

Designing Collectively: Notes on enhancing collaboration within a collection development in fashion design education – a case study

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ABSTRACT

Collaboration and group work are increasingly recognized as essential for moving the textile and fashion sector towards a more sustainable future. Despite this awareness, many fashion and textile design educations continue to emphasize individual design processes in courses and program curricula. This research explores the possibilities and implications of collaboration for creative processes and developments in higher design education in a case study. The ongoing case-study examines an elective course in higher (fashion) design education where a real-life design assignment is implemented as the course task. The course “Student Managed Design Project: Collaborative Project” aims to give students knowledge and skills in collaborative processes from a design perspective, where the collaborative content in the course syllabus is both collaboration with an external part and collaboration with peers. The design assignment, conducted in partnership with a global organization, aims to design a business workwear collection based on a preexisting brief, and should also function as an educational material in terms of sustainable solutions. Participants are a mixed group of undergraduate and graduate students and two facilitators who together form the design team that will conduct the design task. To facilitate the students’ collaborative processes throughout significant phases such as brainstorming, ideation, sketching, prototyping, and refining, a framework for collaboration has been established. Aspects such as design sensitivities, flexibility, communication, willingness of compromise and empathy were trained through the complexity of the collaborative design assignment.

Opportunities, challenges, and limitations of the collaborative methods and structure in the course are reflected upon. The data was collected through observations, visual documentation, recordings and a questionnaire. In this ongoing case study, significant notions and situations to enhance collaboration were identified as *re-aligning* of groups, *decision-making* and *actions and interactions*. These will be subject to future research.

Keywords: Collaborative design practice, togetherness, creative group processes, responsible fashion practice, fashion design education

INTRODUCTION and BACKGROUND

Collaboration and group work are increasingly recognized as essential for moving the textile and fashion sector towards more sustainable futures. Despite this awareness, many fashion and textile design educations continue to emphasize individual design processes in courses and program curricula. While teamwork and interdisciplinary collaboration are an integral part of the industry, where design teams are structured accordingly, they are less of an integral part in education where many approaches and set-ups still focus on the development of the individuals' design skills and the development of creativity in individual contexts. This ongoing case-study examines an elective course in higher (fashion) design education where a real-life design assignment is implemented as the course task. The course "Student Managed Design Project: Collaborative Project" aims to give students knowledge and skills in collaborative processes from a design perspective, runs over two semesters on a part-time pace, and is an optional evening class for both undergraduate and graduate students outside of program curricula. The collaborative content in the course syllabus is twofold:

- a. cooperation/collaboration with an external part in the design assignment and brief
- b. collaboration/group processes with peers in the design developments.

As the study and the course are ongoing this article focuses on the structure and setup of the collaborative design assignment and the methods and structure used for collaborative design developments, leading to reflections and possible implications for further developments.

Enhancing team processes

Even if individual endeavors have been a common feature in higher (fashion) design education, efforts to enhance design education to shift towards approaches that prioritize student-centered, activity-based learning are more and more common. These approaches foster collaboration, practical application and self-directed learning. (Kiernan & Ledwith, 2017). Design education increasingly emphasizes collaboration, involving teamwork and interdisciplinary approaches to tackle open-ended problems. To improve our understanding of how groups effectively utilize distributed information, the importance of investigating the factors that support the exchange, elaboration, and integration of diverse perspectives and knowledge is being put forward. Also to equip designers for multidisciplinary teamwork, it has been pointed out that design education should focus on teaching the intricate processes of inquiry, learning, decision-making, shared understanding, and negotiation all while emphasizing collaborative practices (Kiernan & Ledwith, 2017, Tessier, 2022). It has been highlighted as being of high importance to prepare students for collaborative design contexts, as it is certain they will face the demands of working in team-based environments after education. Collaborative creativity has become a prominent approach in design education, often explored through interdisciplinary, industrial, and

online lenses rather than within the confines of traditional classrooms. Despite its growing adoption, there is limited research on how collaboration can be effectively integrated into teaching (Ni et al., 2022). Exploring how designers learn within teams is critical to understanding the challenges students face when engaging in collaborative design tasks. Addressing these struggles can lead to improved team processes, fostering both action and reflective practices. Tessier (2022) highlights that learning is translated into actionable outcomes as part of an expansive cycle. Successful collaborative organizations build on shared decision-making, distributed responsibility and empowerment, and are characterized by openness, flexibility and an ability to adapt to changing circumstances and contexts (Manzini 2015). For a collaboration to be successful Manzini mentions three basic components - people, expertise and material assets, foundational modules to develop a collaborative organization form.

People: collaboration builds on active engagement and participation and that all participants contribute with their experiences and perspectives. For effective collaborations participants should be involved in both decision-making, ideation and execution.

Expertise: collaboration needs different expert knowledge, such as technical knowledge and social skills. Different competences can be combined to solve complex tasks in a more creative and effective way. The sum of various expertise will lead to ideas beyond individual solutions and create more sustainable innovations.

Material assets: material resources can also be needed, such as tools, finances or a physical space to interact in. These assets enable ideas and actions created through the collaboration to be carried out. A close connection to the professional environments outside of the academic world has been identified as of importance for enhancing team processes. Collaborative problem-solving, especially when grounded in real-world challenges, enables students to develop transferable skills by working across disciplines. This process is further enriched when tutors assume the role of facilitators, guiding team discussions to ensure effective collaboration (Kiernan & Ledwith, 2017). Susan Wheelan introduced a unified model of group development, which views group maturity as an outcome of continued collaboration rather than merely moving through predefined stages. In this integrated model, the early phases are characterized by dynamics such as dependency, counter-dependency, and trust-building, which set the stage for the group to function effectively during its later, more advanced phases (Wheelan, 1990; Wheelan, 1994a). It is also acknowledged that enhancing team processes is challenging, and the significance of outlining key elements of a design team, such as roles, responsibilities and methods to be most efficient has been highlighted as foundational (Brown, 2014). A collaborative learning environment fosters group discussions, where students exchange opinions, ideas, inspirations, and solutions. These exchanges arise from both the guidance of the

teachers' questions and the interactions between peers. This dynamic process supports the development of creativity by encouraging students to think collectively. Research shows that such collaborative instructional models and class environments enable students to produce unique creative ideas and think beyond conventional boundaries (Ni, 2022). In the context of collective ideation, Tessier (2022) emphasizes that "collective intelligence involves both collaboration and synthesis," highlighting the importance of shared thinking and integration in creative processes.

BACKGROUND OF THE CASE STUDY AND PROJECT DESCRIPTION

Conditions in the project, subject to the case study

Course	Student Managed Design Project: Collaborative Project, University level.
Design assignment	A business workwear collection, to be designed and produced in a limited edition.
Participants	Students; Fashion and textile design students, 10 undergraduate and 10 graduate students. Staff team at the University; senior lecturers in design, lecturer and senior lecturer in garment technology, textile strategist, communicator, and multimedia producer (varying work percentage in the project for the staff members). External organization. Production actors.
Timeframe	February 2024 – April 2025 As the case-study is ongoing, this research only focuses on the interactions between the students, the two senior lecturers in design, and the global organization during the first half of the course.

To strengthen the possibilities for collaborative work and to foster a mindset of teamwork in (fashion) design education, this research explores collaborative design processes and developments in a case study. The case study takes place within a course for BA and MA students based on a real-life project, conducted in partnership with a global organization. The ongoing course spans from March 2024 to April 2025, when the project will be launched in facilities of the organization.

Project outline and brief

The project aims to create a new business workwear collection that should be functional, sustainable, of high quality whilst embodying modern, high fashion standards. The keywords for the set of clothing as stated in the official brief were comfort, elegance, inclusive sizes, environmentally friendly and recognizable. A

garment layering system should be developed to provide good thermoregulation since worn across all seasons, it should be easy to clean and durable. A limited edition of clothing sets is to be produced, every employee to be provided with more than one set to be able to change regularly. Additionally, the new set of clothing should function as an educational material for sustainable solutions and strategies to be communicated in the context of the organization's activities as well as in relation to the project communication. The project deals holistically with all phases relevant for creating and publishing a collection, such as the design, the production, communication and presentation. A project team of design, production, communication and coordination, was established to deal with the tasks of designing, realizing, communicating and presenting the collection. This paper, however, will focus solely on the collaborative activity and structure within the design team.

Course framework and structure

The course *Student Managed Design Project: Collaborative Project* is the framework for conducting the project task. As an elective course, it was offered inclusively to all BA Fashion Design students and all MA Fashion and Textile Design students, who would then form a design team. The design team consists of 20 students of undergraduate and graduate level, representing different nationalities, educational backgrounds and skill sets as well as levels. Two senior lecturers, in the role of course coordinators facilitate the creative work tasks within the course through a methodological framework (to be elaborated upon in a later part of this paper). The course focuses on collaborative practice, is project-based and aims to introduce basic theoretical concepts and methods for collaboration. Skills and abilities in design development are trained in collaboration with an external actor and based on a real-life project through the different phases of the design process. Furthermore, important soft skills like presenting, arguing and evaluating design results are practiced and trained in groups. Conceptualization, planning, design development and processing in groups are conducted considering divergent perspectives, such as the perspective of the wearer. Forms of teaching consist of seminars, workshops, laboratories and supervision. The course literature builds on Susan Wheelan's contributions around group processes and model of group development as well as Ezio Manzini's elaborations around collaborative design for social innovation.

METHODOLOGY

Methodological and Collaborative Framework

The brief provided by the external organization constituted a set of limitations and requirements for the collection work. This in turn stimulated the set-up of the framework for the course outline. Practicalities of the course entailed in the first 4 month a set-up of 4 course events per month more specifically, one evening event in the week and one full day on the weekend every 2 weeks. In the continuation, one evening course event would be arranged weekly. One crucial factor for the outline and

the arrangement of tasks was time. With the aim that the main design work from ideation to prototype development needed to be completed in a time frame of 20 weeks, a clear structure needed to be established, that would facilitate the design phases and allocated tasks within them.

Design Phases

The design work from initial ideation to final prototype was planned within 4 design phases from February until June. Figure 7 provides an overview and details of the 5 design phases and the design actions that were covered in each phase. The phases included ideation (brainstorming, mood board work, sketching) (Fig. 1-3), design decisions making (selection process, reflection) (Fig. 4 & 6), concept development and refinement (pattern cutting, evaluation of fit, adjustments) (Fig. 5) and forms of presentation (reviews). In phase one, the general concept for the collection was defined through brainstorming, idea mapping and mood board methods. The ideas were then outlined and developed through sketching and prototyping. Phases 2 and 3 dive into further developments and refinements of the collection items, in phase 4 the final prototypes were developed.

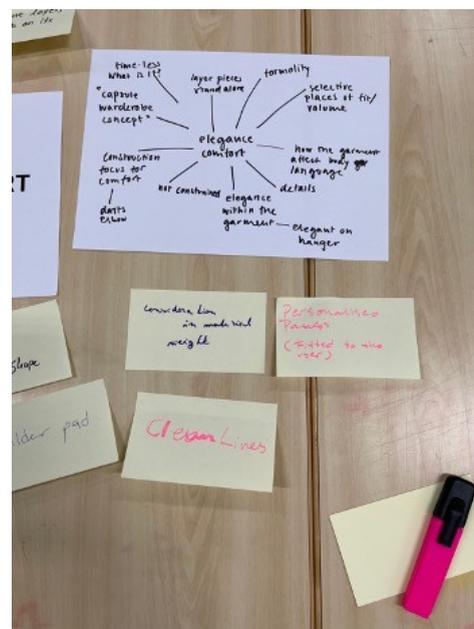
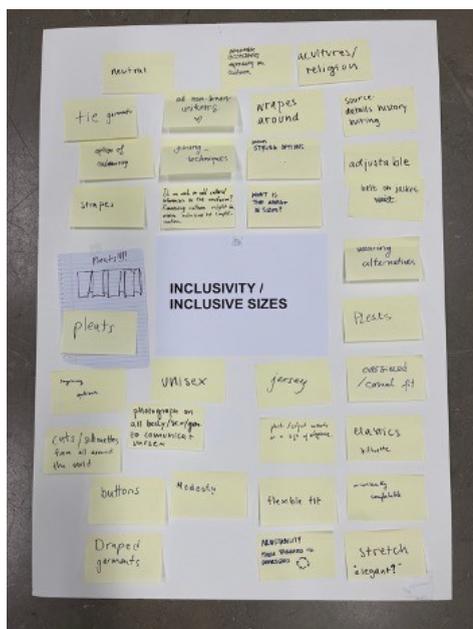


Fig. 1: Brainstorming & concept mapping
Fig. 2: Brainstorming & concept mapping

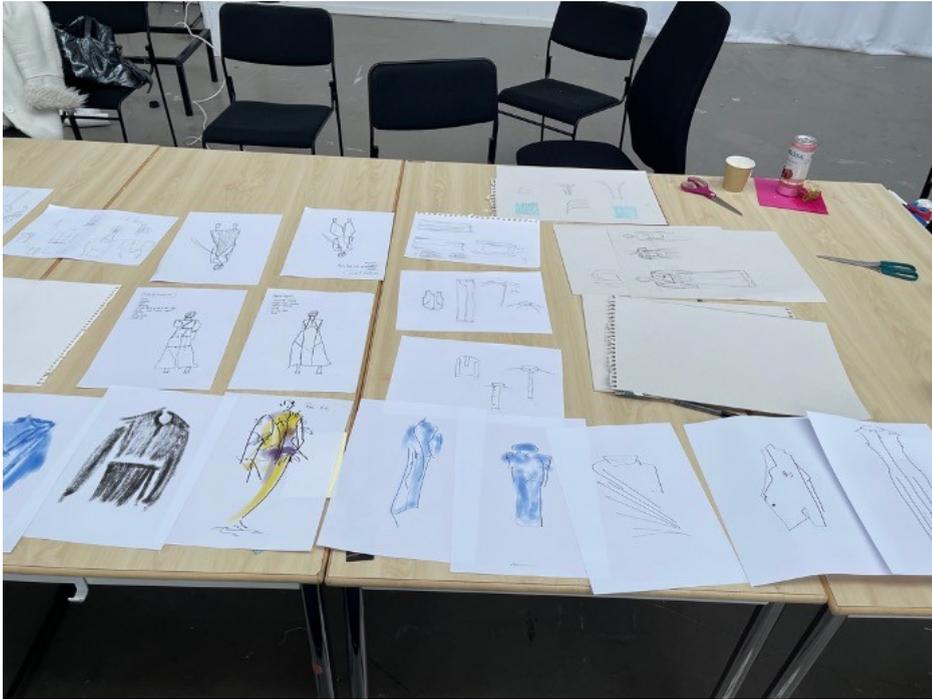


Fig. 3: Sketching phases



Fig. 4: Colour exploration



Fig. 5: Prototyping



Fig. 6: Material selection

Design Phases		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Weeks																					
Planning Phase		[Blue bar from week 1 to 5]																			
Project kick-off						⬡															
Phase 1																					
Brainstorming Phase 1 (Mindmaps, Visual maps)																					
Ideation Phase 1 (Research, Mood board, 2D & 3D Sketching)																					
Selection Phase 1																					
Prototype development, Phase 1 (Pattern cutting, fitting)																					
Digital sketching																					
Review 1 (Presentation of concept and design ideas)																					
Revision 1																					
Phase 2																					
Ideation Phase 2 (Research, Mood board, 2D & 3D Sketching)																					
Selection Phase 2																					
Prototype development, Phase 2 (Pattern cutting, fitting)																					
Preparation for Review (Presentation)																					
Review 2 (Presentation of concept and designs)																					
Revision 2																					
Phase 3																					
Ideation Phase 3 (Research, Mood board, 2D & 3D Sketching)																					
Selection Phase 3																					
Prototype development, Phase 3 (Pattern cutting, fitting)																					
Preparation for Review (Presentation, Fitting)																					
Review 3 (Fitting)																					
Revision 3																					
Phase 4																					
Final Prototype Development (Adjustments & Refinements)																					
Preparation for Review (Presentation, Fitting)																					
Review 4 (Final prototype)																					
Revision 4																					

Fig. 7: Table of Design Phases and Review/Revision structure

Phases 1-4 each ended with a review that was conducted with representatives of the global organization. At the review, design concepts and developments were presented and evaluated. In review 3 and 4 prototypes were fitted and feedbacked by the future wearers of the collection.

Review/Revision structure/cycles

Interaction of the design team with representatives of the global organization was an integral and critical part of the project and partnership. After an initial meeting and interview session of the partner at project start, a regular review structure was established where the representants of the organizations, i.e. the wearers and other team members could view the design team's suggestions in form of ideas, design developments and prototypes, and evaluate them. Then feedback was provided. The feedback could range from crucial development alterations in terms of for example aesthetic characteristics, garment fit or material selection, to mere wishes of adaptations of these. The design team then reflect, discuss and assess collectively before deciding what to revise and how to revise.

Review/ Revision cycles:

Suggestion I – Review – Revision I

Suggestion II – Review II – Revision II

Suggestion III – Review III - Revision III

Suggestion IV – Review IV – Revision IV

Collaborative set-up/ Group arrangements

A central aspect of the project is the collaborative approach to designing. Unity, togetherness and teamwork are notions at the heart of the collaboration. Rather than fostering an individual approach to design tasks and achievements, a collaborative framework has been established to strengthen and emphasize a mindset of collaborative work. The designer who executes the task of creating the collection is thus a team of 20 designers and 2 facilitators. To facilitate a good learning context and to nourish an environment where all skills inherent in the team would be enhanced, utilized and exchanged, smaller group constellations have been formed with 2-7 design students of different educational levels. (Fig. 8) The actions to be performed in the different phases were arranged as specific tasks and assigned to the groups. The duration of tasks has ranged from one course event to one design phase, before a re-arrangement of groups would take place, and the design groups were newly composed and new tasks assigned. The collaboration in this case-study was conducted in diverse formats and constellations, and between different participants in the overall project. In some moments during the project, the students were working all together on the same task, while at other times specific tasks were outlined and assigned to smaller groups. Within the group constellations, there was freedom provided for further divisions of tasks, but also when it comes to further group arrangements. This opened up possibilities to work in shorter periods

individually, or in even smaller teams of 2-3 people. The collaboration was manifold in terms of collaboration parties since it took place between students, students and tutors, the tutors and the global organization and between the entire design team and the global organization.

Collaboration parties:

Student – Student

Student – Tutors

Tutors – Global organization

Tutors & Students - Global organization



Fig. 8: Smaller group constellations of 3-7 students

Planning for Collaboration

Due to the tight time frame and challenging work task as well the team constellation of 20 students with different backgrounds, skill sets and levels, the tutors decided to set a clear structure for collaboration rather than a spontaneous set-up where a group needed to deal with organizational aspects. The extensive and complex task in the course and the short time frame for completing it was reflected in the outline for the collaborative work. Various collaborative ways were identified as beneficial for the project, building on Manzini's organizational model that outlines three basic components for collaboration: people, expertise and material assets. (Manzini, 2015) Building on Manzini's central aspects of organization and personal relations, the collaborative structure, the organization and relevant methods were focused on as key elements to facilitate collaboration.

People: Both students and the facilitators have been actively engaged and participated and contributed with their perspectives in both decision-making, ideation and execution.

Expertise: The expertise ranges from undergraduate to senior lecturer level. Within the student team various skillsets due to different educational backgrounds were provided as well as on different levels.

Material assets: The university's facilities were used. Studio spaces, ateliers and labs have been used during the design process. Financial support was provided by an external foundation.

Collective creativity

The group constellation and re-arrangement strategy, fostered apart from being useful regarding time efficiency, an environment where creativity could be stimulated throughout the different phases. (Fig. 9) In the ideation phases for example, various ideas and perspectives of the brief were brought to the table by the individual designers, then they were processed and discussed by the team. This affected a variety of ideas that could be reflected upon and then further processed but it also stimulated further idea flows. Creative solutions were then generated through sketching and selected ideas were developed and further tested as 3D examples and prototypes by the groups. Due to the repetitive re-arranging of groups, the ideas were shaped and developed by various designers in the design phases. In each phase, be it the ideation, sketching, prototyping or refinement phase, the development of a collection item could consequently be performed by several design groups. (as exemplified below).

Collection item No. 1:

Phases: Ideation, Sketching, Prototyping, Refinement

Group arrangement (as exemplified by the Prototyping phase):

Prototyping Phase Design team

Prototyping I Group A

Prototyping II Group B

Prototyping III Group C



Fig. 9: Collaborative creativity

Decision making

Design decisions have been discussed and taken in various group constellations. This could be within the entire design team including tutors, the team of students, the groups or by the individual designer. The design groups reviewed the design ideas and developments during the process and after a task segment was completed. They then discussed collectively what to develop further and how. At round-up moments, the entire design team have come together to reflect upon and discuss the developments that took place before taking decisions. Then further developments were decided. If no conclusion was reached in the large team, the tutors would, based on the group discussions, take a final decision and outline proceeding development paths and new tasks accordingly.

Challenges and limitations in the project structure

Commonly, project-based university courses outline a specific brief as assignment and the students are to meet the requirements. Planning of time, structure of how to fulfill the task, organizing of explorations etc. is part of the student's learning process and outcome. In this collaborative design project course, the brief, limitations as well as possibilities have been continuously altered throughout the project which imposed entirely new challenges.

Circumstances changed through feedback from the 'client', the external collaborator and through unforeseen circumstances for the collaborators, such as for example changed lead times as is common in professional work processes. This uncertainty and necessity to be flexible and be able to quickly change and adapt design developments and visual goals and outline new plannings is common in working life, though seldom incorporated in the learning outcomes of a university courses. The frequent reviews with the external collaborator that took place during the course provided feedback upon the design work and gave directions for further developments, design alterations or changes. This altered the brief slightly after each review, which was challenging for both the students and the facilitators and required a flexible mind-set in terms of design work and processes as well as regarding time and group arrangements.

QUESTIONNAIRE

To collect data upon opportunities and limitations of the course, a questionnaire survey with three questions was distributed to the students. The questionnaire was anonymized, and the time frame was set to max. 20 min.

The following questions were posed and answered:

1. What were the biggest challenges with working collaboratively, both within the group and with an external "client"?
2. What were the biggest benefits/opportunities with working collaboratively, both within the group and with an external "client"?
3. Do you think that the experience of this collaborative course will be of use for your professional life?
- 4.

The questionnaire addressed 3 aspects of collaboration. Firstly, the challenges, secondly the opportunities that arose from the collaborative work context within the course and thirdly, experiences gained from the course set-up, that was seen as potential benefits for a future professional life.

Challenges

Four aspects of the collaborative work were pointed out as challenging. (Question 1)

1. The re-grouping
2. Working pace
3. Decision making
4. Working habit

1. The re-grouping process was pointed out as challenging by some students. One student described that for achieving a cohesive project it meant to re-design some things that had been decided by a previous group, so that they could fit the overarching visual goal that was being defined.
2. A slower work pace was highlighted by some students to be caused firstly, by

the group structure, where the team's input was regularly requested, secondly by the frequent modification of decisions that had been taken, thirdly, by learning from each other, a process that required more time and lastly, by different work ethics.

3. The decision-making process was described as challenging. Working collaboratively in a larger group context was mentioned as demanding since it made it difficult to take decisions and come to an agreement at times. This affected the maintenance of motivation, as pointed out by one student. Different perspectives made it difficult to unite working styles and design visions as well as to divide tasks.
4. Another challenge regards established working habits. Different working styles and preferences of working individually rather than in a group were mentioned in that context as intricate. One student stated however, 'I feel like this was eventually resolved quite organically where we were able to split tasks between each (other?) and some people would work in pairs or groups and others individually eventually we would meet for reviews and have a dedicated time when we work together.' (Student A)

The researchers recognized the challenges in the course sessions that were raised by the students in the questionnaire and had observed similar.

Opportunities

Four aspects of the collaborative work were pointed out as beneficial/opportunities. (Question 2)

1. Group dynamic
2. Individual development
3. Ideation
4. Course framework

1. The group dynamic was highlighted as greatly beneficial. The students brought up almost unanimously that working collectively, in groups and towards one result, had given them positive experiences. Other formally planned platforms for joint design developments between levels and year groups are rare, and in the survey, it was clear that this was highlighted as an experience that had positive learning outcomes. Students formulated that getting insights and understanding of work styles and thought processes of their peers was extremely valuable. One student described: “..it was super cool to work with other design students with different backgrounds etc. collectively. We learn so much from each other by executing tasks in a group.” (Student D)
2. The individual development and learning to become a designer were mentioned by some students as highly valuable. Learning in group from other students with different backgrounds and skill sets was described as an enriching experience for the individual design development and different to the

habitual way of working that is usually an individual one, as pointed out by one student.

3. The ideation process was described as stimulating. One student described: 'One major benefit of working in a large group was the variety of creative ideas. Everyone brought unique perspectives and skills to the table, which enriched the project and allowed us to create a collaborative design. It was also a valuable learning experience to share knowledge and skills with one another. This teamwork provided an excellent opportunity for personal and professional growth.' (Student B)
4. Another aspect that was pointed out as positive was the course framework and structural set-up that provided the students with freedom on the one hand and with a feeling of safety on the other hand. "It was great to have two teachers leading the way but giving us a lot of freedom. Starting with brainstorming and just loose sketches to be as open as we wanted and every week and every feedback moment becoming closer to the outcome decided in the group. "(student E)

Experience for professional life

The answers in the questionnaire showed that a very strong majority of the students considered being part of this project have strengthened their skillsets when stepping into professional life. (Question 3) Some students just answered "yes!" to the question whether experiences from this collaborative course will be of use for your professional life, while others elaborated more upon the reasons. The course was reflected upon to be useful for learning to acknowledge different working styles but also different perspectives by other designers. The changing limitations that characterized the course were highlighted as great learning and as providing lots of knowledge. One student described: ' I have learned many things, about working for a client, working in a young and diverse design team (with great guidance from NN and NN). ` (Student D) Another student wrote: `It certainly will be useful for my professional life. I learn how to work in a big group, how to work with a client.

Despite not being a fashion student (but a textile student) I was still able to contribute a lot to the process which showed that even when you design a fashion product it is valuable to have perspectives from different skilled people.' (Student C)

As the project is still ongoing, this question will be more profoundly elaborated upon later by the researchers.

REFLECTIONS AND DISCUSSION

Reflections on the ongoing case study and their possible implications for further developments are presented and discussed in this section. Data collection through visual documentation, recordings and observations has been and are conducted

regularly along the course sessions, and one data collection outside of the course sessions has taken place in form of a questionnaire to be filled out by the students individually. Outcomes from both data collection methods as well as analysis of the course structure has been used as foundation for the reflections and discussion.

Collaboration lies at the heart of sustainable fashion futures. While individual design processes dominate many fashion and textile courses, there is a growing recognition that collaborative approaches are essential for transforming the industry (Kiernan & Ledwith, 2017, Tessier, 2022). In this context, this ongoing case study identifies reflections on collaboration from multiple angles: external, internal, and group-based settings:

Group arrangements and task sequencing:

- Students were divided into groups, working collectively on various design tasks, such as brainstorming key notions, sketch development, refinement, and prototyping.
- Between tasks, student groups were re-aligned, ensuring fresh perspectives and continuity as new groups built upon the work of their predecessors.

External collaboration:

- The collaboration extends beyond the classroom. Students engage with an external partner, the global organization, to develop design outcomes.
- This real-life project allows students to address global challenges and consider sustainability from a broad perspective in their designs.

Internal collaboration:

- Within the university, collaboration occurs not only among students but also among staff members from different departments
- Staff groups interact, sharing perspectives and competences, fostering mutual learning, and bridging disciplinary boundaries.

Challenges and strategies:

- Collaboration is inherently challenging. As educators, we recognize the need to develop strategies, methods, and tools to facilitate effective collaboration.
- Setting clearer boundaries for group work will be a focus for future iterations of the course.

Benefits and competence enrichment:

- This project has revealed the depth of competences within our university environment.
- By collaborating across departments, we tap into diverse expertise, enriching the learning experience for both students and staff.

Through the summary of experiences and observations in the case study, three main areas were identified to be of high importance for the exploration of collaboration from a design perspective, and these findings will be further developed in the coming research.

Re-grouping

The iterative rearrangements of the smaller groups facilitated the cooperation within the large group and balanced the diverse skill sets as well as levels of skill, that were given in the group constellation. Apart from promoting collaboration among the students this approach fostered a unified mindset in the context of authorship of collection items, which was a challenge inherent in the assignment. It was decided in the initial planning to work with re-grouping as a method to be used as the foundation for the overall project to achieve inclusivity, collaboration, shared authorship, and teamwork. In relation to Tessier (2022) this research identified method developments to be essential for collaboration in teaching and for having valuable implications for (fashion) design education. At the core of the re-grouping method that the researchers designed for this course and project is a re-aligning structure.

Instead of having several fixed smaller groups to conduct the different tasks it was decided to explore the effects of a constant re-aligning of the smaller groups to have a continuous motion, and through this increase the potential for collaboration to give a strong group affiliation, as the stream of thoughts was in constant motion and shared between participants. A main challenge that was brought up and that will be further reflected upon was the time aspect, each new start of a new group constellation takes some initial time to find balance and become creative together.

The re-aligning method showed many opportunities as a framework for collaboration in design education and is subject to further research and refinements.

Decision making

A significant part in a design process to reach a cohesive outcome is decision making. Both students and facilitators were involved in the processes in different set-ups, and depending on time, complexity of the decision, limitations from the external collaborators, or to prevent conflicting situations in the group, decision making was planned to take place in the following constellations:

- In smaller groups
- In smaller groups together with facilitators,
- In full group
- In full group together with facilitators
- Facilitators

“(...) collaborative organizations (...) depend on complex mechanisms, and that the initiative taken directly by the people concerned (bottom-up interaction) is always supported by information exchanges with other similar organizations (peer-to-peer interactions) and by different kinds of interventions from institutions, civic organizations, or companies (top-down interactions).” (Manzini 2015, p.82)

It has been identified through the observations as highly important for creating a good collaborative environment to have a well-functioning structure for decision-making. In an educational setting, it is also of high importance to create a safe space for the students to interact and be creative without fearing conflicts with their peers. A challenge was to be sure of when the decisions could be negotiated by the group itself (peer to peer) and when the facilitators needed to step in and take the decision (top-down) as written above. Which decision-making structure to use when in a course or project can be linked to the collaborative phases Activity and Interactions and guidelines/suggestions for this interplay will be further developed.

Actions and Interactions

In the course structure and through observations in the course sessions two main situations were identified where facilitators can plan for varying forms of set-ups, to enhance collaboration and collective designing in the process of a design project course. These were identified as: *Actions and Interactions*. Actions refer to the various design actions conducted in a design process, carried out by the students to reach the common goal/outcome of the brief. Interactions refer to discussions, feedback sessions and communications between tutors and students to guide and form both the process and the outcome, including set up of the decision-making.

Actions: conducted by the students in the following set-ups:

- Individually
- In smaller groups (2-7 students)
- In full group

Interactions: conducted in the following set-ups:

In full group:

Presentations of activities by students individually and by the smaller groups.

Presentations by the tutors of the brief, assignments, challenges in the collection that need to be solved, forwarding comments and discussions from reviews with the client, discussions by the tutors regarding changed circumstances due to changed limitations.

In smaller groups:

Facilitators give feedback and discuss the design actions and outcomes with the smaller groups.

A framework for the planning of different collaborative settings for the Activities and Interaction during a project-based course is to be further developed and implemented in iterations of this elective course.

CONCLUSION

In summary, the course serves as a valuable case study to develop a methodological framework for enhanced collaboration in (fashion) design education. In this ongoing case study, significant notions and situations to enhance collaboration have been identified as *re-aligning* of groups, *decision-making* and *actions and interactions* and will be subject to further research. The current findings show that methods and structure used are effective and suggest educators and practitioners to foster educational training dealing with collaborative work to equip future designers with the skills needed for a more interconnected and sustainable fashion industry.

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