Virtual summer schools: experiences from Finland and Germany

Maximilian Köster[1], Sushant Raj Passi[2], Felix Bitterer[3], Ulla Vuorinen[4], and Nermin Karaoglu[5]

Abstract

Summer schools are an important element of universities' international strategies. During the COVID-19 pandemic, however, they often had to be canceled due to health-related concerns and political guidelines. The partner universities A (Finland) and B (Germany) decided to offer their summer schools in a virtual format in 2021 to allow students to gain international experience from their home country and to maintain international relations during the pandemic. By evaluating the success of their summer schools and sharing their experiences, they found that virtual summer schools have great potential. For certain students (with jobs, limited financial resources, mobility impairments, families to care for, etc.), virtual summer schools are particularly suitable and might even represent the only possibility to gain international experience. For virtual summer schools to be successful, however, universities have to consider organizational and pedagogical questions. In this article, organizers from A and B share their lessons learned as an inspiration for other institutions planning virtual summer schools that are immersive and engaging.

Keywords: summer school; design; business; Finland; Germany.

1. Bielefeld University of Applied Sciences, Germany; maximilian.koester@fh-bielefeld.de; https://orcid.org/0000-0003-0860-7838

2. Aalto University, Finland; sushant.rajpassi@aalto.fi; https://orcid.org/0000-0001-8490-9905

3. Bielefeld University of Applied Sciences, Germany; felix.bitterer@uni-bielefeld.de; https://orcid.org/0000-0002-4278-7679

4. South-Eastern Finland University of Applied Sciences, Finland; ulla.vuorinen@xamk.fi; https://orcid.org/0000-0002-2443-4810

5. Bielefeld University of Applied Sciences, Germany; nermin.karaoglu@fh-bielefeld.de; https://orcid.org/0000-0003-2473-380X

1. Introduction: why virtual summer schools are worth considering – not only during the pandemic

In the European academic context, international summer schools are programs organized by universities that usually last several weeks and bring together students from different countries for social, cultural, and professional exchange. They include lectures, but also leisure activities such as excursions or international socializing events. As an important component of many universities' international strategies, they increase international visibility. Because of their short duration, they provide students with a low-threshold opportunity to gain international experience and to earn credit points abroad.

The idea of holding summer schools virtually and thereby making them more accessible is not new. Already in 1994, the Open University (United Kingdom) organized a virtual summer school: the participants used a computer, a telephone, and a modem for communication and were able to follow lectures, to work in groups, and even, according to the organizers, to celebrate the end of the event in a virtual disco (Lucas-Smith, 2012). This shows the will to implement virtually not only the knowledge transfer but also the social component of a summer school although tools and platforms were not as advanced back then as they are today.

The COVID-19 pandemic has given new relevance to the idea of virtual summer schools. Travel restrictions and pandemic measures have made it difficult or even impossible for many universities to host on-campus summer schools since 2020. Because of their shared experience with virtual formats of international exchange, A and B decided in 2021 to explore virtual summer schools rather than cancel their much-anticipated programs. Unlike with pre-pandemic summer schools, A and B had more advanced tools and platforms at hand and could assume that participants were already familiar with distance learning. However, a virtual summer school's dense program over a short period differs from other virtual courses and virtual exchange formats like collaborative online international learning, which usually run over at least five weeks (Doscher & Rubin, 2022) and therefore require different pedagogical designs.

Virtual summer schools can be understood as examples of 'virtual mobility', which is defined by Rubin (2022) as "registering for one or more online courses from a host university in another country and receiving academic recognition for the credits acquired" (p. 14). While virtual mobility formats cannot replace an on-campus experience abroad, they have advantages of their own and complement physical mobility formats. In particular, as, for example, Szobonya and Roche (2021) point out, they make international experiences accessible to more students – even those who cannot travel abroad (e.g. due to lack of time, money, visa, or because of mobility impairments). Furthermore,

they are more eco-friendly than physical mobility formats (Nikula & van Gaalen, 2022). In addition, the institution organizing the summer school neither has to provide accommodation and travel support for participants nor lecture rooms, which makes some aspects of organization less time-intensive and costly.

Current research by the EVOLVE Project Team (2020) shows that through virtual international formats students can successfully develop "competences for intercultural interaction and online collaboration and the ability to manage and resolve conflicts in these settings" (p. 10). Unlike virtual exchange, virtual mobility does not necessarily require collaboration and dialogue between students from different countries (van Hove, 2021), but can certainly be designed to result in it. However, as with any kind of teaching, the framework conditions and pedagogical design must be appropriate in order to meet the needs of the target groups (Helm & Beaven, 2020) and make meaningful dialogue happen. Below, two very different examples of virtual summer schools in Finland and Germany will illustrate how this can be achieved. They were chosen as examples for this article because they have both been very well evaluated, while addressing different fields of study and following different pedagogical approaches. The first was a Finish summer school on Nordic product design in which students experimented with different design methods and developed ideas and products; the second was a German summer school on business in Europe in which students met and discussed with professionals from political institutions and companies.

2.   Example 1: Nordic product design at A (Finland)

Approach	Methods lab
Language of delivery	English (minimum proficiency level required to participate: B2)
Duration	2 weeks (August 2–13, 2021)
Number of participants	20
Participants' discipline of study	Any
Participants' countries of origin	Russia, Nepal, Germany, Finland
Planned virtually from the outset?	No
Platforms and tools	Zoom, Slack, Miro
Credit points	3 ECTS credit points

2.1.   Context

Institution A has been hosting summer schools that cover various topics, such as artificial intelligence, entrepreneurship, and cyber security, since 2019. Participants are recruited through advertisements

on the website and newsletters in the international network of partner universities. Normally, these summer schools include not only lectures, but also field trips and cultural activities. In 2021, A organized four different virtual summer school courses for the first time. The present article concentrates on one of those in detail because it stood out as particularly well received by students. The Nordic product design course was an interdisciplinary two-week intensive program focusing on a specific approach toward the design of products, materials, and systems akin to Nordic countries. The course explored themes of design thinking along the current trajectory of Nordic design in the realm of ecological values, sustainable futures, aesthetics, materiality, and critical thinking.

2.2. Platforms/tools

In the Nordic product design course, different tools and platforms were used to allow for communication and collaboration among students, particularly Zoom, Slack, and Miro. Zoom was used for video conferencing. Slack is a workplace productivity tool where all the students could come together and share information, connect to the lecturer or their peers efficiently, and have access to all the teaching material in one place. Miro is an online whiteboard that enables remote teams to work effectively together, from brainstorming with digital sticky notes to planning and managing agile workflows. It also provided space for the students to visualize their ideas and share their creative outcomes with the lecturer and their peers and served as a space where students could keep a creative learning diary to reflect on the assignments.

2.3. Objectives and pedagogical design

The goal of this course was for students to foster a creative process, from ideation to artifact, and to be equipped with an approach toward design thinking and practice in the Nordic context. Therefore, the course incorporated a combination of morning lectures, daily assignments, and a workshop every week. All lectures and workshops were delivered synchronously via Zoom.

The morning lectures provided a space to introduce the students to fundamental concepts and practices in the world of design, through the lens of the Nordic context. They covered topics such as 'What is design', 'History of Nordic Design', and 'Sustainable Materials and Material Futures'. These lectures served as an inspiration for the students to dive into a topical assignment that reflected the lecture and allowed them to bring theory to practice. There were a variety of assignments to keep the students engaged. They explored traditional writing and visualization tasks as well as creative and hands-on engagements. In one example, the lecturer invited the students to leave their homes to search for materials in their own environment from which they developed a new product. If the summer school had taken place on-campus in Finland, the students would have

gone to a forest near the university. In the digital format, the exercise brought even more variety because the students worked with completely different materials depending on where they lived. The workshops were significant moments where the students worked together to brainstorm, discuss, and co-create in randomized teams. This made sure that all students got to know each other and had a chance to share their knowledge and perspectives. This allowed for cultures to cross-fertilize and added value to the learning experience, especially in the realm of creativity and design. One workshop, for example, followed the futures frequency method, which was developed by the Finnish Innovation Fund Sitra to build alternative futures (Poussa, Lähdemäki-Pekkinen, Ikäheimo, & Dufva, 2021). In this workshop, student teams envisioned their idea of what 2050 could look like using a Miro board wherein the students used a variety of digital creativity tools, digital post-its, and reference links to other sources in real time to visualize their ideas and co-create efficiently.

Having a transcript of records with a final grade was essential for some students to have their participation in the summer school recognized at their home universities. Hence, all lectures and assignments culminated in a final graded project, in which the students applied what they had learned before. They were tasked to design a project that could help achieve the future they had envisioned in the future frequency workshop using any of the design approaches discussed before. These were prepared in Miro and presented in the final plenary session. The students received feedback and reactions from the lecturer and their peers. These projects included, for example, ideas on how waste products can be used as raw materials in other contexts.

2.4.   Evaluation

The summer school was evaluated with an online questionnaire comprising 26 items (nine open-ended questions, 14 five-point-Likert scale questions, three single choice questions). Eleven out of 20 students participated in the evaluation. All of them rated the overall impression of the course with the highest possible score. Additionally, all students strongly agreed with the statement "I think I will benefit from the things learned in the course". In the free-text responses, the students pointed out what they liked about the course in particular. First of all, they appreciated that the course content was accessible for everyone, no matter what disciplinary background; even students without any previous knowledge in design indicated that they were able to benefit from the course. This is an important insight because summer schools always face the challenge of satisfying heterogeneous groups of participants.

Students also appreciated the mix of theory-based lectures and hands-on group work and assignments. The latter required them to be creative and to engage critically with a topic, which

was also well received by the students. They felt they could bring in their personal perspectives and ideas, which were then discussed with their peers and allowed for a meaningful dialogue to unfold. Many students emphasized that they liked the collaboration tools. They mentioned that they felt connected thanks to the use of Slack, and also that it was helpful for students with a lower level of English that assignments were always provided via both video conference and Slack. One student reported that this enabled them to look up words and phrases they could not understand in the synchronous part of the course. Students also liked the use of Miro as a tool to collaborate and share creative outcomes with each other. One student wrote that they had "no feeling of disconnection" thanks to the use of the three tools.

Furthermore, students provided constructive feedback with suggestions for improvement. They mentioned that schedules should be published in advance because participants may have other tasks and duties (e.g. taking care of children). This is a unique feature of virtual summer schools because with on-campus summer schools, students travel to a campus and do not have to take care of day-to-day responsibilities. To further support students with lower English skills, one student mentioned that it would have been helpful to provide a glossary with important technical terms.

3.   Example 2: business in Europe at B (Germany)

Approach	Discussions with changing guest speakers and company challenge
Language of delivery	English (minimum proficiency level required to participate: B2)
Duration	3 weeks (May 10–28, 2021)
Number of participants	21
Participants' discipline of study	Business
Participants' countries of origin	India, USA, Canada, Germany
Planned virtually from the outset?	Yes
Platforms and tools	Zoom
Credit Points	6 ECTS credit points

3.1.   Context

Since 2009, the business faculty of B has been organizing a summer school on business in Europe. Participants are recruited through advertisements on the website, word-of-mouth recommendation by lecturers, and newsletters in the international network of partner universities. Until 2021, the summer school always took place on-campus and comprised lectures,

field trips, company visits, and a cultural program. In view of the pandemic, in September 2020 B decided to offer 2021's summer school online and to announce it as a virtual summer school from the very beginning.

3.2. Platforms/tools

In contrast to A's Nordic product design summer school, this summer school relied on only one main tool: the video conferencing software Zoom. Student engagement and content diversity were established here less through a variety of tools and more through the involvement of different guests and institutions.

3.3. Objectives and pedagogical design

The three-week program comprised online lectures by six teachers from five countries. All teachers were from close partner universities of B's business faculty and all of them were already used to online teaching. Therefore, the organization of a virtual teaching format was relatively easy. As a matter of fact, arrangements with 2021's German company partner were more time-consuming because it was the first time this company and the university cooperated virtually.

In the lectures, the teachers provided the students with knowledge about European business and European business culture. In addition to the lectures, each week held 'highlight events', such as a virtual tour at one of [location of B]'s biggest companies, a virtual lecture by a member of the European Central Bank, or a conversation with a member of the German parliament. A special feature was the project week, in which the students worked in international teams on a real challenge from a globally operating company in [location of B]. The teams organized themselves and were supported by the department's academic writing advisor. They invested a lot of work in a market study and finally presented it to the company's management team. The management team was enthusiastic about the results and announced that they would include all the ideas of the student teams in their next strategy discussions. The summer school concluded with a final online exam, in which the students reflected on what they had learned. The final grade was composed of the performances in the market study presentation (40%), the final exam (40%), and the oral participation and attendance (20%).

To also promote informal exchange, German students enrolled at B organized get-together activities in the beginning and introduced their peers abroad to Germany and [location of B]. There was also an introduction to B and the German study system because the summer school also has a marketing function and serves to spark the interest of students from abroad in studying at B.

3.4.   Evaluation

The summer school was evaluated with an online questionnaire comprising 42 items (nine open-ended questions, 29 five-point-Likert scale questions, four single choice questions). Sixteen out of 21 students participated in the evaluation. When asked if they were satisfied with the overall program, all 16 students answered "yes". Three students explicitly emphasized in their free-text responses that they appreciated the virtual format because a journey to Germany would not have been possible for them. One of the participants abroad wrote: "I was very glad this program was offered online. I have always wanted to study abroad, but could not financially afford it. This gave me the opportunity without the extra cost". Even German students profited from the accessibility of the virtual format: They were mostly enrolled in work-integrated degree programs, which means that they both work in a company and study at B. This group of students often reports difficulties to participate in physical mobility programs because companies do not always support the idea of their employees studying abroad. The virtual summer school, however, was easily accessible for them because, due to the international participants, it always started after these students' working hours.

Many students also appreciated that there were changing lecturers from different countries each day. This way, they learned about a variety of perspectives and approaches that could not have been provided by a single lecturer. They also liked the variety among the participants that allowed for diverse intercultural dialogue. What stands out most in the evaluation, however, is the positive feedback on the cooperation with this year's partner company from [location of B]. Fourteen out of 16 students fully agreed with the statement 'the guided tour was informative and interesting'. Six students also indicated in the free-text responses that they especially appreciated the combination of theory and practice. The group challenge gave them the feeling that their opinions and field studies could have a real impact.

Students also provided some constructive feedback on how to improve the summer school in the future. Some of them mentioned that it would have been helpful to extend the summer school by one week, given the broad program. An additional week would also have made it possible to work on the company project even more intensively.

4.   Conclusions and implications

A virtual summer school is worth considering. The evaluations of the two summer school examples show that students perceive virtual formats as enriching when they allow for meaningful intercultural dialogue and collaboration. In particular, they can provide international experience

for students who cannot travel abroad to gain them. For this to happen, however, virtual summer schools must be immersive and engaging instead of being just another online lecture. The following recommendations can be derived from the experiences and evaluations of the two summer schools in Finland and Germany.

4.1. Organizers

- **Decide whether the summer school should take place virtually or on-campus from the outset.** If an on-campus summer school has to be canceled spontaneously, the virtual format can still be an alternative, but students may be disappointed because they were expecting to travel. If the summer school is announced as a virtual format from the outset, more students have the opportunity to participate.
- **Check in advance whether you have the necessary infrastructure to organize a virtual summer school:** digital tools and platforms, support, company partners, interested partner universities, etc. Make sure that everyone involved knows how to use the digital learning environment.
- **Clearly communicate the prerequisites for students to participate in the summer school,** e.g. language skills, technical requirements, lecture times (including the time zone), necessary prior knowledge, and examination format. Also, communicate expectations regarding attendance at the start of the program.
- **Let students from your university introduce the participants to local student life.** For example, let them show photos or videos of popular places among students or answer questions about student life in your country. This way, participants get a taste of what studying at your university feels like and might consider going there for a semester abroad later.
- **Organize a social and cultural program.** In the case of virtual summer schools in particular, many opportunities must be created for participants to also exchange ideas and make informal contacts. Students from the host university can also be recruited for organizing icebreaker activities, such as virtual games, scavenger hunts, cooking lessons, or other fun activities.

4.2. Lecturers

- **Make the summer school a different experience from the 'regular' online lectures.** When students decide to spend their vacation time in a summer school, they expect an exciting, varied, and enriching program. Make it an adventure by using methods and assignments that foster creativity and innovativeness among students, such as the self-designed learning diary, the futures frequency method, or by inviting inspiring guests.

- **Combine theory and practice.** Give assignments that allow students to work on their own projects with an impactful outcome at the end, for example by cooperating with companies or displaying the results of their work.
- **Translate the experience of intercultural exchange to the digital realm by making use of the students' different locations.** Students can, for example, show each other their different locations, collect objects from their surroundings, or do observation tasks that serve as a basis for cross-cultural comparison.
- **Be aware of language barriers and heterogeneous groups.** It is helpful to provide information both in oral and written form to make it easier for international students to follow. A glossary explaining difficult technical terms can also be helpful. However, also take into account that not only language might be a barrier, but also widely varying prior knowledge. Therefore, it is important to design assignments that are appropriate for all students, for example, by asking for individual opinions or by allowing for solutions of varying complexity.
- **Encourage students to turn on their cameras.** This facilitates intercultural communication enormously because facial expressions and gestures help understanding and expression. Respect it, however, if students cannot turn on their cameras or do not want to do it. Especially when students participate from home, they may have good reasons to keep the camera switched off, e.g. family members being in the same room.
- **Leave enough space for formal and informal exchange among students.** For this, it is useful to give them a lot of time in groups. Breakout sessions have the advantage that students can speak without feeling observed by the lecturer. For breakout phases, a stimulus for discussion should always be provided (e.g. a question or thesis to be discussed). Nevertheless, there should also be room for students to talk about the topics they bring in themselves.

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