

HUOM! Tämä on alkuperäisen artikkelin rinnakkaistallenne. Rinnakkaistallenne saattaa erota alkuperäisestä sivutuksestaan ja painoasultaan.

PLEASE NOTE! This is an electronic self-archived version of the original article. This reprint may differ from the original in pagination and typographic detail.

Käytä viittauksessa alkuperäistä lähdettä/ Please cite the original version:

L. Wallenius, C. Tigerstedt (2022) DESIGN SPRINT IN HIGHER EDUCATION, GOING FROM FACE-TO-FACE TO REMOTE MODE, INTED2022 Proceedings, pp. 4952-4958.
<https://doi.org/10.21125/inted.2022.1303>

DESIGN SPRINT IN HIGHER EDUCATION, GOING FROM FACE-TO-FACE TO REMOTE MODE

Liisa Wallenius¹, Christa Tigerstedt²

¹*Haaga-Helia University of Applied Sciences (FINLAND)*

²*Arcada University of Applied Sciences (FINLAND)*

Abstract

This paper discusses experiences of running intensive service design courses, namely Design Sprints, and the steps of moving from face-to-face to remote mode. The cases discussed are intensive courses in Finnish Bachelor education in multidisciplinary settings at Haaga-Heliana University of Applied Sciences and an international intensive programme in a Nordplus programme offered to universities in the Nordic and Baltic region.

Design Sprint is a service design model developed by Google Ventures (hereafter GV) is a five-day process to be used in business to find answers to and accelerate product development and solving of in-service business problems. The Design Sprint is a cost-effective way to develop and test ideas in a short time. Each sprint has a commissioner with real-life needs or problems to be solved. This customer centred method starts with gathering customer understanding, continues to generate and iterates ideas, creating prototypes, and testing them. The process combines best practices from business strategy, innovation, behaviour science and design thinking. The Design Sprint is used in business companies, public sector services and educational institutions around the world.

The Design Sprint has been part of the curricula at the Porvoo campus of Haaga-Heliana University of Applied Sciences since 2018. The sprint is arranged for third semester students of various disciplines with the objective of offering an intensive and hands-on insight into design thinking and product development with focus on customer understanding. Furthermore, commissioners are provided a swift experience of product and service development.

The second experiences come from an international Nordplus project Eko Tek that offers students in the Nordic-Baltic area to experience and participate in an intensive programme of Design Sprint offered by a network of universities and companies in the Nordic-Baltic region.

The paper will discuss steps taken to move the Design Sprint intensive programme from face-to-face and international visits to remote sprints, the tools used to enable remote collaboration, student, and teacher experiences of the remote experience.

In the end, the paper suggests how the experience might be used in similar intensive programmes in the future benefitting the student participants and enhancing collaboration.

Keywords: service design, design sprint, customer understanding, work life cooperation, remote learning, face-to-face learning.

1 INTRODUCTION

This paper discusses steps taken when taking intensive service design courses from face-to-face to remote mode. The practical cases discussed are a learning camp course in Finnish Bachelor education at Haaga-Heliana University of Applied Sciences and an international intensive programme Ekotek Nord in a Nordplus programme offered to universities in the Nordic and Baltic region.

The paper will first introduce the Design Sprint as a method and the two cases, Haaga-Heliana learning camp and the Ekotek Nord intensive programme. Secondly, methods and tools enabling the change and ensuring teacher and student collaboration, co-creation, teamwork are presented. Thirdly, the results of the remote courses and teacher and student experiences will be discussed.

Then, lessons learnt are reflected from the teacher and student points of view. Lastly, recommendations for further remote or face-to-face Design Sprints will be given.

2 METHODOLOGY

First, the Design Sprint is described and then a brief overlook of the cases will be given. Thirdly, steps to be taken to enable the remote implementations are discussed.

The concept, the remote online intensive week, required good online teaching and learning practices, and sophisticated use of online tools and platforms. The teachers and students had had their first experiences of remote teaching and learning, and hence they could benefit from earlier experience and best practices. Special attention was paid on pre-course communication to engage the students and team building and interactive collaborative activities were designed. Virtual learning tools were tested and selected.

2.1 Design Sprint

Design Sprint is a service design model developed by Google Ventures (hereafter GV). It is a five-day process to be used in business to find answers to and accelerate product development and solving in-service business problems. The Design Sprint is a cost-effective way to develop and test ideas in a short time. Each Design Sprint has a commissioner with real-life needs or problems to be solved. This customer centred method starts with gathering customer understanding, continues to generate and iterate ideas, creating prototypes, and testing them. The process combines best practices from business strategy, innovation, behaviour science and design thinking [1]. The Design Sprint is used in business companies, public sector services and educational institutions around the world. The Design Sprints may be given by any party acknowledging and following the Design Sprint method.

Design sprints have been given in different fields, sizes of companies from private to state owned and governmental. The Sprint stories website gathers user experiences, presents case-studies and invites people to share their experiences and lessons learnt [2].

2.2 Cases Haaga-Helia Learning Camp and Ekotek Nord

Haaga-Helia UAS learning camp 3: Service design module (5 ECTS) is a multidisciplinary course with the aim of learning 21st century skills such as collaboration, complex problem-solving, critical thinking, communication as well as creativity through the GV Design Sprint. The Learning Camp 3 is offered at the Porvoo campus that has a tradition of project based and experiential learning. The learning module brings together students in various bachelor's degree programmes who work in mixed groups bringing their expertise into problem solving and creation of new concepts. Each Design Sprint has a commissioner with a real product or service-related problem to be solved. The commissioners are companies representing the local industries and the university partner companies. [3]. Haaga-Helia UAS has given Design Sprints since spring semester 2018 and they are given in groups of 80 – 140 students with a teacher-instructor team of three to seven. The students have a pre-assignment which helps them familiarise themselves with the Design Sprint concept prior to the intensive week. During the sprint week GV materials such as videos, the book and team activities are used to engage the students. Also, icebreakers and team-building activities are used. Inspirational speakers, former Sprint students and commissioners are also invited to visit the intensive week.

The Design sprint was first given virtually in the autumn of 2020 due to Covid-19. The most recent Design sprint at Haaga-Helia UAS Porvoo campus in autumn 2021 was given both remotely and online. The students and teachers could choose which implementation to participate in.

The other case discussed here is the SPRINTINHEL which is a Nordplus funded intensive program (IP) which took place online Week 17 2021: Monday April 26th to Friday 30th of April. This sprint was created and led by the Ekotek Nord network which in turn is a network supported by the Nordplus program [4] (<https://www.oph.fi/fi/ohjelmat/nordplus-korkeakoulutus>). In the network there are partners from all Nordic and Baltic countries and in this specific we had teachers and students from Finland, Sweden, Iceland, Lithuania, Latvia, and Estonia working together. In the sprint students worked together in multicultural teams (4 teams, 23 students) to solve real business problems and in this case the problem was related to marketing and to digitalization [5]. The purpose of this sprint was to adapt the Design Sprint principles to a learning situation providing students with the tools and process for solving problems and testing new ideas in “just” five days. This means that GV methodology was applied to this case as well. The teachers worked in pairs to coach the different stages of the sprint.

In total 15 teachers were involved in the IP. This case was special in the sense that it was first planned to be held on site. Due to the prolonged pandemic this was however not doable, and teachers need to restructure the intensive program with a rather short notice. Here the online teaching and working skills

of the involved coaching teachers and the online learning and working skills of the students became crucial. In the sprint the teams worked mainly in Zoom, Microsoft Teams and Mural.

2.3 Enabling Remote Sprints

In 2020 it became evident that the Design Sprint intensive programmes would need to be moved to virtual settings due to the Covid-19 pandemic. The teacher teams started planning the virtual courses for spring 2021. All participants had faced the situation of making a swift change to online teaching and learning in March 2020 when the Covid-19 lockdowns forced institutions of higher education to enter remote mode. At this point the Design Sprint community had gathered a group of experts and published a Remote sprint guide in 2020, which was to be of great help in the planning. The Remote sprint guide was inspected and case-studies with first remote sprints studied [6].

The questions at hand were for example how to create an intensive and energetic pace for the sprint as the Design Sprint is characterized by giving intensive hands-on experiences of product development and idea iteration for the participants. The method also includes the idea of gathering customer understanding through interviews and tests. Another question was how to create a feeling of togetherness for the students and how to ensure collaboration between all parties involved.

The institutions involved in both the cases had provided advice and practical help for the digital leap by providing workshops and courses on pedagogy for digital learning, peer support and digital tools with training. The Remote sprint book and website offered much help in suggesting methodologies, approaches, and practical tools. Also, the universities and companies involved had selected the most suitable digital tools for remote learning.

At the same time with the Remote sprint guide many stories were shared on the sprint community website called Sprint stories [2]. The stories and lessons learnt inspired the teacher teams.

The decisions taken at the various universities since the pandemic took Higher Education courses online and the GV Remote Sprint guide proved to be very beneficial in taking Learning camp sprint and the SPRINTINHEL online. The steps taken and decision on how to run both the sprint in spring 2021 are presented and discussed in the following chapter.

3 RESULTS

In the spring 2021 virtual courses were not a completely new concept, and studies had already been offered in blended form. Blended learning combines contact and remote learning and thus the teacher teams were not completely inexperienced with digital tools. The Nordplus teacher team consisted of lecturers from different countries and the approaches to online learning and preferred tools might have varied. All in all, one can say that teachers were familiar with some conventions of online learning and that there were tools available as well as willingness to experiment with new ones. Still, it could be said that the digital leap was huge when considering that all the teaching would be online and such intensive programmes had, until this point, drawn on the intensity of face-to-face collaboration. Here the teachers who knew the tool in question supported the others so that all teachers who were willing to do coaching during the sprint were able to do so. This is one strength of having a teacher team.

In the following, we will explain the choices made for each case. The choices will be motivated, result and learner and teacher experiences will be given.

3.1 Case Haaga-Helia Learning Camp 3 in Remote Mode

Many of the teachers in the Learning camp Sprint at Haaga-Helia UAS had participated and could implement the learnings of a training course offered in digital learning. That is a one semester course including designing and creating an online course. The course comprises pedagogy and introduces various online tools for learning and collaboration tools that the university provides. The gained skills and the materials existed from the previous physical sprints and details were added. The Sprint book, Design sprint video materials, and other creative commons instructional materials on the different days of the Design Sprint were already in use.

The teacher team was concerned with how to make the students engaged and accustomed to their new learning teams. They realised that additional planning was needed to make the learning process more visible and interesting for the students online. They wished to create ways to enhance communication

and collaboration within teams, across teams and across student teams and teachers. Furthermore, the fact that most students would be working from home with possible distractions.

3.1.1 Solutions for enhancing engagement and virtual learning

The students had a pre-assignment of studying the Design Sprint method and a task to make a visual presentation of the Design Sprint as a method, its uses, benefits, and steps. Detailed daily programmes with tasks including lectures and activity steps for teamwork aimed at increasing student engagement. The students could study the material in advance and thus plan their remote days better. Additionally, each remote day would finish with documentation of the day's work to recapture the accomplishments of the day and to investigate the following day. The days included workshops on e.g., using tools such as Flinga to enable digital co creation, how to sketch to ideate and how to summarise notes using specific tools. There were also creative sessions to enhance grouping. These sessions could include sketching, music, and imagination exercises.

Each student team had a designated teacher coach who would visit the students' virtual conferences and work room to help, encourage, give feedback, and prompt questions. The students could also turn to the other teachers for help. The group of students were divided into teams of seven students and each coach had 2- 3 student teams. The student teams were divided between two commissioners.

3.1.2 Solutions for learning and communication tools

Microsoft Teams and Moodle learning management systems were used as learning platforms. Collaboration tools introduced for online collaboration were Flinga and Mural and Zoom and Microsoft Teams Meetings for virtual meetings. It is noteworthy that both the students and teachers were learning to use these tools as they started using them.

Zoom was chosen as the virtual conference tool because students were already familiar with it and the university offered a secure licence. Moodle was chosen as a learning management tool for the same reasons, and it was used for instructions, materials, and student submissions. An additional tool, Microsoft teams groups, was chosen for the student collaboration. It was used for co-writing and documentation and most students were familiar with it as the remote sprint started.

Flinga (www.eduflinga.fi) was added to the list of tools as it offers visual message walls and whiteboards. Students were also welcomed to use other tools once they were familiar with, and they were encouraged to discover and try out new ones such as digital mock-ups for prototyping.

3.2 Case SPRINTINHEL

The active planning of details and involvement in the SPRINTINHEL started in December 2020. First out was the student recruitment process in the different institutions. Recruitment took place institution wise, and the local teacher oversaw this. The activities and the collaboration were carried, as planned, by having three video conference planning meetings via Zoom before the IPW week and communicating updates via email as well as cooperation workspace in Microsoft Teams. During the video conference meetings, the SPRINT IPW week was divided up by assigning two of the collaborating teachers to work as a team of facilitators for each day of the SPRINT IPW and to provide students with guidance. Other tasks were divided up among teachers and the week was planned out in full detail using software within the Microsoft Teams cooperation workspace.

This sprint was a typical 5-day sprint, but to make the collaboration easier the SPRINTINHEL started already on Sunday evening with a get together dinner and team formation. We assumed that a successful forming of multicultural and cross-institutional teams online might need this extra day. This did create a good base for the Monday kick off when the case and the specific problem was presented to the teams by the client.

23 students from 6 countries and 15 instructors took part in the SPRINTINHEL. The project coordinator was the main facilitator and provided good insight and help with Mural. The commissioner (client) was also present during several days of the IPW week.

For communication before and during teachers, and later students, used mainly Microsoft Teams, but also email to some extent. Teams was used for teamwork and assignments as well as for teachers' collaboration, planning and administration.

During the sprint the main platforms were Zoom and Mural. Zoom was used for the presentation of theory, the case, the methodology itself and the solution. Everyday started out in Zoom. Mural is a

digital workspace for visual collaboration - this provided the teams with the ability to work together on templates of the Sprint process each day of the week. The idea of this tool and the templates came from the Sprint book website.

On top of this the students all received their own copy of the sprint book by Knapp et al. They were also encouraged to familiarize themselves with the day's topic before each day started in Zoom.

Learnings from both teachers and students were well documented with the help of oral feedback, survey, and the learning diary. On top of this the presentations and solutions were documented and handed over to the client.

3.3 Learning Experiences of learning camp 3 and SPRINTINHEL

All in all, both the Learning camp and the SPRINTINHEL sprints were successful and surpassed expectations. The level of participation was higher than in the physical sprints and most of the students completed all assignments. There was a slight difference between the large Learning camp 3 group with 120 participants and the smaller the SPRINTINHEL team with 23 students. Not all learning camp 3 students submitted their pre-assignment which affected their readiness to participate in the sprint activities.

However, it is rather difficult to see student involvement in teamwork as the students worked remotely. Some participants were shy in taking part in the virtual conferences and discussions.

At Haaga-Helia UAS the Design Sprint had two commissioners and the students would work together and act as each other's test groups providing feedback. The commissioners were present on day one and final concept presentations at the end of the course whereas the SPRINTINHEL commissioner would visit the virtual meetings several times. Due to the pandemic the students were not able to go out and seek potential customers to test their ideas and prototypes, and instead approached customers via their own social contacts and communities invite interviewees and testers.

According to a recent research study by Konttinen et. al. 2021 [7] that compares Haaga-Helia Learning Camp 3 in face-to-face and remote mode reveals that the remote sprint students claim to have learnt online teamwork, use of online tools and platforms, which are skills not mentioned in the face-to-face sprint student feedback. The positive learning experiences students had during both modes were similar and these positive points were working in mixed groups, learning to know new people, working for commissioners, and supporting coaches. However, students felt that coaches were more reachable during the online sprint. They felt that the online sprint, as well as the earlier face-to-face one, was quite intensive and somewhat exhausting. The major difference was in the difficulty to gather customer understanding. The students were hesitant to approach customers because of the pandemic.

In the end there might not have been vast differences between the learning results of the remote Sprint implementations in the two cases discussed even though they were very different in scope and participant numbers. One can say that both sprints were successful, and students felt they had learnt service design, teamwork, virtual communication and how to use virtual tools. The implementations differed in that the SPRINTINHEL was less structured during teamwork hours giving more independence and responsibility to the participants in comparison to the Haaga-Helia Sprint. It is noteworthy that part of the Ekotek Nord, SPRINTINHEL, participants were master level studies whereas at Haaga-Helia the course is on bachelor level. The results were achieved as planned. The students learned the five-day Sprint process with the aid of a client assignment. The students gained the knowledge, ability, and methodology to run a five-day sprint as well as the tools to do so for any client or their future company/entrepreneurial endeavour. The general feedback from students was that they were surprised at how much they learned in just five days and were very happy to have a process/methodology that they can carry out themselves. The client received multiple solutions to the problem they posed.

The administration process varied as in the first case all students study at the same institutions and in the second in different and in different countries. Smooth administration of user codes and passwords for all platforms and tools was taken care of by professional project coordination.

Students learnt to use Mural very quickly. The team received a free account for educational purposes, The Mural platform included ready-made templates for the Design Sprint and the remote spring authors promote Mural. Unfortunately, institutional restrictions and decisions on virtual tools did, however, restrict the choice of tools.

Some teachers had knowledge and experience of running the Sprint process while others gained knowledge of the methodology for the first time. Here the teacher team or pairs became a very good solution for peer learning. All teachers did note that they gained knowledge and experience of using new digital and team cooperation software which they would use in their future courses.

4 CONCLUSIONS

All in all, both the sprint cases presented were successful and proved that the Design Sprint can inspire students to creative work in a virtual setting. The sprints could be realised with skilled instructors who were dedicated to pre-planning, provided support, inspiration, advice, and tasks. There were inspiring materials such as the Sprint book and the Remote Sprint guide, functional virtual tools that enhanced teamwork and co-creation and enabled effective product development. The commissioners offering real-life business problems were present which motivated the students further.

How can this experience be used in the future? The points learnt listed below may benefit future “sprinters”

- Improved online digital skills for students and teachers
- More experienced teachers that could guide newcomers to become successful sprint coaches
- There are great tools available for free
- One should familiarize oneself with tools to be used and have at least two experts per coach team.
- Great solutions can be generated in Remote Sprint just as in face-to-face sprints.
- Liaising with commissioners in advance proved beneficial and company involvement went smoothly in both the cases.
- The commissioner's involvement increases student motivation.
- Coaching and giving feedback online worked well.
- The sprint methodology is for developing solutions and new ideas online of IRL.

Based on the experiences of these two sprints it may be suggested that the following should be considered for future Design Sprints: attention should be paid to detailed pedagogical planning of activities and coaching, communication tools and commissioner and work life cooperation.

The detailed planning in advance should include team building and inspirational activities along with the actual design sprint activities of service design. The coaches and learners should be able to familiarize themselves with the steps and activities in advance which enables them to plan their activities in the home offices. Receiving information and schedules in advance can alleviate the intensive and somewhat exhausting pace of the design sprint week. Likewise, easy access and reachability of coaches during the sprint is vital.

The remote sprint administrators ensure effective communication before, during and after the sprint by choosing learning management systems, communication tools and virtual meeting tools that all participants have had time to get acquainted with. Further, added emphasis should be placed on good involvement of the commissioners who bring their business challenges to be solved.

ACKNOWLEDGEMENTS

We would like to express my gratitude to our affiliations Arcada University of Applied Sciences and Haaga-Helia University of Applied Sciences, to the Learning Camp 3 teacher team, and the Ekotek Nord consortium with Metropolia UAS as the coordinator.

Most of all we wish to thank Google Ventures and Jake Knapp and his team for creating such a wonderful model and for the agility in which they created and provided the remote sprint guide in 2020.

REFERENCES

- [1] Knapp Jake, 2016. Sprint: How to solve big problems and test ideas in just five days. The Design Sprint. Google Venture. Retrieved from URL <http://www.gv.com/sprint/> (3.1.2022)
- [2] Sprint Stories. (2019). Sprint Stories. Retrieved from URL <https://sprintstories.com/> (4.1.2022)

- [3] Learning Camp 3 – Service design. Curriculum, Haaga-Helia University of Applied Sciences. Retrieved from URL. <https://opinto-opas.haaga-helia.fi/en/realization/INS2PO201-3015>
- [4] Nordplus Higher Education. OPH. Retrieved from URL <https://www.oph.fi/fi/ohjelmat/nordplus-korkeakoulutus> (12.1.2022)
- [5] SPRINTINHEL. Metropolia University of Applied Sciences. Retrieved from URL. <https://sprintinhel.metropolia.fi/> (16.10.2021)
- [6] Knapp, J., Zertsky, J. And Colburn, J. The Remote Design Sprint Guide. 2020. Retrieved from URL <https://www.thesprintbook.com/articles/remote-design-sprint-guide> (21.10.2021)
- [7] 2021. A. Konttinen, N. Moilanen, Remote Design Sprint – A Case Study of Learning the 21st Century Skills Online. E-Signals Research, Haaga-Helia University of Applied Sciences. Retrieved from URL <https://esignals.fi/research/en/2021/06/24/remote-design-sprint-a-case-study-of-learning-the-21st-century-skills-online/#e572c2a4r>. (9.11.2021).