

Drawing lines through the invisibles: Mapping and reframing visibility of work through an ethnographic study

This paper elaborates on an ethnographic effort of a workplace design project. Examples and analysis of fieldwork instances are presented with an emphasis on the issue visibility of work in relation to the dynamics of identity among members of a design research group at a university setting. Through further analysis of social interaction instances, the role of actors and space seems to be dynamically influenced by the ‘invisibles’ of a workplace: identity, quality, efficiency, social interactions, limitations, and power structure. Re-framing and mapping give insights to the dynamic and nuanced relationships of the invisibles and thus further challenges the rigid de-contextualization of notion visibility of work. This study has told us that visibility of work is a sensitive issue to the group and thus requires careful understanding of the invisibles. All these are put forth with hopes in a grounded starting point for participatory, user-centered efforts in this workplace design.

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INTRODUCTION

Studies in the fields of collaborative design practices have given both the design industry and community a range of insights regarding issues of communication [1], technology [4] and social interactions [3] in various workplaces. Not surprisingly workplaces in the academic settings have received much less attention; no doubt due in part to the fact that it is largely academics conducting studies in the first place. Even those set in universities mainly focus on the design process carried out by design students. What about the practices by design groups that are part of an academic institution?

My motivation

As a design student, I have occasionally wondered about the dynamics that take place among researchers and designers at an academic setting. Though it seems that such setting would embody similar, if not less complex social interactions among the practitioners, the idea of interaction within an academic group might embody different dynamics of social issues compared to those present in the industry setting, such as: purpose and goal of design work, organization structure, project management and participants, and design limitations or freedom that seem to have a major implication on the process and result of design projects.

Workplace design

In this paper, I focus on the idea of visibility of work in relation to the dynamics of identity among members of a design research group at a university setting. Much of the findings have become a starting point for the redesigning project of the group’s studio, in which I have been partly involved. Before I demonstrate some of the main findings from this study, I will first describe the nature of the design project. From a number of insightful events during my involvement in the project, I have picked an event that challenges my initial understanding of visibility of work. I will then present the analysis of this event, which I have used as a stepping stone in exploring the role of researchers and the interactions among members of this research organization. This leads to the interpretation of visibility of work and reframing of the term due to conflicts found in the main event.

Following this, I have attempted to draw some lines between the term visibility and issues that seem to socially influence their work. In this study, I refer to these issues as the *invisibles*, since they seem to be part of values and meanings embedded socially in the group’s daily interaction. This effort has brought me to understand that the lines should be understood more dynamically as perhaps flow, since the invisibles are constantly changing and evolving.

The lines I have drawn are of course open to be reconnected, redirected, or redrawn to fit or make sense of design practices at other workplaces. It seems to be of an importance however

to recognize there are nuances to the notion of visibility of work when looking at the interplay of social interactions, group identity, and design process.

DESIGN PROJECT FOR A RESEARCH STUDIO

Logic Design (LD) is a research group comprised of thirteen members of various backgrounds such as Industrial Design, Art, Computer Science and Electronic Engineering. Residing under the faculty of Industrial Design of a technical university, the group focuses on various research topics regarding product and service design. The group was founded five years ago, around the time when the Industrial Design program started.

The LD group was first located in a strategic location (see Figure 1) at the university where students and other members of the faculty were free to interact with the group. In September 2004, the group was moved to a new location (see Figure 2) still within the same building, but less attractive than the site before. The group seems to manage spontaneous arranging of the space. Tim, one of the assistant professors, had mentioned that the studio seems to grow without a specific design plan in mind. Patrick, a PhD student, has also mentioned that they seem to keep the seating arrangement from the previous studio. Despite having a workable studio to work in, the group had decided to do something further with the space. My role in the project was as an observer to explore possible design proposals for the studio together with members of the LD group.



Figure 1: The old site of the LD group

METHODS

The LD studio project was collaboratively proposed by both the LD group and a faculty member at the university I'm currently attending. My participation in the project was established based on my interests and ongoing thesis project in workplace design. Together with Tim of the LD group, who is in charge of the studio project, I have planned the first stage of the design process to be an ethnographic study, where I would be able to gather some data from the field through various observations and interviews with members of the LD group.

Field data such as notes, sketches and pictures were collected throughout a two-week period, by observing group members' activities and their interaction with each other and the space. Five sets of individual interviews were also collected to complement my observation data. During the two-week study, I was able to participate in group activities together with members of the LD group, such as attending group meetings, a lecture and a design workshop, and also the ones that are less informal like lunch and coffee breaks.

VISIBILITY OF WORK

The term visibility in the case of the LD group emerges first from the interviews regarding improvements that can be implemented to the studio space. Though other issues such as storage, personal space, efficiency, etc. were also mentioned, visibility was emphasized in greater length.

Visibility, as described by Patrick is an indication of the group's presence. He describes:

It's a bit unpleasant here. I wish to have some of our designs enlarged on the ceiling, so that at a glance, it's clear that we're here. We need to be a bit more open. A visibility of our own group.

Jeff, who sits next to Patrick also emphasized on the quality of visibility: that the space could be made more visible as a design statement. One solution that he offers is to invest in nice furniture which serves not only as an invitation but also design statement to the group's visitors. Perhaps, visibility is more than an indication of the group's presence. Sam, also a PhD student described visibility as if it is more an indication of work identity:

What we have now is not representative of what we do. This place doesn't look like a design studio yet. There are no traces of what we've been working on. I would also like to see more models, different objects that you can use to help get your ideas across to students, faculty members and guests.



Figure 2: The new LD studio

Though Sam statement seems to agree with Patrick and Jeff about the look of the studio, he also suggests that there are elements of design work that improve the visibility of the group: design models and objects. These models and objects perhaps can be seen as artifacts representing or inspiring the activities that they do thus be a symbol of their work identity.

Based on these interviews, the notion of visibility appears to be related to the idea of being noticeable and represented as a specific kind of group, involving specific work activities, identity and perhaps values. They wish to be more visible to the outsiders. The reasons they have given seem to be closely related to the physical characteristics of the studio: unpleasant, lacks of inspirations, and less open.

The interviews had also shown that some of the statements were based on their comparison with their previous studio, which was located in a more strategic place of the building. If their need of visibility is simply because of their studio now needs to be improved to the way it used to be like in the old site, then the solution to the problem would be simpler: tear

down the front walls and add some nice looking furniture. Having the task to redesign their studio space, it is tempting to offer such straightforward solution. But are these the only solutions that will solve visibility of work problem?

GROUP MEETING: VISIBILITY OF WORK REVISITED

Beside several individual interviews and general observations of the studio, I was able to participate in several activities in which the members were involved.

One meeting that I attended was a weekly meeting for the Logic Design group. In the meeting room there were 13 participants, including myself. At the head of the table, there was Luke, the main professor, which in this case is the leader of the group. By this time, he had already laid out the agenda of the meeting: “research”, “housekeeping”, and “education”.

“Research”

The meeting started off with Luke explaining the importance of re-shifting research focus toward healthcare issues. He described some of the trends in the academic fields in Scandinavia and the rest of Europe that research is being focused on the future of healthcare. Some of the participants in the meeting, specifically several PhD students showed some concerns about the relevance of their research to the healthcare field. Tim opens up the discussion:

T: Why all of a sudden healthcare?

L: Yes, this is something that had been discussed by some people at many sites both on the industry and academics. We have an obligation to contribute and participate in this, in a way. There is a reason behind this, and it's because that there are many improvements can be done in healthcare. We're talking opportunity to do what matters. From conferences, we have heard and seen good projects taking the lead into this direction as well, using ambient technology not to only design lighting of a room, but also think what we can do to help.

J: But, what about my digital camera?

L: I understand. But as I said before, we have an obligation to fulfill what we have promised. We are expected to put in more, especially now towards healthcare. Of course there will be a lot of paperwork involved in this. This is not a shock for us, since there will always be paperwork. Keep in mind that we also work with high quality, both in our designs and publications.

[J: Jeff, a PhD student; L: Luke, main professor; T: Tim, associate professor]

My first impression of this exchange was that Jeff's question sounded a bit feisty and daring, challenging Luke's reasoning for the change of direction. Considering that it was a weekly group meeting, in a way, Jeff's question sounds very direct, concerning his own personal project. Jeff, as a PhD student, has been working with students in the area of tangible interaction for digital camera. In a way, the question almost sounded as if it was a selfish protest coming from the lower level of an organization, disregarding the leader's attempt in evangelizing the good deed of working on healthcare issues.

However, from several interviews before the meeting, I'd found out that most projects the LD group has been working on are in the area of tangible and emotional interaction design in various consumer digital products. Perhaps, Jeff's question wasn't all that selfish or complaining; instead he seems to speak for other projects that are running in the group. Why then didn't Luke offer a clear answer to the question? His argument sounds very convincing and inspiring, but his response did not answer Jeff's question.

While it may seem to be a normal discussion taking place during a re-shifting of an organization's focus, as an outsider, I found it surprising to hear the contrasting tone of voice of both characters. While Jeff's question almost seem to express disbelief, Luke's tone of voice sounds a lot more composed, trying to explain the reasons of the organization shift. Perhaps it is a natural reaction for a leader to be able to stir and lead the discussion, thus the calm and long explanation. Luke's sentences seems to run fluently as if he was putting a lot of effort in trying to make sense of his argument, in a very indirect way. Instead of giving an answer to Jeff's question, Luke emphasizes on the importance of the new direction and the group's obligation to contribute to the new research direction of healthcare.

What does this say about visibility of work of the DI group? As described by the three PhD students, visibility that is needed has an outward direction: the group needs to be recognized by their guests, students, and the rest of the university. But this idea seems to be contradicted by Luke's reaction to Jeff's question. If Jeff's work is visible to Luke, why didn't Luke answer the question and address the importance of healthcare in relation to Jeff's digital camera project? If visibility is indeed the problem, would Luke specifically address the importance of healthcare in relation to Jeff's digital camera? Maybe visibility of work as described in the interview is not the cause of Luke's indirectness. Luke's first sentence when answering Jeff's question is “I understand”. This can be seen as an evident of the visibility of Jeff's work and also concern about his project.

However, Luke's long explanations sound more persuasive and less authoritative. Though Luke holds the role of a leader, he seems to put himself and Jeff (and the rest of the group) on the same level by using words like “we” and “us”, instead of “I” and “you”. In the beginning of this session, when explaining the importance of healthcare as the new research direction, the reasoning that Luke offered also has this persuasive tone. He uses phrases like “do what matters”, “obligation to contribute”, “good projects taking the lead”, and “what we can do to help”. It sounded if Luke is asking the group to choose healthcare because of its moral values, almost making those who are disagreeing feeling bad about not agreeing to his argument. This is a strategy that seems to work in persuading the group to take the proposed action.

Luke does this by presenting the strings of argument within an interesting narrative framework. He uses a storytelling method to lay out all the points that led up to the climax of his argument, which is to pick up their research direction towards healthcare issues. Though Luke's argument is closed, leaving very little room for the group's feedback, he was able to stage selected issues and values that are important for the group to have. Schriffin [2] has identified persuasive devices of storytelling, namely:

- Selective interpretation – recounting aspects of the event preferred by the narrator
- Evaluation devices – highlighting parts of the experience from the narrator's perspective, to show the narrator taking an orientation to what is being talked about
- Deictic shifts – shifting time, place and participants from the conversational world
- Contextualization - framing and event within the story world [2, p. 338].

Luke's long explanation is an evaluation device in which he manages to place himself, as the leader and also a member of the group. His response to Jeff's question seems to show this idea of evaluating the experience, or the question, to which he decided to contextualize into a greater setting, where the group

has moral obligation to the industry, the university and the research community. In his arguments, Luke uses deictic shifts, especially in his response to Jeff's question. He shifts the topic of the discussion from what can be done with projects that are currently running to reasons why they need to start working with issues in healthcare. In a way, Luke's persuasion tends to be general and indirect to Jeff's personal question. Perhaps this round about nature of Luke's answer reflects the level of his interaction with Jeff and the group in general. This might be due to the fact that Luke has his own office, located across the LD studio, on the other side of the hallway. The spatial gap that separates Luke from the rest of the group can be seen as a visibility problem within the group. In this case, the improvement of visibility of work holds the notion of improvement of social interaction among members of the LD group.

"Housekeeping".

The second session of the meeting was housekeeping. Two assistant professors, Tim and Paul, had been appointed to be the committee that is in charge of the redesigning of studio project. Paul started off by describing the updates and development of the space project. Budgeting which then presented by Tim seems to be the opening of the discussion during the meeting.

T: We just got some news from the carpeting people and they basically have rewritten the bill with a fork. Now the cost of cutting the carpet diagonally will triple what we had in mind. Added on top of that is the painting work.

C: Why can't we do the painting our self? We can see it as one of those team building exercises.

F: Yeah, can we do that?

C: Sure we can. I am not sure when we can do this though. We don't have too much time during the week. But I am willing to come in on the weekend and if we all show up, we can finish it in no time.

S: That sounds okay.

T: The problem with that is we have high ceilings and some of the walls are just too high. We need some, what do you call those?

S: Scaffoldings.

T: Yes, scaffoldings and they can cost quite a lot. Some of us have been thinking also about using the wall as space to hang some poster boards.

L: That's feasible.

F: Bill Sawyer tried it for a year and they still have them up all along the walls in the hallway.

L: Can you (Faye) coordinate it?

P: If you want to do that, then you need to think about the content. I mean, Ben and the people upstairs tried it but they never really put that much effort into what goes in it.

L: Good initiative and this needs a good follow up. I am asking you, Faye to coordinate this.

F: Yes. We can set a good example for the rest.

L: I will sign for the poster boards.

F: Great. And we already have our own plotter for those posters.

[C: Chase, associate professor; F: Faye, artist; L: Luke, main professor; P: Paul, assistant professor; S: Sam, PhD student; T: Tim, assistant professor]

Compared to the previous session, the discussions in this session seem to be less rigid and more interactive; almost everyone in the room is able to contribute. The discussion is interactive since there is a considerably balanced give and take between the group and the coordinator team. The team presented updates and problems and responded by the group giving ideas and possible solutions.

Financial limitations, like in other design projects in general, seem to be an important issue for the LD studio project. I found the solution proposed by Chase was very unique to the team. As Chase proposed, it might be beneficial to and more affordable for the group to paint the studio themselves. He tried to convince the group to solve the problem together by showing his willingness to work on the painting on the weekend. Though Chase's proposal wasn't feasible, several people were able to respond back. The idea was discussed several times before it was decided. It seems that perhaps Chase's idea or his way of presenting was more personal and less dominating, leaving room for the group to interact and contribute.

Another issue that emerged from this session was identity. It almost appears that several members of the group were concerned about the group's status in comparison to the rest of the university. Faye's remark on setting up a good example may have sounded as if this is worth emphasizing in the meeting. She had also mentioned earlier about another person (Bill Sawyer), who had tried to present their projects and work using poster boards. Perhaps, this is closely related to the visibility issue that was mentioned by the PhD students in the interview.

Discussions during the two sessions described above seemed to focus on what may be defined as the 'invisibles' of work. Issues such as identity, quality, efficiency, interactions, limitations, control, and group dynamics did not emerge from the interview. However they do emerge, directly and indirectly, from the discussion that took place during the meeting.

What relationship do these elements have with each other in shaping the notion of work of the LD group? Are there any significant relationships between these categories and the framing of visibility of work? Data from the interview suggest that visibility of work involves the improving the design of the physical workplace. Categories emerged from the analysis of the group meeting have given insights about the social aspects of visibility of work. How can these invisible elements implemented into the physical design of the LD studio, to improve the visibility of work inside and to the outside?

REMAPPING VISIBILITY, CONTEXTUALIZING CATEGORIES

The notion of visibility of work as mentioned in the interviews refers to the ability of the group to present their work and identity outward. Though this might offer a straightforward insight and strategy to the ways of improving the design of the workplace, the issue deserves further investigations by taking into account the invisibles of work:

- Group and personal identity
- Work responsibility and activity
- Control and power structure
- Social interactions, and
- Work limitations

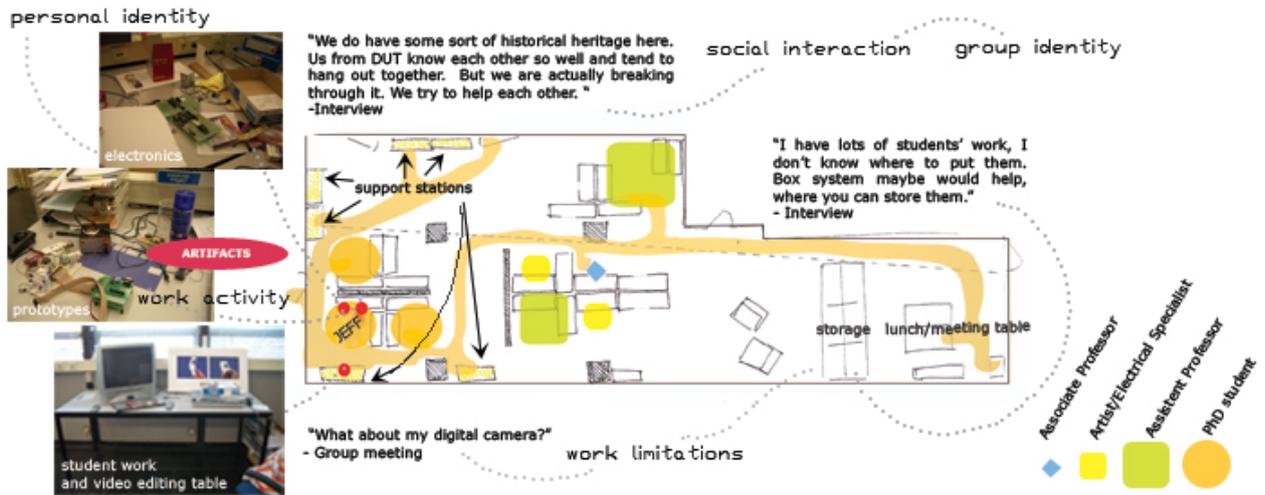


Figure 3: Activity Map 1

Having data gathered before, during and after the meeting, it seems to be an importance to analyze for possible interconnection, contradiction, or association between different accounts of data in relation to the idea of visibility of work, observed from one or combination of several perspectives.

Remapping or reframing visibility of work, in this case, involves the laying out of interview statements that refer to visibility. These quotes then are compiled together with the LD studio floorplan, which shows areas of action of each individual. Each individual's activities, quotes, traces of work, and design artifacts which then mapped onto a copy of the studio floorplan can be seen as a map.

From Activity Map 1 (see Figure 3), we can see that Jeff makes more use the support stations, specifically the ones that are located close to his desk. Two design prototypes of his current projects are located on his desk, while a stack of poster board and electronics are located on the video editing table that is located behind his desk. His interaction with the rest of the group seems to be limited to discussion sessions taking place at Chase and Tim's desks. Jeff had also mentioned about a specific social interaction among several people who came from the same program. Apparently out of 5 out of 13 members of the Logic Design group have worked together before also at an academic setting in DUT. This can be seen as a challenge for both the DUT group and also for the rest.

When being asked about improvements that can be done to the studio space, Jeff wished that there are more storage spaces available for his students' work. It seems that in Jeff's case the wish for visibility of work emerges from the condition of his work desk which is located in one of the corners of the studio.

The access to the video editing table is not as open as the one to the electronics or cutting station. This might lead to isolation, especially since there isn't much traffic or social interaction taking place at this corner.

Visibility of work for Jeff might also refer to the fact that his meetings with students which takes place in the lunch area is located far away from his models and other students' work. Suchman [5] suggests that problems in organization sometime arise due not to the incomplete representation of work, but because of the spatial distance between the site of work and the place of where these artifacts are stored. The combination of inadequate storage space and isolated work desk can be seen as a factor contributing to the invisibility of work.

Similar to Jeff's case, Sam seems to make use the support stations that are close to his work desk, as well (see Figure 4). Piles of his publications can be found on his desk, and several pages of his PhD dissertation are posted to the pillar next to the coffee table. Since he is now in the process of editing and finishing his PhD dissertation, Sam spends most of his time reading, writing and editing. Different from Jeff's case of

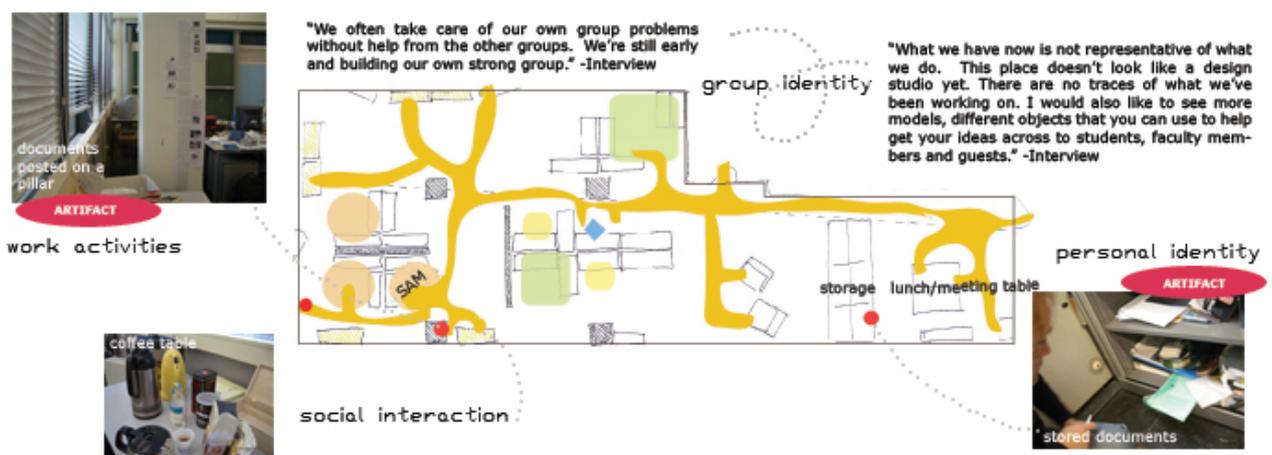


Figure 4: Activity Map 2



Figure 5: Activity Map 3

visibility, Sam has been using a green chalkboard and the pillar as easels to present his work progress. Regarding interaction, though located close to the corner, Sam is still close enough to the coffee table which is frequently visited by almost all members of the group. Possibilities of social interaction are high due to a great opening of the coffee table and its function as stop-over of the group in-between sessions and activities.

In connection to identity of the group, Sam had mentioned the independence of the group in solving problems. This seems to reflect the initial idea of projecting group's identity but instead of only outward, it also works inwardly. In Sam's case, visibility of work may be interpreted as the openness of communication and sharing of inspirations, methods and tools that are being used in various projects. Sam had mentioned the independence of the group in solving problems. This seems to reflect the initial idea of projecting group's identity but instead of only outward, it also works inwardly. In Sam's case, visibility of work may be interpreted as the openness of communication and sharing of inspirations, methods and tools that are being used in various projects.

Chase's desk, as shown in Activity Map 3 (see Figure 5), is located in the center of the room. As the associate professor of the LD group, Chase acts as the leading supervisor to the PhD students. Most of his works can be traced from the stack of publications stacked on his desks and also at the studio's library. He describes the quality of the open space which helps the "mixing between designers and non-designers". Metaphorically, Chase's role in the studio can be seen as the motor and the blade of a mixer that mixes the social interactions within the group.

Chase's concern about quality reminds me about the dilemma presented by Luke in the last session ("education") of the meeting. As Luke described in the meeting, the LD group is presented with two challenges that are difficult to tackle simultaneously.

High quality and efficient work at the same time require good collaboration and strategized project management. This could also be related to Chase's idea about the challenge that their multidisciplinary team faces when working together. In a way, visibility of work in Chase's term is a condition of an open space supporting the mixing of various skills and knowledge in improving the quality and efficiency of work.

From the three maps of visibility of work above, we can see that the definition of visibility of work is very much related to the contextual setting of work. Even within one same group, visibility of work differs from one person to another. When it comes to developing workplace design concepts, it is important

to realize the fluidity of visibility of work that seems to be influenced by the work categories or the invisibles of work. It seems to be an importance to carry several sets of thorough investigation of the invisibles and the way they are contextualized within the physical space and social interactions.

DISCUSSION

Recap

As illustrated and described in the previous sections, my approach to the early stage of the LD studio project had been done in the manner of a two-week ethnographic study. I was able to observe and analyze various field data ranging from the description of physical space of the studio, interviews with several members of the group and an account of one of the weekly group meeting.

The emergence of visibility of work as an issue to be addressed originated from several interviews with some members of the LD group. This doesn't mean that visibility of work is the only issue that needs to be solved and addressed in the design of the LD studio. During a later phase of observation of the LD group I stumbled across an important event, a group meeting, in which my previous understanding of visibility is challenged to be re-contextualized. This had led me into trying to focus on the notion visibility of work as a point of reference in exploring my field observations and notes.

From the analysis of the exchanges that took place during the meeting I have been able to identify five issues regarding social interactions that somehow seem to influence this notion of visibility of work. These issues, or as I referred to as the invisibles, though they are very much influencing the group, they are not tangible or visual. It became a challenge to use this understanding in developing concept for the physical design of the studio.

By mapping them out in relation to an image of the physical space of the studio, I had been able to see that the notion of visibility of work for the LD group should not be addressed simply by making the group's work more visible, but instead, that there are nuances of visibility which the design team needs to be sensitive to. These nuances are very much influenced by the following invisibles of workplace.

Group and personal identity

Visibility of work involves the physical qualities of what can be visualized. In a way, this can also mean that it also describes, perhaps indirectly, what's missing from the visible. This is what seems to be captured by the PhD students in the interview. They were able to explicitly describe the need to be

visible to the outside by looking what's visually missing from the physical space. However, it is important to re-visualize the meaning of the poster boards, models and design object and relate them to a wider or more specific context. From the meeting we have found out that the presentation of poster boards in one way can be defined as a way for the group to express the group's identity. Sam's dissertation pages were posted next to the coffee table can also be seen as a way to project his personal identity. Though the notion of identity seems to be too personal to individual, it is important to realize that visibility of work can also be contextualized to fit in a group's perspective. This challenges the rigidity of my initial frame of visibility of work.

Responsibility and activity

Identity works hand-in-hand with the notion of activities and responsibilities. In a way, identity can be seen as an actualization of activities with requirements which are described in the responsibilities. All this relates to the quality of work. In this sense, when looking at visibility of work, it is helpful to understand the way quality influences responsibilities and activity of work that take place in the group. The discussion in the meeting about the obligations and activities that have been set by the board of education reflects a certain level of importance of this issue to be considered in the framing and defining of visibility of work. Reasons for how much visibility or which visibility of work should be presented are examples from the meeting which reflect the social indistinctness of visibility of work.

Control and power structure

The discussions that took place during the meeting can be seen as an indication of the dynamics of control and power that may reside not only inside the meeting room, but also structure the process of negotiation and interaction of work within the LD group. The analysis on the discussion on the shifting of research direction suggests that the one way of interpreting visibility of work seems to be too naïve and too limiting. When it comes to understanding visibility of work, it is important to consider the nuances of control and power structure that exists in the organization.

Social interactions

Though the initial framework of visibility of work addresses the need of outward interaction, it assumes one harmonious way of social dynamic and relationships among members of the LD group. The arguments, collaborative discussions, and agreements have shown a short glimpse of the richness of social interactions among members of the LD group.

Work limitations

Work limitations can be seen as the underlying factor of the realization of visibility of work. Though the term limitations almost cover too wide of a field, it thus seems to have a great importance to be investigated further on a more concrete level, contextualized to the real work practice. One example of an exploration of this can be seen through the discussion that took place in the meeting regarding the painting of the studio. The group was able to express the different levels of limitations such as budget, time and expertise. This gives an insight of the nature or character of group and also individual member.

Being aware of the condition of work through its limitations gives a wider perspective and perhaps a better understanding of their work practice.

CONCLUSION

From the study of the LD group, I had come across the notion of visibility of work, which initially seemed to be an easy starting point to work with. However, the term turned out to be richer and intricately connected to the invisibles of work. From my observation and interviews with the LD group, the invisibles are social issues that are strongly influencing the group's interaction: group and individual identity, work responsibilities and activities, control and power structure, social interactions, and work limitations. Because of the intangibility and richness of the invisibles, I was challenged to map them to the physical outline of studio. This turned out to be a powerful and useful approach to contextualize the invisibles onto the physical space.

From this approach, I have learned that the invisibles of work are fluid, strongly and weakly correlated to each other, depending on the context to which they are being applied. An understanding of these categories under specific conditions contextualized to the design subject gives direction to the possibility of a greater understanding of the visibility of work.

What this has told us is that the design team should be able to delicately treat the notion of visibility of work of the LD group. The design process needs to be sensitive to how the group is influenced by the nuanced invisibles. For the LD group, there are still more works to be done. The project needs to consider how visibility could be improved to support their work progress, in such way that the design does not limit the group's social interaction. Another issue that needs to be considered is that the medium in which their work could be visible should be able to represent the group's identity. Perhaps it could be designed as a dynamic medium, which could be manipulated interactively by members of the group, for an example, poster boards or digital showcases. The design of the LD studio still needs several more concrete decisions made by the group and the design team in tackling the details of the notion visibility of work. Still in the making, the project leaves room for a process that is participatory and user-centered.

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