

Match the Space to the Case

In this paper we investigate the use of studio space by students in a series of design workshops. The term space is divided into three parts: the areas that groups physically are in, the surfaces upon which work is carried out, and the location and availability of resources. By analyzing photographic data and video interviews an overview is gained of the characteristics of the studio space during each workshop. It is seen that the characteristics of a good studio space change according to the activities to be conducted within the space. Therefore, to set up a good studio environment, consideration of the activities to be carried out must be made.

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INTRODUCTION

Is it possible to create a set of guidelines for making a better workspace design in a studio environment? Such a set of guidelines would be valuable for both those involved in design education and practicing designers themselves. The purpose of this paper is to investigate, through grounded research, whether such a set of guidelines could exist. In particular, we try to find connections between the nature of the project and the characteristics of space that would aid in setting up a studio space.

METHOD

This paper is based on investigations into the design studio working space of five different workshops of the first year masters students of IT Product Design located at The University of Southern Denmark in Sønderborg. The data for this research consists of photographic evidence, video interviews, and notes from the people planning the space regarding their intentions. In addition, the authors of this paper are also first year students of this masters program and were therefore participants on all the courses. Furthermore, before and after map of each project have been made. The before maps are of the studio as it was set up in the beginning of a project, whereas the after maps are of the studio as it was changed according to the students and their needs. The paper is based on the grounded theory, and the characteristics of this theory are basically that the researchers collect data, and analyses the data in a way, so that the data will come up with a theory[1]. In other words, we had the data, looked at it and then came up with some theories that we then explain in this paper. We have also been influenced by the theories about text and context put forward by Ian Hodder.[2] He explains about the grounded theory in comparison to photographic evidence. We therefore realize that how we have interpreted from the materials is not the only way of interpreting the material. Therefore in this paper we also draw on the fact that we were also participants in these workshops. However, on the whole, the captured materials should be strong enough to support our interpretations.

Studio Space

We acknowledge that 'space' is a very broad and ambiguous term that can be understood in many ways. For this paper we are limiting the meaning of space to being the workspace within a studio. (This should not be confused with 'Design Space', which was one of the workshops studied.)

If creative activities can be influenced by the space in which they take place then it would be very valuable to have deeper insight into how to best set up the space. Through the use of flexible infrastructure, for example modular furniture with wheels on, moveable barriers that can double as pin boards, and wireless computer network access, it is possible to

change a studio environment relatively easily. In the light of such an easy to change system, knowledge of best to set up space becomes more interesting, because it is more possible. For this paper we look at the workspace in the studio in three distinct but interlinked meanings. The first meaning is the open space surrounding a group; the second is the surfaces being worked on, tables and movable pin boards. In short form these two can be called, the space to be in, and the space to work on. Thirdly, there are the resources within the space, including furniture such as tables, tools, computers, lockers and movable pin boards.

The Workshops

The workshops are carried out in the time period from first of September to the ninth of November. The workshops varied in length from one week to two and half weeks. The five workshops the research is based on are: Design Games, Styles and Crafts, Experience Interaction, Design Space and Tangible Interaction. Styles and Crafts and Experience Interaction were both part of a larger course called Interaction Qualities but for the purpose of this paper are being discussed as two separate workshops.

The students participating in the workshops come from a wide range of disciplines and have a wide variety of skills. The varied backgrounds of the students are split roughly into thirds, between Design, Language and Culture, and Technology. The workshops are characterized as 'hands on' and involving lots of co-operation within groups. The pace of the workshops is relatively intense, and time is definitely seen as a limited resource.

Changes in the studio space

Second year students who are working on a project regarding space for their thesis design set up the initial layout for each workshop. When the first year students meet to begin a new workshop, they find that the studio has already been set up. Throughout the natural course of the workshop different activities would take place and the students would make changes to the studio space to a greater or lesser degree according to their needs. Based on the before and after maps of the studio space it can clearly be seen that varying degrees of change took place within each workshop, and within different areas of the studio.

For example, the Styles and Crafts studio layout is divided into two areas. The 'Crafts' half is made of cubicles – completely self-sufficient units in which students, in groups of two, sharing a computer, edited video. The 'Styles' half is a more open arena. In this area eight students had to work on a collective task of making four posters, but with only two computers. By comparing the before and after maps it can be seen that no changes have taken place in the Crafts area, but many changes have taken place in the Styles area. There appears to be a relationship between the availability of the resources needed to complete the task and the amount of change that took place within the space.

Another example is the Design Games layout. In this project students had to develop a concept for a board game and build four finished prototypes. The workshop was characterized with group work, starting with group discussions, and moving onto more practical work of construction. Comparing the before and after maps shows that all groups have changed to some degree. Here there appears to be relationship between the number of groups in a single space and the amount of change. Groups that had their own space moved less from the original layout. Where two groups shared a

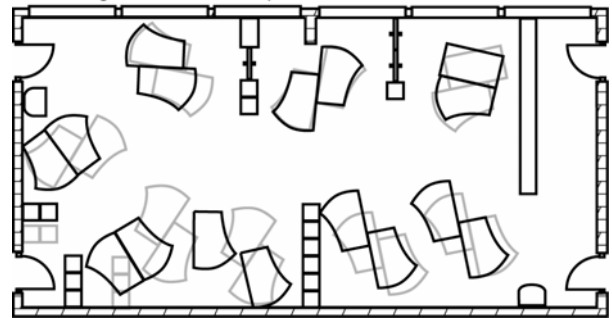
space (i.e. had no barriers between them) the amount of change was the greatest.

The next section of the paper will look more in depth at several examples. It will compare changes that took place in the studio space to our three space terms: space to be in, space to work on, and availability and distance to resources.

The Space to be in

If we look at one of the workshops, the Design Games Project, which was a project where it is very important to note that there was a design class from Umeå, Sweden joining this project, we see some clear example of students moving furniture. However, the furniture being moved around might not give a clear example of the situation in this project, since there were twice as many people as usual and because of this the space was limited.

After Design Games workshop



After map of the Design Games Project

We found that some tables have been moved around. The tables in the upper right corner, by the door, have been moved quite a lot compared to the space that is available. A closer look at the interviews actually tells us, that these groups, situated at each set of tables, at an earlier stage were one group. In the interview with one of the students (Student 1), her team mate (Student 2) expands: "*We were together with this group (she points at the table next to her), so we were like on one table when we split*". So they began as one group, and then they split into two. What made the team divide the tables then? As a starting point the two groups had the same data they had to base the games on, so why could they not stay at the same tables? According to the interviews privacy was a very big factor in this decision. Student 1: "*We wanted to get some private space to work more on our own, sometimes it is too much, because it is very close "..." I think it is good to sit in the corner*". So even though they are both in the same situation, a little work privacy is preferred. In the Design Space project we see one more example of this. The before map of the Design Space project shows an open table in the middle of the room, completely without any interference to the other tables. In an interview about that workspace a student (Student 3) was asked if there was something that could have improved her workspace, to this question she stated: "*Maybe if it is more space, so we could isolate us a little bit*". She is then asked the question, if she would like it better if she were working in one of the corners. To this she replies: "*Yeah, there would be more private*". Not all people like to be looked at by the rest of the group while working.

In the project of Design Games, a student (Student 4), whose group in this project chose to take their production to another room, talks about his separation from the rest of the class, his

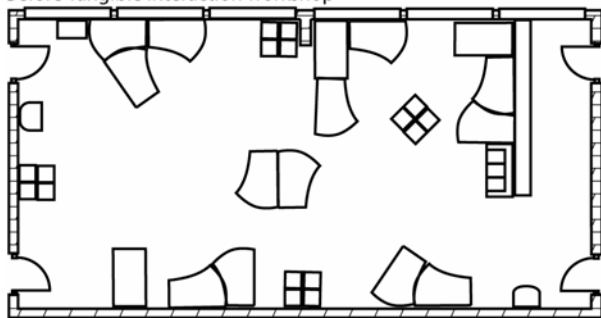
comment is: “It was very private and we worked well there, because it was kind of quiet”. However there are two sides to this problem. Because although privacy is wanted, it can go in the other direction, and thereby simply cut the group off from all class activity. Student 4: “One problem... we were quite separated from other groups”. So the degree of privacy in this example was simply too much.

The Space to work on

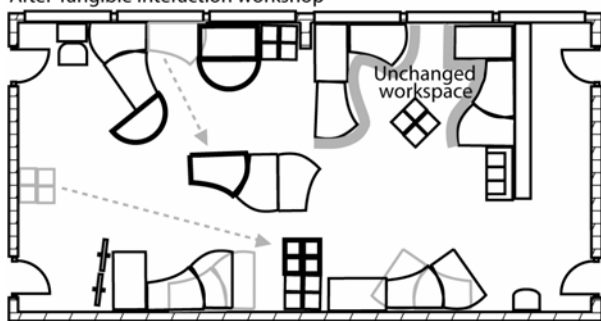
When looking at the after map of the Design Space course we saw how the lower table in the middle, has been moved away. This table was not being used, so to create more open space it was moved down to the window. These tables were redundant, that is why they were moved.

In the Tangible Interaction course, where the assignment was to come up with an electrical prototype there were added some tables to two of the groups. This may be because of the type of project. The table in the middle, and the one on the upper left side, had a new table added. In this project more workspace, was required. This was the same problem in the Design Games project, where the workspace was a problem. A student said in the interview to this case that: “I need some more space for the cutting...”. So in creative processes where you are producing something tangible, it is necessary to have enough table space.

Before Tangible Interaction workshop



After Tangible Interaction workshop



After map of the Tangible Interaction course

On the other hand, it is not always desirable to have a lot of table space, when you are working on more conceptual projects. The large tables actually obstruct the dialogue in between the group. In the Interaction Quality, a student (Student 5) talks about her group, which was placed down in the right corner. She says: “We would like a group table, a large group table, so you have room to work and still sit

together and discuss”. This implies that there is a fine line between the table being too big or too small.

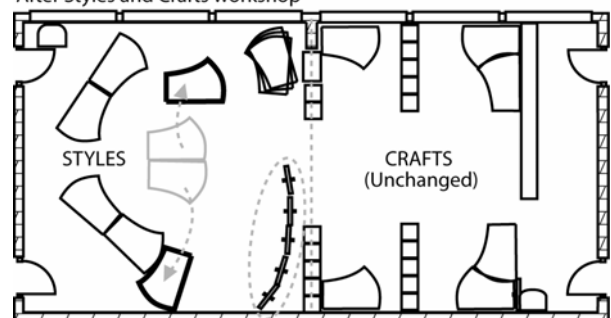
Availability and Distance to resources

In a studio with several independent groups but only a limited amount of resources, such as computers, cutting tools and pin boards, it can be difficult to use the workspace efficiently. Going too far away to use a resource may have the result of separating the members of the group. In the question of going to cut in the workshop instead of the studio in the Design Games workshop, Student 4 replies: “In this situation no, because I am not just cutting, I am working doing this process where I am testing this and that...If I am working over there, there is just no way I am going to come over here and ask for advice on such a small thing... We need to be working together, also with cutting.” So to take out one member of the group to cut and glue, means to take that member all out of the group process. This is not very considerate towards the group. So what he later on suggests is to get more tools. “It would be different if we had a thousand things”. This way the students do not need to go to the workshop, and thereby separating themselves from the continuing work going on in the group. However it is important to note that this is only appropriate for some activities. It is fine for cutting and gluing, but as soon as you need to work with wood or metal, the studio it would be inappropriate.

In addition, continually sharing resources uses more time, in comparison to each group having its own tools.

About the sharing of the tools, it should more or less self-explanatory that waiting in line to do some work on a computer is never good and that the removing the members of the group to find a computer and wait in line for one raises the same problem as mentioned before, namely that you separate the members in a group, to make them do their work.

After Styles and Crafts workshop



After map of the Styles and Crafts workshop

The after map from the Styles and Crafts workshop shows how the mobile pin boards have been set up so that the group can have a permanent overview of their work. In this project the group was supposed to create posters summarizing the timeline of the Bang and Olufsen products. Here we really see the value of mobile tools. The group could move the pin boards to a place that was close and appropriate to the group. The group could then gather around the work but still be able to inhabit the space the way they wanted to.

CONCLUSION

This research has shown that, given a flexible system, students will to a degree change their studio space in an effort to better suit their activities. Based on these changes it should be possible to deduce guidelines for setting up a studio. In addition, this research has also shown that even if the barriers to change are low, that students will not change their studio space if they find that it is already suitable for their purpose. From this we can ascertain that setting up a studio to match the activities that will take place within it will make a more efficient and much faster workspace within which designers or students will be able to make their projects.

Although our intention was to arrive at a set of guidelines, we have not managed to gain a clear picture of the exact relationship between the various layouts and their effect on the design activities. Nevertheless, we feel the results of this study show that there are patterns and that with more research such a set of guidelines would be possible. In the meantime, we can present some more general guidelines.

When you set up a studio setting, you want your groups to have privacy, but still not so much that it interferes with your work and in that sense, isolates the group from class activity. This is the same with open space versus the workspace.

Depending upon the project the groups are working on there should be enough workspace for the groups to feel free in their creativity, while at the same time there should be enough open space to feel free in their movements. On the other hand the workspace should not be so big that it more or less makes the group feel separated. This is the same with the tools and computers available. There should be enough tools and at least one computer in a group's workspace. This is all to avoid the group being split too much apart.

We believe basic guidelines for setting up a studio space could be developed based on these three main considerations.

- Privacy – the space to be in
- Workspace – the space to work on
- Resources – distance vs. availability.

However it is very important to note that any such guidelines can be overdone, and that it in that sense is all about finding the right balance. While all these above factors feature in the studio set up, the weight of each varied between projects. For a good studio set up they all must be adapted to the projects. Our main conclusion is therefore, Match the Space to the Case.

Give thought to the activities that will take place during the workshop, and match the studio space after that. For example, is there going to be a lot of talking in groups, then priorities a larger open space, and less workspace. On the other hand, if large, involved prototypes are to be made, priorities workspace and availability to resources.

The main guideline for setting up good studio environment is therefore to do so in a considered manner in comparison to the activities that will take place in the studio.

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