is a level of disruption the likes of which we have never seen before. Many scientists and experts believe that degree of online classes at universities and colleges will increase in the future even more. The questions is, what will the coronavirus pandemic mean for higher education in the coming years? For historical and functional reasons, universities are at odds with social developments. On the one hand, universities have a decisive influence on these developments; on the other hand, they are also shaped by them, but must not simply adapt to them. By generating and imparting knowledge, universities provide the chance that the problem horizons of the societies around them generated by everyday theory are exceeded. They do justice to their role as actors in the dialogue that builds on this, especially when they prospectively take up the foreseeable changes in social framework conditions. At present, modernization processes can already be observed or foreseen, which pose considerable challenges to the ability of societies and states to cope with social change. The challenges result from the fact that societies can only adapt to the upcoming changes through mobilization long unnecessary resources of conflict management, differentiation and innovation.
processing will succeed. The dimensions of these modernization processes are knowledge society, globalization, Europeanization, regionalization and demographic developments. The mobilization of appropriate coping resources requires democratization processes, changes in state tasks and developments in labour markets and work requirements. Figure 14.1 shows trends in the educational and teaching area. A trend towards greater privatization or partial privatization of education at all educational levels is an expression of education and training that is more focused on application and practical relevance, as well as the simultaneous limitation of state funding in Europe. Companies set up their own educational institutions or cooperate specifically with state educational institutions. Private schools of all levels are gaining popularity compared to state schools. Private financing shares are increasing. Financial stress is an issue in all systems of tertiary education. The answers to this are, on the one hand, the search for efficiency reserves, and on the other hand, the shifting of costs to the demand for education. A distinction must be made between financing the educational processes themselves and financing. At universities e.g. the educational process is 85% publicly funded and 15% privately; In the case of livelihood it is the other way round: 78% are financed privately and only 22% by the state.

### 14.1.1 Virtual Classrooms

A virtual classroom is a learning environment in which students (customers, partners, or any third-party) engage with the lesson material online. Information is often conveyed through voice or video conferencing with several participants and instructors connected to the same chat interface. The virtual classroom allows for live
interaction between the tutor and the learners as they are participating in learning activities. In other words, the virtual classroom is a shared online space where the learners and the tutor work together simultaneously. Usually, these interactions take place through videoconferencing. The participants have tools to present learning content in different formats, as well as to implement collaborative and individual activities. In this type of interaction, the teacher has the particularly important role of the moderator who guides the learning process and supports group activities and discussions. The most common tools you can find in a virtual classroom are:

- Videoconferencing
- Online Whiteboard for real-time Collaboration
- Instant Messaging Tool
- Participation Controls
- Breakout Rooms

Synchronous virtual classrooms have the potential to provide significant added value to online learning by addressing the needs of the learners as they relate to social interaction and psychological safety. They can also create a new standard in the learning experience that goes above and beyond the physical space of the classroom and traditional teaching methods. The virtual classroom provides an abundance of opportunities, especially when combined with self-study platforms (learning management systems) or when used in addition to traditional classroom learning activities. Unlike asynchronous learning environments, the synchronous virtual classroom allows for instant feedback, direct teacher-student interaction, and engaging activities to increase motivation and active participation. Immediate communication favours relationship building within the group, as well as a sense of community.

Although teaching and learning in a virtual classroom provide an experience similar to the physical one, it requires new pedagogical approaches and a redesign of the instructional model that includes the following characteristics:

- Virtual Classroom’s high Interactivity
- Collaborative Learning
- Student-Centred Instruction
- Variety of Content Presentation and Learning Activities
- Psychologically Safe Environment
- Positive and Constructive Feedback

Figure 14.2 shows the workplace of a virtual classroom with simple tools and the audimax classroom at the IUBH in Berlin. During the COVID-19 crisis, the IUBH changed to 100% virtual teaching.

### 14.1.2 Blended Learning

Blended learning or integrated learning describes a form of learning that strives for a didactically meaningful combination of traditional face-to-face events and modern forms of e-learning. The concept combines the effectiveness and flexibility of electronic forms of learning with the social aspects of face-to-face communication.
and, if necessary, the practical learning of activities. This form of learning combines different learning methods, media and learning-theoretical orientations. As a learning organization, blended learning aims to strengthen the advantages and minimize the disadvantages through the appropriate combination of different media and methods. It is particularly important that the attendance phases and online phases are functionally coordinated. Through the unprejudiced use of the optimal medium in the respective step of the learning process, blended learning represents a decidedly universal form of learning organization.

### 14.1.3 Diverse and International Student Population

As institutions are becoming more focused on welcoming diverse student populations, administrators are faced with understanding how they can meet the needs of all students, no matter their background. Diversity is important on college and university campuses; having a wide array of perspectives and backgrounds brings forth new ideas and teaches students to value the opinions of one another. However, with all of these different backgrounds at play, administrators are faced with the challenge of ensuring that all cultures are respected and the needs of all students are met.

As leaders in higher education, administrators must also pay attention to the needs of their online students in order to ensure that they can achieve educational success, especially with distance and digital factors involved.
14.1.4 Online Examinations

Online examination is conducting a test online to measure the knowledge of the participants on a given topic. In the olden days, everybody had to gather in a classroom at the same time to take an exam. With online examination students can do the exam online, in their own time, with their own device, regardless of where they live.

14.1.5 Artificial Intelligence Replacing Human Factor

Artificial intelligence (AI) is already being used in blended and personalized learning, but experts expect its use to grow significantly in the coming years. It seems schools will be at the centre of this technological “revolution”. Education leader Sir Anthony Sheldon claims that intelligent machines will replace teachers by 2027. Of all the current teaching trends, this one makes us the most horrified. Teaching is perhaps the most human of endeavours.

14.1.6 Student Financing

Well over half of students who graduate from 4-year colleges and universities finance their education through student loans. According to The College Board, the average student loan debt is around $30,000 for a bachelor’s degree from 2012 to 2013. In total, well over a trillion dollars is owed in student debt. That is second to what is owned on all American home mortgages. Additionally, students who either graduated or left college before completing their degrees are defaulting on their student loans; it is estimated that over 14% of student debt is currently in default. While policymakers are looking for ways to make student loans easier to repay, colleges and universities are searching for ways to make earning an education more affordable. This has pushed colleges and business schools to think creatively about the types of programs they offer, how students earn credit, and the way education is delivered.

14.1.7 Diversification of Revenues and Stabilization of Budgets

Under continued financial pressure, regional universities must identify innovative ways to gain more control of their budgets. Traditional efforts to reduce costs tend to be the default way to meet budget, but universities should also assess their assets and capabilities to identify new, diverse ways to generate revenue. To achieve these goals, universities will have to rethink their entire strategic, operating, organizational and financial models. This article focuses specifically on rethinking financial models. Revenue diversification is a critical component of overall revenue mix, and it requires a holistic approach based on five key revenue diversification levers: continued education, research and innovation, services, asset utilization, and partners.
14.1.8 Personalization of Alumni Communication

In an increasingly competitive higher education sector, universities face significant challenges when it comes to recruiting new students. Recruitment is only the beginning of a long-term relationship that universities and business schools need to cultivate, not only while students attend the programs but also beyond graduation as part of the alumni system. How universities manage the relationship with the students and how students perceive their institution’s brand can have an impact on the attachment with the institution and in turn on students’ intentions to engage with the university in the future. Future relationships with graduates will be more personalized.

14.1.9 Brand Awareness Strategies to Increase International Reputation

Brand awareness, or the public perception of your higher education institution, directly affects application and enrolment numbers. Ensuring that your institution’s brand is well-known and widely recognized is vital to a healthy student advertising plan. Institutions must make a conscious effort to build brand awareness in order to reach potential students, build a widespread reputation, and attract more recruits. This can be done via internal or external resources and agencies.

14.2 Tools for Online Teaching and Collaboration

During the Covid-19 pandemic, many international business schools moved to 100% online teaching and used video conferencing tools and devices. Video conferencing is an engaging, highly interactive way to meet face-to-face with students, colleagues, partners and customers without the need to travel or to meet in a classroom. Participants can join these online meetings using a variety of devices with built-in cameras, including desktop, mobile and video systems. Solutions like Zoom, Webex or Skype also offer sophisticated video conferencing features like screen sharing, meeting recording and transcription, AI-powered meeting assistance, and more. There are many online tools and software solutions, in this chapter the most important are briefly explained. Most of the used online tools have the following important features for virtual teaching:

• Instructors—Schedule & Invite: Schedule a Virtual Classroom meeting and invite others (even external participants like a guest speaker)
• Recording: Record sessions, then archive or submit as assignment videos
• Desktop Share: Share an application or additional resource through your desktop
• Upload Presentations: Upload a presentation or present with the whiteboard
• Annotation Tools: Show & annotate content during live sessions
14.2.1 Zoom

Zoom is a video conferencing and messaging solution. It tends to be better for classes of 25 or less so one can interact and see the students, but can also be used for larger lectures. The free “basic” service of Zoom has a 40-min limit on group meetings with three or more participants. 1-to-1 meetings have no limit. Breakout session enables lecturers to do group work and activities. At its peak, the ZOOM company counted more than 300 million daily participants in virtual meetings, while saying customers have more than tripled. The dramatic uptake has the potential to change the firm’s path. Zoom said it expects sales as high as 1.8 billion US$ this year—roughly double what it forecast in March.

14.2.2 Cisco WebEx

Cisco WebEx is a cloud-based suite of productivity tools that keeps teams connected. Including WebEx Teams, WebEx Meetings, and WebEx Devices, this suite merges the web conferencing platform and the Spark team collaboration tool from Cisco.

14.2.3 Open Broadcaster Software

OBS is free and open-source software for video recording and live streaming. Versions of OBS are available for Linux, macOS, and Windows. It can be used to pre-record lectures for offline consumption. Multiple audio and video sources can be mixed, including desktop capture.

Live streaming requires a back end.

14.2.4 Microsoft Teams

Microsoft Teams can be used for online collaboration using chat, audio, video, and screen sharing. It supports 1-to-1 as well as group collaboration. See IST’s instructions for using teams. Microsoft says that Google Chrome is fully supported on all
platforms including Linux, however for Linux we recommend downloading the Teams desktop application because we have seen issues with the browser version. In addition to chat, audio, video, and screen sharing, MS Teams provides a shared (multi-party write) whiteboard during online meetings. The shared whiteboard is also available as standalone service. An overview of various content sharing options in Teams meetings is given here.

### 14.2.5 Skype

Skype has been around since 2003, and it’s still among the most popular video chat tools that are available today. Chances are pretty good that one has had already used it to talk to family members or friends from around the world at some point. It’s a good Zoom alternative for live class instructors who have a smaller group of students. While Skype allows for up to 50 people in a single call, it also limits you to only 250 people on your contact list at a time. As long as all of your students also download Skype, it’s completely free to connect with them to teach live online classes through the platform. Skype is a suitable choice if you’re on a budget and just need a basic video presentation or lecture. The platform offers HD video and crystal-clear audio, as long as everyone in the call has a decent internet connection.

### 14.2.6 Bongo

Bongo facilitates online classes and video recording for examinations. Virtual Classroom facilitates real-time conversations between multiple parties through video. Our web conferencing tool not only integrates seamlessly into any platform, it’s also directly accessible to all users within Video Assignments.

### 14.3 New Work Opportunities in Teaching and Education

Location-independent work has become more important in the wake of recent events. The employee remains the decisive factor. Digital solutions and modern communication tools help to simplify work processes and relieve employees of routine tasks. New Work concepts support schools, business schools and universities with a holistic, strategic approach in using resources efficiently and keeping an eye on the needs of your employees. Figure 14.3 is showing how many opportunities New work offers for the education and teaching sectors. Professors and academic staff can teach virtually from home or any place in the world. Administrative staff can utilize New Work to facilitate support processes. Students have through New Work the chance to join classes on a global level at any time.
With Campus Studies, the IUBH offers you 100% English-language course content in small study groups, which should optimally prepare students for your future career in an international environment. The individual lectures and seminars take place either at selected locations on campus or online in the virtual classroom. A combination of virtual studies and face-to-face events is also possible in order to exchange ideas with international students, gain intercultural experience and take part in a variety of partner programs abroad. Examinations can also be executed in a virtual way. This can be done via face-to-face examinations, speech recording or online written examinations. Finally, the New Work opportunities offer also practitioners to join virtual classes, either as experts or as scholars.

The survey in Fig. 14.4 of the IUBH on online teaching shows that schools are still facing difficulties in online teaching (IUBH, 2020b). Germany’s largest private university for online studies asks teachers about the most important challenges. A big obstacle for virtual classrooms in schools is the infrastructure of IT (30.4%). Every student must have access to digital forms of learning. That is the most important conclusion of the current IUBH survey, in which around 800 teachers took part.
In order to get schools up and running quickly for digital learning, the IUBH wanted to know where the teachers surveyed see the greatest challenges in online teaching. The topic of achieving learning goals primarily affects the motivation of the students as second biggest concern (29.1%). Communication with schoolchildren—similar to students—is different on the screen than in the classroom. Ten years of experience from online courses shows that teaching methods and didactics have to be adapted. For teachers, too, this means first acquiring the technical and didactic knowledge. There were mixed results with the answers to the question about the tools that are currently used most frequently by teachers for online teaching. The respondents work with very different learning and communication platforms such as Zoom, Microsoft Teams or Kahoot, which also provide teachers and students with exciting tools for digital teaching. Tools like e-mail or WhatsApp are definitely an addition. Of course, these two channels are not sufficient for motivating virtual teaching. The survey outlined that a notebook is more convenient, but a smartphone is sufficient in many cases when teachers switch between online and offline sensibly. Assignments can be sent online via mobile phone, which are then processed on paper, photographed and submitted for examination.

Figure 14.5 shows the chances and areas for New Work. Virtual classrooms offers a large population of students on a world-wide scale. Virtual classrooms leverage the best of technology to make learning an easier and more convenient experience. They also help bring down the costs significantly, while at the same time, provide a vastly superior reach both in terms of students and lecturers that can...
access it. It’s important for students in virtual classes to engage with the material and interact with the lecturer, their classmates, and the subject matter. Like in the traditional classroom, the role as an instructor is what makes virtual courses impactful and special. Key skills such as presentation skills or public speaking can easily be practiced through virtual classrooms, because it offers a safe space for students to experiment without the fear of judgement or getting it wrong—thereby helping them translate those skills confidently in the real world. On the other hand, virtual classrooms have disadvantages like having no control over the students or classroom and no control over the learning atmosphere or environment. Virtual Classroom requires computers and internet access, which might not be at hand to everyone. Field trips to show real examples of industry and enterprises are not possible. Many students want to have real classes and dislike the lack of social interaction, which is
associated with virtual classes and teaching. Among the many benefits of online education, virtual learning allows lecturers to have a more flexible schedule. It will reduce the cost, and can allow you to more easily develop the career alongside furthering education.

14.3.1 Case Study: Virtual and Physical Classes in IUBH

As Germany’s largest state-recognized and accredited private university, the IUBH International University is very familiar with virtual forms of study and innovative study models. For maximum freedom and flexibility, students can also study 100% online if they wish. In the university’s virtual classrooms, students can follow lectures preferably via zoom video conference in a live stream, take part in interactive seminars and take oral exams completely digitally. In group work, one can ask the lecturers questions directly and exchange ideas with other students via Microsoft Teams. Even the complete learning material and the tasks for the respective online course are made available to them online (IUBH, 2020a) (Fig. 14.6).
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