“It’s not personality traits – it’s practical circumstances that make good groups work”

An interview with Anna Leonard Fransgård, Gro Lemcke Hansen, Ruth Horak and Katrine Ellemose Lindvig[1] from the University of Copenhagen about their app “My Study Group” that helps making study groups work

HINT: Welcome Anna Fransgård, Gro Lemcke Hansen, Ruth Horak and Katrine Ellemose Lindvig from the University of Copenhagen and thank you for agreeing to have this interview with us. In September 2022, you launched a new app that is seamlessly integrated into your learning management system (Canvas), called “My Study Group”. The app claims to make study groups work effectively and thereby helps to increase student wellbeing. You are all involved in this project as administrators, counsellors, digital learning consultants and researchers. However, before we get into the details of this project, can you tell us, how and when this whole endeavor started?

Fransgård: It all started with the initiative “Good Student Lives” in 2019. It was a direct result of our study environment survey. This survey clearly showed that our students did not have the level of wellbeing that we thought they had. Additionally, it indicated that students with high wellbeing scores were in a study group. Respectively, it showed that the students who had a lower score were not part of a study group, or had a study group that did not work. In conclusion, we could see that functioning study groups had an impact on students’ wellbeing. This is some of the specific background to what later became the project “My Study Group”.

[1] Pictures from left to right, top to bottom: Katrine Ellemose Lindvig, Gro Lemcke Hansen, Anna Leonard Fransgård and Ruth Horak (source: private)

Volume 4 (2023), pp. 33–46, DOI https://doi.org/10.11588/hint.2023.1.101926

Hansen: What followed from these initial observations from the survey in 2019 was a think tank called the "Think Tank of Stress and Wellbeing". The think tank consisted of Staff members, researchers study counsellors and students. It developed a framework for the project "Good Study Lives". The framework consisted of a concrete definition of student wellbeing and five recommendations on student wellbeing. Afterwards the think tank started seven different projects focusing how to increase students' wellbeing in in different ways, focusing on different parts of the student wellbeing definition.

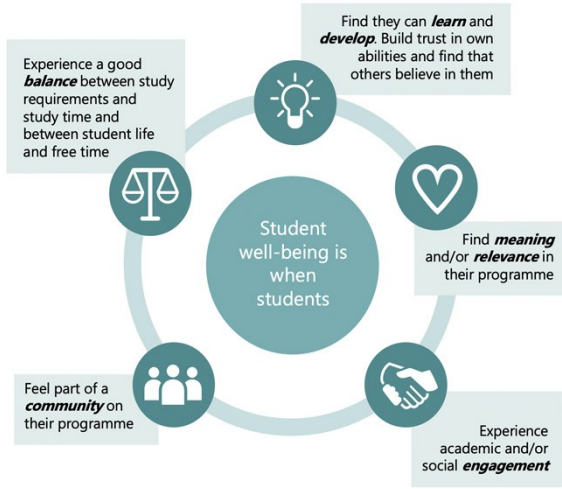

Figure 1
Definition of student wellbeing at the University of Copenhagen

HINT: Ok, so you had the evidence from the student surveys that suggested that students are not as well as you think they are. This then led the university to initiate formats like the think tank that proposed seven projects to tackle the initial problem, right?

Hansen: Exactly, you could call it seven different experiments on how to increase student wellbeing, "My Study Group" being one of them. These experiments, or projects, should be based on experiences from within the University of Copenhagen and the knowledge of researchers in the field. The idea was to make study groups work as a way the help the students to feel part of a community in their local study program.

HINT: What were the next steps?

Fransgård: We wanted to bring together the two spheres that were just mentioned: experiences from our university and research. Therefore, we formed a project group including

student counsellors from different faculties. As student counsellors, we talk to students on a regular basis, and we hear many stories related to study groups – especially if they do not work out. However, we wanted to have a scientific grounding for thinking about study groups. We clearly strived to look at it as scientifically as possible and based on current research to eliminate the anecdotal character or emotional impressions we gained from our conversations with students as well as with teachers.

"We wanted to have a scientific grounding for thinking about study groups."

HINT: So let's bring Katrine Lindvig into the discussion, who joined your group to provide perspectives from field of science education. What was your contribution to a project working on digital solutions for challenges centered around what seems to be a social issue – namely, students working together in groups?

Lindvig: Well, I think it is very honorable and nice that you all put so much emphasis on the role of the researchers and their initial contribution. However, I think this was from the outset an endeavor with a clear scientific structure. Essentially, it is an action-based research project, based on trial-and-error: we form a hypothesis, we test it, we evaluate it, then we refine it and then we test it again. This is pretty classic action research. Furthermore, it is important to note that we did not start from scratch.

One of our early colleagues in the project, Anine Skjøt Møller, was involved in the think tank that had already developed a model of good student life. Additionally, some of my colleagues from the Department of Science Education had supported this initiative on study groups, wellbeing and social life of students at the time of its inception. Their input was itself influenced by Vincent Tinto and by Lave and Wenger who have studied meaningful collaboration and coined the idea of "communities of practice". Again, our approach followed a typical research design in that sense: building on prior findings from others to develop own ideas further.

"Essentially, it is an action-based research project, based on trial-and-error: we form a hypothesis, we test it, we evaluate it, then we refine it and then we test it again. This is pretty classic action research."

HINT: Alright, what was the starting question for you then?

Lindvig: We wanted to figure out why study groups worked. For that, we looked at disciplines and programs where forming study groups seemed to work particularly well. We found that some of these programs were applying a deliberate and thoughtful approach to how to form the groups. Thus, we asked them "How do you do that? How could we get inspired by your methods of putting together the groups so that we could use it in a generic

sense?" Actually, there is not a lot of research on how to form study groups. There are studies done on how to form groups and a lot of it is built on what we would consider "magic sciences" like Belbin tests or Enneagrams focusing on different personalities. I guess some of it works and some of it is a bit like "how are you feeling today" and not very research based.

"We wanted to figure out why study groups worked. Fort hat we had to discard pretty much all of the generic knowledge from the literature."

HINT: I see, so where did you look for inspiration apart from the aforementioned programs at your own university and the existing research?

Lindvig: We were very much inspired by a group of a small startup in Aarhus, Denmark. They had already come up with a first algorithm, sorting out students based on personality traits and preferences. We started a first collaboration with them trying to match what we knew from one of the disciplines where it worked well and their algorithm. That was pretty funky. We had to alter their algorithm quite a lot and everyone was somewhat frustrated about it. First, the people at the disciplines felt that we were violating their method. The group from Aarhus had a lot of trouble as well. They were very polite, but they had a lot of trouble figuring out how to help us. I think this is the point where we decided that we wanted to come up with our own algorithm and integrate it into our Learning Management System (LMS).

Horak: This is when I entered the process in January 2021. We planned to create a seamless user experience in the LMS. I got immediately involved in the project of requirement specification. From then on, it became rather technical since all the previous clarifications and sorting out of options had already taken place.

"It is important for us to emphasize that the app is not research-based as such. The hypothesis, however, which is the basis of the development of the app, is indeed research-based."

HINT: That sounds like a lot of effort and an extensive process – quite like in research. What would you consider your main takeaways from this?

Lindvig: I think the main takeaways from that process were that we had to discard pretty much all of the generic knowledge from the literature on what makes groups work. We could use research-based literature such as Tinto, Lave and Wenger to create a research-based hypothesis that we could test at University of Copenhagen. We have been discussing this quite a lot and it is important for us to emphasize that the app is not research-based as such, since this would entail that something

like that had been done before and had been tested. The hypothesis, however, which is the basis of the development of the app, is indeed research-based.

Horak: There were a lot of discussions about this because we are sometimes invited to give talks at conferences and panels. It is important to us to be very explicit about the difference between the research-based hypothesis and the app being research-based, which is not what we are claiming.

HINT: It will be interesting to see the evaluations and assessments that you will produce for this project in the course of time that it is running. We will definitely follow up on this in the future. Before you share some of your assumptions there, let me ask a rather simple question: what is your definition of a good study group? What could you deduce from the disciplines at Copenhagen?

"We could determine one common denominator. This proved not to be the personality traits of students in the groups, but it was the practical circumstances – the alignment of expectations."

Lindvig: That is a very good question. I do not want to downplay prior research on what makes groups work, of course, and it was inspiring to read studies from Google and other successful global companies on how they facilitate making groups creative and working. However, when we looked at all of this and the programs here where groups worked well, we could determine one common denominator. This proved not to be the personality traits of students in the groups, but it was the practical circumstances.

HINT: Could you elaborate on that? What does that mean exactly in this context?

Lindvig: It means the alignment of expectations – being aligned as group members in terms of what the role and purpose of a group meeting is. It also means actually being able to show up and be comfortable in the places where you met. This matched with my own experience as a supervisor at Roskilde University, which fundamentally bases its programs on problem-based group work from very early on. What you can observe from supervising these groups is that the students in those groups can be extremely different in terms of their personalities. What makes the groups work, however, is that they have been able to agree on a sort of contract on what they are going to do, on

"What makes groups work is that they have been able to agree on a sort of contract on what they are going to do, on how they want to solve conflicts."

how they want to solve conflicts. Together, they have figured out the purpose of the group. That is very different from forming groups assuming everybody has a specific and fixed role.

After all, things like bullying and social wellbeing happen in groups and these things happen collaboratively. Why should it be any different in study groups? We saw this correlation between the literature and what we could observe in our disciplines and programs. This led us to the conclusion that basic, practical circumstances make good groups work – not personality traits.

HINT: This sounds fundamental. How did this translate into a definition of a good study group?

Lindvig: We reverse-engineered it into a formal definition that we all agreed upon in alignment with the bigger project of "Good Study Life". This definition is a result of our process based on research as well as our practical evidence from the University of Copenhagen:

> "A study group is a safe and egalitarian work community built on a number of negotiated norms and practices with the purpose of supporting students academically as well as socially, in and outside the physical and established educational structures during their studies."

HINT: That sounds very convincing. This definition comprehensively covers the important aspects that we have been talking about so far. However, one central issue is missing: how many people does a good group include for it to work? The rule of thumb, according to my own experience, seems to be three to five people. Does that hold true?

Horak: Actually, we decided to set the default in our app to four. Teachers can, of course, add a few more, or, can reduce the number of students in the in the group. The rule of thumb seems to be spot on.

Lindvig: Definitely. This is interesting because I would even argue that four is indeed the ideal number. Three is a risky group size since it has an inherent danger of becoming two versus one. Six is too big as it quickly splits into two groups of three.

"The ideal number of people in a study group is four. This is why we set the deffault in the app accordingly."

Fransgård: Exactly, it is simply more difficult to have a stable communication in groups of six. It almost needs a coordinator or moderator. However, in terms of these numbers one has to keep in mind that this also depends on what the

groups are for – it might be necessary for some teachers to have groups of three for particular tasks. More than the exact number of people, we would argue that working study groups need alignment in terms of purpose, liability and logistics.

"More than the exact number of people, we would argue that working study groups need alignment in terms of purpose, liability and logistics."

HINT: Ok, so now that we know what ideal study groups should look like, let us enter into the topic of forming them practically. How does the app help teachers in the LMS to form these groups?

Lindvig: It has to be said that study groups have not been actively pushed by the University of Copenhagen, historically speaking. In Denmark, it has been the reform universities in particular that base their study programs heavily on group work. This is to say that we were inspired by what others already implemented. As mentioned earlier, even at Copenhagen, many disciplines have used and applied study groups successfully. One of our ambitions is to facilitate the formation of study groups in programs that have not yet used them.

This means that we had to think about a solution that would support faculty in creating these. We cannot expect teachers – say in a first year lecture with hundreds of students – to provide time and space for lengthy processes of group formation via surveys or elaborate questionnaires. The classical "cheap" solutions of determining groups randomly, for example by alphabet, or letting the students form their own groups, ignore everything we know about functioning groups so far. We wanted to offer something transparent for everyone, easy for teachers to implement and a procedure that avoids mere randomness.

HINT: How did you do that?

"To assemble groups, we came up with three very basic questions in the app. These completely ignored things like age, gender, marital status, having kids etc. The questions that the app uses aim at the circumstances."

Lindvig: We had already realized that we would need commonality in a certain field – namely alignment in terms of purpose, liability and logistics was crucial. Therefore, we had to find a convenient way to assemble groups of students who could be as diverse as imaginable but were similar in these crucial regards. Therefore, we came up with three very basic questions for everybody to answer. These completely ignored things like age, gender, marital status, having kids among many things. The questions that the app uses aim at the circumstances.

HINT: What are these questions?

Horak: We ask students to range their answers for the following statements on a Likert scale, giving four possibilities from "absolutely yes" and "absolutely not". The first question or statement is "I prefer to meet on campus." The second one is "I can meet with the study group some evenings and / or weekends". The last one is "I would prioritize to also socialize with the study group." According to the commonality of their answers, the algorithm sorts them into groups of four or whatever number the facilitator has chosen for the desired group size.

"The crucial questions are: Do I prefer to meet on campus? Can I meet with the study group some evenings and / or weekends? Do I prioritize to also socialize with the study group?"

HINT: How and when are students asked these questions?

Horak: This is not an automated process. It is still the teacher who sets the whole thing into motion in the LMS. We are trying to convey to teachers – based on the experiences we have gathered so far – that it is essential to facilitate the formation of study groups very early in the process. We are communicating this to new teachers who want to use the app. It has become evident that when you start later on in the process, students very often have formed their own groups – and then you interrupt the whole process. You actually disrupt group processes that are already taking place. You would force new group processes or group formation processes on students and potentially create resistance. Hence, we recommend starting the group formation process as early as possible in the beginning of the semester course.

HINT: Now your app has been running for about a year now. How did you get teachers involved in the beginning to use this solution?

"We recommend starting the group formation process as early as possible. It is crucially important to introduce this mode of group formation in the very beginning. It hast to be communicated transparently by the teachers."

Lindvig: The first important thing that we learned from the pilot was that it is crucially important to introduce this mode of group formation in the very beginning of your course, as mentioned earlier. It has to be communicated transparently by the teachers. In the cases, where the algorithm-based study groups were formed later in the process, students were furious about it and considered it an unfair intervention into their existing groups. Consequently, teachers were also unhappy, of course. This made us able to identify the correlation between how "My Study Group" is prepared, how it is presented to the students and the eventual outcome.

Horak: Additionally, we found out that we needed to frame the questions better. In the first evaluation service, we got frustrated comments about what was perceived as "being banal". Students' reactions ranged from "what kind of nonsense is this?" to "why do you ask us these things?" and "why do you not ask us about our level of ambition or our personalities?" We realized that we had to improve communication in terms of the alignment of expectations. We did not change the app as such, but we added a few sentences in the introduction in the app where we provided explanations on why we had chosen these questions grounded in our research-based hypothesis.

HINT: Ok, this covers the student-side. How do you instruct teachers to use the app?

Horak: We hold workshops for teachers on how to use "My Study Group". There, we emphasize the right timing for the implementation and the need to scaffold the process in terms of proper framing and explanation of this mode of group formation. This includes broader pedagogical questions on group work in general: Why is it important that students work in groups? What is the group intended for? We encourage them to keep following up on how the student groups work over time.

"The app is no miracle solution. It does not solve problems by itself. But it is a smooth way for teachers to divide students into groups that are more likely to function."

The app is, of course, not a miracle solution. It does not solve problems by itself. But it is a smooth way for teachers to divide students into groups that are more likely to function, since the method of forming groups is not arbitrary. Nevertheless, it does not work as a stand-alone solution for everything – the application needs to be fully embedded in the process of teaching and learning.

HINT: Is conducting these workshops one way of advertising the use of the app for teachers?

Hansen: Exactly. If I remember correctly, we also had a global announcement within the LMS when we first implemented the app university wide. We had a prominent banner with the announcement that there is a new tool waiting to be used. In the intranet there was even more information on "My Study Group" including some videos with teachers and students sharing their experiences with it. We also used other channels of advertisement, posting it to every staff member and briefing the deans of faculties to circulate the information among their teachers.

HINT: How successful was this advertising, or, put differently: how many teachers use the app and how is the feedback so far?

Horak: Since it is up and running, "My Study Group" has facilitated 441 processes of group formation in 281 different courses. Thereby, it has helped to create 1.019 individual study groups involving 3.810 students. In the current autumn semester at the University of Copenhagen, 69 courses apply the app.

"'My Study Group' has facilitated 441 processes of group formation in 281 different courses, creating 1.019 individual study groups involving 3.810 students in total. Currently, 69 courses apply the app."

We have some super users. These are mostly people who have been involved in the process from the beginning and are enthusiastic about it. For feedback, I offer a MS Teams room where people can share experiences and come up with proposals on how to improve the app. However, it is very much the same people commenting, the same people sending emails, the same people having suggestions. Generally, we have had a stronghold in the science faculty. For a long time, they have been the most involved. With some other faculties, we are sometimes struggling to find more teachers to spread our "happy gospel".

Lindvig: We always had the existing connections to build on. For example, I teach the "Teaching and Learning in Higher Education" program at the science faculty. We introduced "My Study Group" to our participants very early on and they are a good target group to aim for. We need to have a humble approach, however, clearly communicating that this is not a tool fixing everything. It is, of course, limited. Nevertheless, it is the best we have in terms of saving time and supporting the formation of study groups currently.

At the same time, we definitely had arguments with faculties and teachers not wanting to use it because they already had a functioning system. This is simply a fight we are not willing to take. We would just say, "Perfect, it is great if you already have a system that works, keep going because then this might not be necessary for you." I mean, the app should not rule out good local practices. It should create a good practice over time in the areas where there is none currently. Therefore, I think it is important to make that demarcation in terms of looking at how popular it is.

"The app should not rule out good local practices. It should create a good practice over time in the areas where there is none currently."

HINT: I understand. I guess the advantage with "My Study Group" is that you can target teaching cultures that are not too familiar with group work as such, offer them a handy solution, and develop teaching and learning at the same time?

Horak: Yes, I think that is an important point. We really aimed at providing a solution to those teachers who were teaching very big classes and maybe did not have the energy or did not know how to approach the group formation process. Thus, we wanted to give a practical and easy-to-use tool to those who otherwise would not implement study groups – and not those who are already far advanced in facilitating study groups. The former, not the latter, is our primary target group, and this is what I aim to stick to with what I call the "system strategy": avoiding a lot of functionalities or complex usage, trying to keep it as simple as possible in order to accommodate the needs of the primary target group.

"We really aimed at providing a solution to those teachers who were teaching very big classes and maybe did not have the energy or did not know how to approach the group formation process."

Fransgård: I would like to add that apart from these advantages for teachers, it is important to note why we wanted to develop this solution for the students in the context of the "Student Wellbeing" initiative. We wanted students to feel safe when they join the university and its new environment, because it is a completely new experience for them. To counter the social insecurities when new students join a course at the beginning of their studies, for example, the need to get to know their co-students. Eventually, with "My Study Group", we want to facilitate stable study groups for students that help create a learner friendly environment. This is, in a way, an important contribution towards fighting social exclusion. In that sense, this mirrors the original context of wellbeing that brought about the project.

"With 'My Study Group', we want to facilitate stable study groups for students that help create a learner friendly environment. This is an important contribution towards fighting social exclusion."

HINT: Do you get feedback from students directly as well?

Lindvig: I think this is really tricky to study. It is a little bit like good service in a restaurant that if it works really well, you do not notice it. It only becomes apparent when it is weird or you do not get the service you expected. In a sense, the less we hear from students, the better, because it means that the faculty or the professors and teachers have taken it in as a tool to create these groups seamlessly. So, if the students do not realize that there is a new solution at play that is good from our point of view.

Additionally, it is important to note that forming the groups via the questions and the algorithm is only the first part of our contribution to making these groups work. The second part is the ongoing support that we provide for the students to create a contract, to discuss

how you want to do this, how to deal with situations that go wrong or if they have a conflict. Again, if it works well, it is because the teachers have included this into the routines they already have. If the students contact us,
it is because it may not be working.

Horak: True. It is fundamental that the algorithm is only half of what the app does. Moreover, we provide materials within the app that are available for students from the beginning. Teachers can also choose to push them at certain intervals that the teachers define themselves to create attention around these tools. The app offers some additional materials helping students to align their expectations or handle conflicts.

"It is fundamental that the algorithm is only half of what the app does. Moreover, we provide materials within the app that are available for students from the beginning and that help them making the group actually work."

HINT: That sounds great! "My Study Group" offers a technical solution for forming study groups that are very likely to work based on the alignment of practical circumstances. At the same time, it also helps students keep their groups running productively in order to enhance student wellbeing and learning. Are there any general conclusions that you draw from the whole process for teaching and learning in higher education in the 21st century?

Lindvig: Just recently a new study came out saying that malfunctioning study groups could be a main reason for students dropping out. This hints to the point that supporting the process might be even more important than we initially thought. Concerning what our project indicates about higher education today, I think one thing that could be a sign of the times is perhaps that we nowadays have a strong focus on diversity. You would not have seen this happening 20 or 30 years ago. In terms of functioning groups, it appears that questions of diversity have become relevant with regard to how we can collaborate, how we can support that collaboration – not so much with regard to gender, skin color, economic background, among other things.

"Malfunctioning study groups could be a main reason for students dropping out. This hints to the point that supporting the process might be even more important than we initially thought."

After all, one has to say that the whole project was developed during COVID, when physical circumstances of the university fell apart. This made invisible support structures – like study groups – even more important. Thus, the pandemic situation has influenced the way we set up "My Study Group", leading to new or different questions now that everybody is back on campus.

Horak: From the IT perspective, it was great to have this trial-and-error approach, which was somewhat new. Even though we developed the app in our group, we involved teachers throughout the whole process and altered our ways several times according to their feedback. Maybe you could call it a co-creation process en miniature. The vital engagement of users in the process was refreshing and in my dream scenario, we would have involved students more. This could be one of the next steps. Thus, being able to create an original solution making our "customers" an integral part of the process – that is probably what will become even more important in the 21st century. This holds true for new ideas about studying in general. I think we will have even more holistic approaches to studying at the university. Students are not only thinking about good results in the exams and trying to fill their brains, but they assign relevance to themselves as a person. This has to be reflected in higher education as well.

"The vital engagement of users in the process was refreshing and in my dream scenario, we would have involved students more. This could be one of the next steps."

Fransgård: Exactly. Students today simply expect more from us at the university. It is not enough to tell the students to form groups themselves and then expect them to figure out how to work together. It is neither meaningful nor acceptable to many. Therefore, the most important conclusion that I draw from this project is that we can react to these changing student expectations by creating a good study environment fostering the wellbeing of our students.

"Students today simply expect more from us at the university. We can react to these changing student expectations by creating a good study environment fostering the wellbing of our students."

Hansen: Precisely. Our hope is that the app can be constructive in creating a good learning environment, and, at the same time, can even be preventive in terms of low wellbeing. If you experience good and helpful study groups from the very beginning of your studies, this can prevent loneliness and other factors that affect mental health and wellbeing negatively. We have even tried to cater to the dynamic character of student lives by making it dynamic as well. After all, your practice and your wellbeing can be different semester from semester. So every time you start a new class, you will answer the questions again.

HINT: I think we have come full circle here. Your app "My Study Group" started as a project within a wider initiative of the University of Copenhagen to improve student wellbeing – and it really looks like it does. At the same time, of course, it offers an easy-to-apply solution to develop the quality of teaching and learning further. I need to ask, of course, whether your app will be available outside the University of Copenhagen at one point?

Horak: We are currently looking into this – but nothing has been decided yet.

HINT: Anna Leonard Fransgård, Gro Lemcke Hansen, Ruth Horak and Katrine Ellemose Lindvig – thank you very much for the interview!

The interview was conducted by Rafael Klöber

Anna Leonard Fransgård is an educational guidance coordinator from the Faculty of Science and a central member of the working group.

Katrine Ellemose Lindvig, is an assistant professor of higher education research at the Department of Science Education. She was essential in defining and qualifying the research-backed hypothesis "My Study Group" is built upon and is a central member of the working group

Gro Lemcke Hansen works in the central administration and is involved in initiatives around student wellbeing and study environment. She has been the project manager of Project Good Study Life, which "My Study Group" is a part of.

Ruth Horak is the operational system owner of the LMS and digital learning technologies at the University of Copenhagen. She is part of the working group, now also operational system owner of the plugin "My Study Group".

Correspondence:
Ruth Horak
ruh@adm.ku.dk