

DEFINING A WORKPLACE EXPERIENCE FRAMEWORK: ANALYZING THE SOCIAL HEARTBEAT OF AALTO UNIVERSITY DESIGN FACTORY

I. V. KOJO¹, S. P. NENONEN¹ and E-M. SANTAMÄKI²

¹Aalto University Built Environment Services (BES) Research Group, Helsinki, Finland

²Aalto University Design Factory, Finland

e-mail: inka.kojo@aalto.fi

EXTENDED ABSTRACT

Organizations in both the public and private sectors are widely embracing new ways of working. A student-centred approach to learning is becoming more common and concepts such as "new learning", "new learning environment" and "constructive learning environment" have emerged. Learning environments need to evolve with the change in students' learning styles, aspirations and expectations. Today's learning environments should facilitate meaningful, authentic activities that help the learner to construct understanding and develop skills relevant to problem solving. The use of university spaces is transforming. Formal learning, which has traditionally taken place in conventional classrooms, is becoming virtual thanks to internet-aided learning technologies, whereas the need for physical spaces intended for informal learning is increasing.

The aim of this research was to understand the purpose and importance of informal social face-to-face learning spaces for their users. The model of "6 dimensions of user experience" was applied as a data-gathering framework in this study. The research was conducted in Aalto University Design Factory and is related to the user experience of its common cafeteria, "Kafis". Data were gathered by means of focused interviews among 16 users of Kafis, representing students, researchers, start-up entrepreneurs and staff members. The data were analysed by microanalysis by identifying repeating concepts from the data.

According to the results, it seems that the key function of Kafis is to offer a platform for socialization and sharing knowledge between its members. Furthermore, the metaphor "the social heart of the building" describes the importance of having this kind of place in the university environment. The social heart refers to a shared place that is welcoming to its users and has an open and cosy atmosphere. The research indicates that people create meaning for a place. Therefore, bringing people together is essential. However, to get the best outcome from these kinds of places, it is necessary to broaden the perception of work. In addition to individual work related activities, such as shortening the task list in front of one's desk, work could also be understood as something that essentially includes collaboration between people, such as interaction and knowledge sharing.

The research provided evidence of the suitability of the model of "6 dimensions of user experience" as a starting point for a workplace experience research study. Future investigations relating to workplace experience research will focus on identifying workplace experience profiles of co-working spaces for learning, including informal social face-to-face learning spaces studied in this research. The next step would be to conduct a virtual survey research study. For future research purposes, the workplace experience framework was generated in the research.

KEYWORDS

Informal social face-to-face learning space, Co-working space, User experience, Co-working, University facilities, Higher education

1. INTRODUCTION

Organizations in both the public and private sectors are widely embracing new ways of working. New ways of working refers to work that is increasingly digital, loose, informal and mobile (van Meer, 2011). This has resulted in today's workplaces being e.g. more flexible in the use of time and space, more welcoming to their users regardless of their age, and well equipped from the viewpoint of knowledge interactions (Myerson *et al.*, 2010). Similar change is taking place in the educational sector. A student-centred approach to learning is becoming more common (Lea *et al.*, 2003) and concepts such as "new learning" (Simons *et al.*, 2000), "new learning environment" and "constructive learning environment" (Wilson, 1996; Loyens & Gijbels, 2008) have emerged. These concepts are mainly but not exclusively rooted in constructivist theory and claim to have the potential to improve the educational outcomes of students' in higher education (Lea *et al.*, 2003).

The physical environment of an organization affects significantly its users' activities, such as teaching and learning processes and social practices (Jamienson, 2003; Oblinger, 2005). The traditional university campus facilities, like lecture theatres, have reinforced traditional narrowly defined roles by manifesting particular behaviouristic power relations between teacher and student (Jamienson, 2003). However, from the viewpoint of constructivist theory, the process of learning and teaching should be fundamentally student-centred (Lea *et al.*, 2003). Therefore, new learning environments need to evolve with the change in students' learning styles, aspirations and expectations (Matthews *et al.*, 2011). Today's learning environments should facilitate meaningful, authentic activities that help the learner to construct understanding and develop skills relevant to problem solving (Wilson, 1996).

Furthermore, the use of university spaces is transforming. Formal learning, which has traditionally taken place in conventional classrooms, is becoming virtual thanks to internet-aided learning technologies, whereas the need for physical spaces intended for informal learning is increasing (Brown & Lippincott, 2003; Brown & Long, 2006). For that reason, physical learning environments should include purpose-built informal social learning spaces. These spaces enhance the student experience and strengthen student engagement by fostering active learning, social interaction and belonging (Matthews *et al.*, 2011).

Understanding the user experiences in these spaces and the factors causing them can help the university facility managers to develop and maintain spaces that support new learning activities. The aim of this research is to understand the meaning of informal social face-to-face learning spaces for its users: what purposes it is used for and why it is important to have one. The model of "6 dimensions of user experience" (Diller *et al.*, 2005) was applied as a data-gathering framework in this study. The research was conducted in Aalto University Design Factory (ADF) in Helsinki, Finland, studying the user experience of its common cafeteria called "Kafis".

This paper is divided into five chapters. After the introduction, the theoretical background for describing an academic learning environment is discussed. The process and structure of the data collection and analysis is described in the next chapter. In the fourth chapter, the results are presented and discussed. Finally, the conclusions are derived and the limitations and implications for future research and practice are considered.

2. INFORMAL SOCIAL FACE-TO-FACE LEARNING SPACES IN A NEW LEARNING ENVIRONMENT

The concept "new learning" is used to describe today's learning. It refers to "new learning outcomes, new kinds of learning processes and new instructional models that are both wanted by society and stressed in educational and psychological theory" (Simons et al., 2000; Loyens & Gijbels, 2008). The concept is characterized by features such as effective communication, thinking and reasoning, making accurate judgements of large volumes of information, solving complex problems, and working collaboratively in diverse teams (Pellegrino et al., 2001). Altogether, learning theory has undergone a widespread change of paradigm from objectivism to constructivism (or from behaviourism via cognitivism to constructivism). Objectivism holds that there is an objective reality that can be structured and modelled for the learner (Jonassen, 1991). Constructivism can be seen as an umbrella term grouping learning perspectives with a similar basic assumption: the understanding that the learner actively constructs the knowledge (see, for example Duffy & Cunningham, 1996; Harris & Alexander 1998; Mayer, 1999). Understanding the way in which people create meaning relates essentially to the constructivist learning theories (Loyens & Gijbels, 2008). Yet, objectivism and constructivism can be seen as compatible despite their contrary nature: they offer complementary perspectives to learning (Jonassen, 1999).

Phenomena such as constructivism, digital technology and a holistic view of learning activate the major learning space design trends: design based on learning principles, an emphasis on human-centred design, and increasing ownership of diverse devices that enrich learning (Brown & Long, 2006). Informal learning, as an opposite of formal learning, relates to learning space discussion. Informal learning emphasizes the social significance of learning from other people. It refers to learning that takes place in spaces surrounding more formal activities and events and in a much wider variety of settings than formal education or training (Eraut, 2004). In higher education, students spend the majority of their time learning in informal settings. These spaces act as a medium through which the social and academic aspects of university life can coincide (Matthews et al., 2011). So-called "activity magnet areas" can help to create informal learning spaces. They refer to different kinds of environmental features and amenities that attract people and encourage them to interact serendipitously. Passageways (e.g. elevator frontiers), service facilities (e.g. copy centres) or food suppliers (e.g. cafeterias) are such examples. (Becker & Steele, 1995).

The concept "learning spaces" is suggested to replace the traditional term "physical classrooms" in learning environment discussion (Brown & Lippincott, 2003; Oblinger, 2005). These learning spaces, also called new learning environments, make the students' learning the core issue (Lea et al., 2003). A new learning environment is "a place where learners may work together and support each other as they use a variety of tools and information resources in their guided pursuit of learning goals and problem-solving activities" (Wilson, 1996). The classification of new learning environments can be seen in Figure 1. This classification categorizes the learning environment according to the dimensions of formal – informal and face-to-face – virtual (Digenti, 2000).

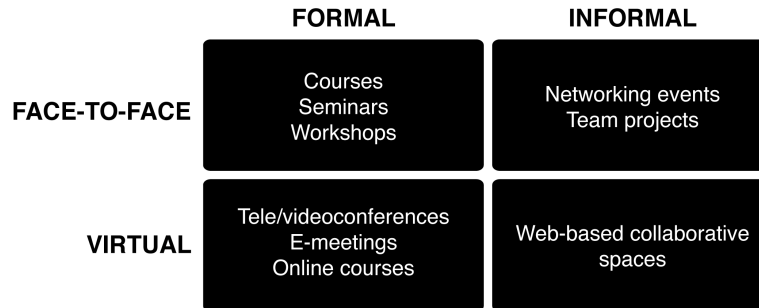


Figure 1: Four modes of learning (adapted from Digenti, 2000).

3. CASE: THE COMMON CAFETERIA “KAFIS” OF AALTO UNIVERSITY DESIGN FACTORY

“Kafis”, the common self-service cafeteria of ADF, is an example of an informal social face-to-face learning space. As seen in Figure 2, its 120m² are divided into five distinct functions: cafeteria, kitchen, dining room, living room and hallway. ADF was established in 2008 after a successfully conducted demo project called Future Lab of Product Design (Santamäki, 2008). It functions as a matrix unit that combines the expertise of Aalto University in the field of product development. The ADF building is a co-working space in an academic context of over 4000 square meters; it is designed to facilitate collaboration between academic teams, researchers, students, companies and communities. A number of academic courses, research projects and start-up companies are hosted in ADF. Prototyping spaces, rooms for lectures and seminars, teamwork spaces, and common areas (e.g. a lobby bar and cafeteria) are examples of ADF facilities. The physical spaces of ADF are designed to support easy modifiability of the spaces and interaction and collaboration between the users. In addition to traditional office hours, ADF is open for its users also during evenings and weekends. The ADF building is located in Otaniemi. Otaniemi is a part of the main city area of the capital, Helsinki, and one of the campus areas of Aalto University (ADF, 2010; ADF, 2011).



Figure 2: The five functions of Kafis.

4. METHODOLOGY AND DATA ANALYSIS

User experience can be seen as "a result of motivated action in a certain context" (Law et al., 2008). User experience has become relevant to many fields of research and industry due to its nature as a commonly understandable, holistic and all-encompassing concept that includes the user, the product and the context of use. User experience approaches can be divided into three categories: person, product and interaction centred approaches. Approaches relating to the first category relate to the idea that user experiences revolve around people's needs that products should satisfy, whereas approaches relating to the second category refer to the qualities of the design and their relationship to people's experiences and evaluations of them. Approaches relating to the third category examine the experience as a time related process (Battarbee, 2008). In this research, the concept of user experience is conceived broadly as a combination of all these three approaches.

The data was gathered by means of a qualitative research study, more closely "focused interviews" (or semi-structured interviews). Focused interviews include a sequence of themes and questions that should be covered with openness to changes in the sequence and forms of questions in order to follow up the answers given and the stories told by the subject (Kvale, 1996). A focused interview consists of certain attributes. Firstly, interviewees should be involved in a particular concrete situation. Secondly, the researcher should produce hypotheses relating to the situation. Thirdly, an interview guide or setting for the areas of inquiry should be created. Lastly, the interview itself should be focused on the subjective experiences of the informants (Merton & Kendal, 1946).

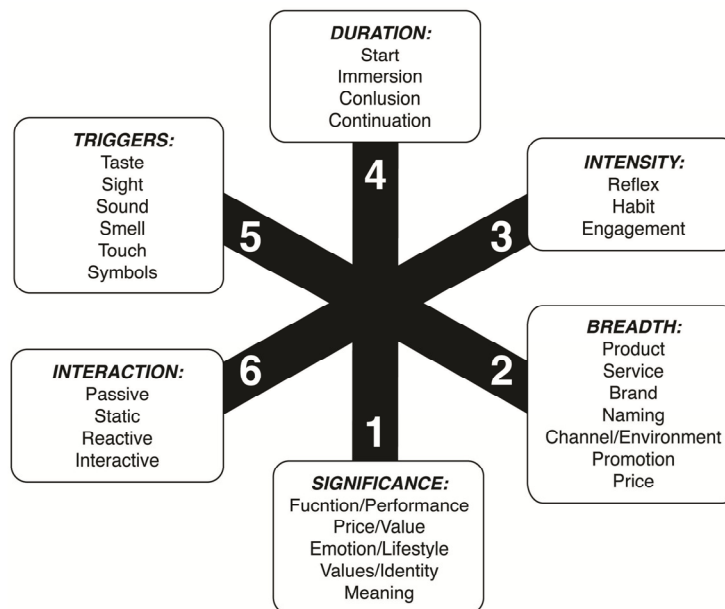


Figure 3: The model of "6 dimensions of user experience" (adapted from Diller et al., 2005).

The user experience of Kafis was the particular concrete situation in this research. The hypothesis of this research is related to identifying related to the framework of academic workplace experience. The interview guide of this study, which can be seen in Appendix 1, consisted of 48 questions in total. These questions were divided into three themes: questions relating to the background information, experiences of using ADF, and experience of using Kafis. The questions related to the last theme was further divided into

six sub-themes according to the model "6 dimensions of user experience". As seen in Figure 2, the dimensions of this model are duration, intensity, interaction, breath, triggers, and significance (Diller et al., 2005). Three test interviews were conducted to develop the interview guide before the actual interviews.

The data collection took place during April-May 2011. 16 users of ADF participated in an approximately 45 minutes long, recorded, two-on-one interview. 11 of them were male and 5 female. The interviewees were born during 1950s to late 1980s with a mean age of 33,6 and a median age of 30,5. The users of Kafis were defined as anyone using Kafis and the ADF building in general more or less regularly. Among them, four user groups were identified. Thus, the sample included students attending product development courses (4), researchers (2), start-up entrepreneurs (4), and staff members (6). Half of the interviewees had an educational background in technology. The remaining interviewees had various backgrounds, e.g. design, economics or political science. The majority of the interviewees consisted equally of graduate students and people with the Master of Science (MSc) award. Also doctors of philosophy (PhD) and secondary level vocational school graduates were involved. The interviewees had various occupations, such as project coordinator, product development manager, research manager, managing director, course assistant, teacher, researcher, research assistant, intern, and student.

Microanalysis was used as the analysis method in the research. It is an analysis method of grounded theory, referring to a detailed line-by-line analysis that helps with generating initial categories and suggesting relationships among them (Strauss & Corbin, 2007). The analysis process consisted of two phases. In the first phase the transcribed interviews were read through, at the same time identifying repeating concepts. These concepts became the first order concepts. On the basis of these, second order themes and aggregate elements were identified. In the second phase of the analysis, the research material was read through again, this time verifying the data structure that can be seen in Table 1.

Table 1: Data structure.

<i>FIRST ORDER CONCEPTS</i>	<i>SECOND ORDER THEMES</i>	<i>AGGREGATE DIMENSIONS</i>
<ul style="list-style-type: none"> Heart of the building Easy access No restrictions Cosy atmosphere Self-guiding usability 	Open atmosphere	The social heart of the building
<ul style="list-style-type: none"> Common area People come to meet each other Enhances possibilities of talking to strangers Responsibility and freedom to use 	Common place	
<ul style="list-style-type: none"> People changes Involves different activities Users are individuals or small and big groups Varying usage time 	Evolving social environment	
<ul style="list-style-type: none"> What is done in front of the desk Forwarding job description related issues Shortening the task list 	Individual work	The perception of work
<ul style="list-style-type: none"> Beneficial to oneself and to others Interacting with people Knowledge sharing 	Collaborative work	
<ul style="list-style-type: none"> Access through employment or a study place Requires knowing the basics 	Formal	Membership formation
<ul style="list-style-type: none"> Access through knowing other members of the community Requires participating in the common activities Requires intensive presence 	Informal	

5. RESULTS

5.1 General view

Most of the interviewees had consciously chosen to become ADF users. Students became ADF users accidentally or intentionally via course participation, researcher and staff members through employment, and entrepreneurs by comparing options for business premises and selecting the most attractive one. As one researcher stated, "I assumed during the second or third time I visited here that I might have possibility to work here because I am an employee of Aalto University". Most of the interviewed researchers, start-up company representatives and staff members had used ADF previously as students. Interesting people, an inspiring atmosphere, an enabling culture and functional facilities (including connections, workspaces and devices) were the common selection criteria for all user groups. One start-up entrepreneur describes his feelings when visiting ADF the first time in the following way: "I got the feeling that you really are allowed to think freely here and do things". Some differences in the selection criteria between the different user groups were identified. Moreover, students claimed that ADF is the only place available that includes everything they need for conducting their project work. One student pointed out that "no other place can offer the same kind of possibilities in one place". According to another student, "there is everything that I need for working, such as access to telecommunications computers, machines and equipment and places where prototypes can be built. And places where other people can be met." Later he continued, "there is no other place like this, this is the only option". One student emphasized the importance of having the assistance of the workshop personnel available in prototype building: "one truly important thing is to have professional personnel in machine and electronic shops from whom you can ask help". Researchers valued the synergy developed from the close vicinity of similarly oriented researchers. As one of them stated, "we knew that another researcher focusing on the same topic was coming here – there is synergy". Start-up entrepreneurs preferred the innovative atmosphere of the place and the vicinity of the interdisciplinary students and described how "this is an innovation environment, there is thinking outside the box – thinking and students from design, engineering and business backgrounds."

5.2 Kafis as the social heart of ADF

The users' experiences were characterized by three specific themes relating to the origins of the conception of Kafis as the social heart of ADF building: (1) open atmosphere, (2) common place and (3) evolving social environment. According to the results, this conception emerged strongly from the data. For example, 11 of the 16 interviewees used the expression "the heart of the building" when describing the function of Kafis as a part of ADF. Others used concepts such as "our key place", "nerve centre", "community kitchen" and "meeting point".

OPEN ATMOSPHERE. Kafis was considered to be the heart of the building. For example, as one start-up entrepreneur stated, "it is the heart of the whole building, where people come and meet". Kafis was also considered easily accessible. According to one researcher, "it is easy to go there", and one start-up entrepreneur pointed out that "it is nice to come here". The atmosphere of Kafis was considered warm and cosy. For example, one researcher mentioned that, "it is warmer than many other places" and later called it a "homely space". A staff member mentioned that "it doesn't feel like an institution – it seems to be pleasant space for people to be – like homes are". A student emphasized the importance of a cosy atmosphere by her comment, "I spend more time

here than elsewhere so it is really important that it is homelike". According to the results, the cosiness of Kafis can be strengthened by easy usability. As one researcher mentioned, Kafis is a "self-guiding place where everything is clearly instructed so that you don't need a manual – like in my own kitchen".

COMMON PLACE. Kafis is the common area of ADF users. A researcher emphasized this by saying, "it [Kafis] is nobody's place in particular, and at the same time it is everybody's place". Maybe for that reason, as a staff member stated, "it feels like your own because you can use it freely". All in all, people come to Kafis to meet each other. One staff member emphasized that, "the people are the only reason why I go there". Another staff member pointed out, "you never know who you're going to meet there". A third staff member mentioned that, "people look at each other when they meet there, whereas elsewhere [outside ADF] people try to avoid eye contact". A start-up entrepreneur described the sharing culture of Kafis by saying that "people are open and come to chat and share ideas". Later he continued by saying "it is an area where it is acceptable to stop someone and ask what you are doing here". A researcher pointed out that "you can join any conversation group when you are there". The absence of restrictions or the permissive usage policy may be one factor in making Kafis a lively meeting point. As one researcher described, "it is not a closed space, you can go there and walk through or take coffee, whether there is an event going on or not". Another researcher noted that "you can be there a short time or a long time without a precise agenda". A student described the nature of the culture of Kafis as follows:

Somebody comes to ask what you do and then you explain, and all of a sudden they say that it is similar to what we do or that a friend of mine has a company – and you get always interesting feedback, such as have you heard about this other project that does something similar or does the same thing in a different way – It offers a lot of possibilities to get good feedback and hear interesting things.

According to the results, the atmosphere of Kafis was seen to encourage talking with strangers. One researcher noted that, "Kafis is a natural place to talk to new people". Another researcher pointed out that "there is an unwritten rule that you should speak to strangers". A staff member mentioned that "they don't feel like strangers when they are there". The permissive usage policy is supported by the assumption that the users are responsible for taking care of the place and being considerate of the other users. "Here you get more freedom, but it goes hand in hand with a certain kind of responsibility", noted one researcher. Another claimed that "people must clear their own mess". To strengthen this behaviour, according to a start-up entrepreneur, "there [in Kafis] are different elements and signs that guide your action so that you empty the dishwasher, put the dirty dishes into the dishwasher, clean the tables and pay your coffee". Kafis was also considered to guide the users to greet and respect each other. As a staff member mentioned, "everybody always says hello and exchanges a few words together".

EVOLVING SOCIAL ENVIRONMENT. The other users of Kafis were considered one of the most important factors of Kafis. As a student pointed out, "the people make the place". The social environment of Kafis was seen as constantly evolving. Another student mentioned that "it [Kafis] changes quite a lot depending on who is there and what is done; this breaks the routine and conventionality". According to a staff member, "there are small meetings and groups of friends". One student pointed out that in Kafis, "start-up people, study course participants, staff members and everyone else come and end up talking together". However, although the social environment of Kafis transforms constantly, the atmosphere seems to stay invariable. As a researcher stated, "it [the atmosphere] never changes – I don't remember that it has ever been more formal". Kafis is used for different activities, such as for participating in the hosted breakfast, eating lunch, cooking, relaxing, joining planned or unplanned meetings and discussions, as a passageway, participating

in different events and as the destination of ADF introduction tours. "Mainly my own coffee breaks and a few times I have had friends to whom I have shown Kafis as a part of the ADF introductions tour – I held one tutor meeting there – it has been a place for some nonspecific discussions" is how one researcher described the occasions when she has used Kafis. One staff member talked about the different use situations of Kafis as follows: "I have attended the breakfast multiple times – meeting-like discussion events – yesterday there was a French wine tasting event – one guy held a welcoming party for himself – all kinds of meetings – sometimes cooking". A student said that, "sometimes during the weekends we have sat around the big table and worked". The usage time of Kafis varies from a few minutes to several hours. "Breakfast is half an hour or 45 minutes, and usually later in the evening I go to cook there for 30 minutes – we have been there sometimes five to six hours", explained one student. A start-up entrepreneur described his usage habits of Kafis in the following manner: "I spent an hour there when I go there to work on some offer or read the emails and five minutes when I go and get coffee".

5.3 The perception of work

The users' experiences were characterized by two specific themes relating to the origins of the perceptions of work. These contradictions occurred during discussions with four of the 16 interviewees. In these cases, the work was considered e.g. as things that are done in front of one's desk. This kind of perception of work was named as (1) individual work. In the other 11 interviews, the interviewees thought that work also includes social interactions. e.g. talking with people was considered to be work. This kind of work perception was named as (2) a collaborative work.

INDIVIDUAL WORK. Individual work was related to conducting tasks such as forwarding job description related issues or shortening the task list. As a staff member stated, "maybe it is because of a generation difference that I think that work is what is done in front of the desk". Another staff member claimed that, "work is checking off tasks from the task list". These interviewees weren't certain if e.g. talking with people can be seen as working. Relating to this, one researcher argued that "I don't know if it [talking with people] is a part of my job description, whether I get paid for that or not".

COLLABORATIVE WORK. Collaborative work is more than just shortening the task list. A researcher stated that, "all the time I spend here [in ADF] is work". Moreover, work was considered something that is beneficial to one and to others. According to one researcher, "work is something that is beneficial and own kind", and a student mentioned that "I always try to combine work and fun – I aim to do work that I'm really interested in". Interacting with people was also associated with work. As a start-up entrepreneur stated, "work is communicating with people and exchanging ideas". A researcher noted that "networking is part of any work". Sharing knowledge was also closely related to the collaborative work. As a start-up entrepreneur summarized, "it [work] is being a member of the community, sharing knowledge, collecting knowledge and creating relationships".

5.4 The process of becoming a member

The users' experiences were characterized by three specific themes relating to the process of becoming a member: (1) formal membership and (2) informal membership.

FORMAL MEMBERSHIP. The formal membership is accessed automatically through employment or a study place. As a student noted, "it was kind of an automatic membership when I was accepted to the course". The formal membership requires knowing the basics, as one researcher explained that "first I had to clarify the basics such as where I sit and eat lunch – where are the dressing rooms". However, this does not

make you a full member of the community. As a start-up entrepreneur emphasized, "I am a constant user when I come here every day but I have not become acquainted with the people that much yet".

INFORMAL MEMBERSHIP. Being part of the community requires knowing the other members. According to a student, "you need to know the people and how things are done". A student who considered herself a full member of the ADF community said that "people know us [the project team] by name and we know everybody by name". Participating in the common activities of ADF is also needed for acquiring the informal membership. A staff member noted that, "you get the membership via participation". A student emphasized the same thing by explaining that, "I gained the membership because I was building this place". Altogether, the results show that achieving the informal membership requires intensive presence in the community. As one student put it, "we [the project team] spent here more time than anybody and so intensively – so it feels like being a member of this community".

6. CONCLUSION

Academic learning environments are in the middle of change. The challenge is meeting the needs of new ways of learning and teaching that emphasize interaction, collaboration and individual meaning making processes. To contribute to meeting this challenge, the aim of this research was to understand the meaning of informal social face-to-face learning spaces for its users: what purposes it is used for and why it is important to have one.

According to the results, it seems that the key function of Kafis, the informal social face-to-face learning space studied in this research, is to function as a platform for socialization and sharing knowledge between its members. It has other functions as well, such as being the place for relaxing or fulfilling basic needs such as eating or drinking. The metaphor "the social heart of the building", which emerged from the interviews conducted in this research, describes the importance of having this kind of place in the university environment. The social heart refers to a shared place that is welcoming to its users and has an open and cosy atmosphere. The people make the place, so bringing people together is essential. According to the literature, there is some means to achieve this, such as designing an appropriate layout for the passageways vis-à-vis different places. Also offering events, nourishment and beverages (e.g. coffee) is effective (Becker & Steele, 1995). However, to get the best outcome from these kinds of places, it is necessary to broaden the perception of work. In addition to individual work related activities such as shortening the task list in front of one's desk, work could also be understood as something that essentially includes collaboration between people such as interaction and knowledge sharing.

The model of "6 dimensions of user experience" (Diller *et al.*, 2005) was applied as a data-gathering framework in this study. The research provided evidence of its suitability as a starting point for a workplace experience research study. However, to be more universally applicable, it needs to be further tested and developed. The next step would be to conduct a virtual survey research. This would allow a greater number of respondents and produce more quantifiable findings. For future research purposes, the workplace experience framework was composed on the basis of the data collection phase of this research. It can be seen in Appendix 2.

Future investigations relating to workplace experience research could focus on identifying workplace experience profiles of co-working spaces for learning, including informal social face-to-face learning spaces studied in this research. For example, according to this

research, it seems that the usage time (what period of time one has been a user of a place) and intensity of use (how often and how long times at once one has used a place) have an effect on the quality of the user experience. The users' attitude may also have an effect. It appears, for instance, that the more the user has invested his or her time and effort in a place, the more important the place is for him or her and the stronger the sense of belonging to a community. In addition to usage time and its intensity, the results also indicate that there are differences between the experiences of the different user groups. For example, students might value the acquiring of an informal membership more important than other user groups. On the other hand, it might be that the informal membership is valued among the students because they do not get it as easily as staff members. It also seems that different user groups have different needs, and therefore they experience the place differently. For example, it might be that students more often spend longer times in ADF and use it during the evening and weekends and therefore they value the cooking facilities and the cosy atmosphere of Kafis highly. Moreover, it would be interesting to investigate how the work is perceived among the different user groups. Based on this research, it seems that interaction and sharing seem to be a more indelible part of work than for the students and start-up entrepreneurs than for the staff members and researchers.

REFERENCES

1. Aalto University Design Factory (ADF) (2010), Annual Report 2009-2010, available at: <http://aaltodesignfactory.fi/annualreport2010.pdf> (accessed October 5, 2011).
2. Aalto University Design Factory (ADF) (2011), available at: <http://designfactory.aalto.fi/> (accessed October 5, 2011).
3. Battarbee, K. (2008), *Co-experience: Understanding User Experiences in Social Interaction*, PhD thesis, University of Art and Design Helsinki, Helsinki.
4. Becker, F. and Steele, F. (1995), *Workplace by Design: Mapping the High-Performance Workspace*, Jossey-Bass, San Francisco.
5. Brown, M.B. and Lippincott, J.K. (2003), Learning Spaces: More Than Meets the Eye, *Educause Quarterly*, No. 1, 14-16.
6. Brown, M.B. and Long, P. (2006), Trends in Learning Space Design. Oblinger, D.G. (ed.): *Learning Spaces*, 116-126, Educause eBook, available at: <http://www.educause.edu/LearningSpaces> (accessed October 5, 2011).
7. Digenti, D. (2000), Make Space for Informal Learning, available at: http://www.astd.org/LC/2000/0800_digenti.htm (accessed October 3, 2011).
8. Diller, S., Shedroff, N. and Rhea, D. (2005), *Making Meaning: How Successful Businesses Deliver Meaningful Customer Experiences*, New Riders Press: Berkeley.
9. Duffy, T.M. and Cunningham, D.J. (1996), Constructivism: Implications For The Design And Delivery of Instruction. Jonassen, D.H. (ed.): *Handbook of Research for Educational Communications and Technology*, 170-198, Macmillan.
10. Eraut, M. (2004), Informal Learning in the Workplace, *Studies in Continuing Education* 26(2), 247-273.
11. Harris, K. R. and Alexander, P. A. (1998), Integrated, Constructivist Education: Challenge and Reality, *Educational Psychology Review* 10(2), 115-127.
12. Jamienson, P. (2003), Designing More Effective On-campus Teaching and Learning Spaces: A Role for Academic Developers, *International Journal for Academic Development*, 8(1/2), 119-133.
13. Joint Information Systems Committee (JISC) (2006), Designing Spaces for Effective Learning: A Guide to 21st Century Learning Space Design,
14. Jonassen, D.H. (1991), Objectivism versus Constructivism: Do We Need a New Philosophical Paradigm?, *Educational Technology Research and Development* 39, 5-14.
15. Jonassen, D.H. (1999), Designing Constructivist Learning Environments. Reigeluth, C.M. (ed.): *Instructional-Design Theories and Models – A New Paradigm of Instructional Theory*, Volume 2, 217-240, Lawrence Erlbaum Associates.
16. Kvale, S. (1996), *InterViews: An Introduction to Qualitative Research Interviewing*, Sage Publications.

17. Law, E., Roto, V., Vermeeren, A.P.O.S., Kort, J. and Hassenzahl, M. (2008), Towards Shared Definition of User Experience, published proceeding in CHI08, 5-10th April, Florence, Italy.
18. Lea, S.J., Stephenson, D. and Troy, J. (2003), Higher Education Students' Attitudes to Student-Centred Learning: Beyond 'Educational Bulimia'?, *Studies in Higher Education* 28(3), 321-334.
19. Loyens, S.M.M. and Gijbels, D. (2008), Understanding the Effects of Constructivist Learning Environments: Introducing Multi-Directional Approach, *Instructional Science* 36(5-6), 351-357.
20. Matthews, K.E., Andrews, V. and Adams, P. (2011), Social Learning Spaces and Student Engagement, *Higher Education Research & Development* 30(2), 105-120.
21. Mayer, C.M. (1999), Designing Instruction for Constructivist Learning. Reigeluth, C.M. (ed.): *Instructional-Design Theories and Models – A New Paradigm of Instructional Theory*, Volume 2, 141-160, Lawrence Erlbaum Associates.
22. van Meel, J. (2011), The Origins of New Ways of Working, *Facilities* 29(9/10), 357-367.
23. Merton, R.K. and Kendall, P.L. (1946). The Focused Interview, *American Journal of Sociology* 51, 541-557.
24. Myerson, J., Bichard, J.-A., and Erlich A. (2010), *New Demographics New Workspace*, Gover, Surrey.
25. Montgomery, T. (2008), Space Matters: Experiences of Managing Static Formal Learning Spaces, *Active Learning in Higher Education* 9(2), 122-138.
26. Oblinger, D. (2005), Leading the Transition from Classrooms to Learning Spaces, *Educause Quarterly*, Number 1, 14-18.
27. Pellegrino, J.W., Chudowsky, N. and Glaser, R., (2001), *Knowing What Students Know: The Science and Design of Educational Assessment*, National Academy Press.
28. Santamäki, E.-M. (2008), The Product Development Environments Enabling Interdisciplinary Cooperation Between University and Industry, paper presented at European Society for Engineering Education (SEFI) conference, 2-5th July, Aalborg, Denmark, available at: <http://www.sefi.be/wp-content/abstracts/1075.pdf> (accessed July 29, 2011).
29. Simons, R.-J., van der Linden, J. and Duffy, T. (2000), New Learning: Three Ways to Learn in a New Balance. Simons, R.-J. (ed.): *New Learning*, 1-20, Kluwer Academic Publisher.
30. Strauss, A.C. and Corbin, J.M. (2007), *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*, Sage Publications.
31. Wilson, B.G. (1996), Introduction: What Is a Constructivist Learning Environment? Wilson, B.G. (ed.): *Constructivist Learning Environments: Case Studies in Instructional Design*, 3-8, Educational Technology Publications.

APPENDIX 1: Interview guide.

BACKGROUND INFORMATION

1. Name
2. Year of birth
3. Education
4. Job description
5. Work assignments
6. Use of time

EXPERIENCES OF USING ADF

7. Why do you use ADF as a workplace?
8. How often (frequency and duration) do you use ADF?
9. How long have you been aware of ADF?
10. How did you get to know about ADF?
11. What was your first impression about ADF like?
12. What are the most important workspaces in ADF from the viewpoint of your work? Why?
13. How have you adapted to ADF?

EXPERIENCES OF USING KAFIS

14. What comes to your mind first when you think about Kafis?

Duration

15. Why do you use Kafis?
16. How often (frequency and duration) do you use Kafis?
17. Can Kafis be used for working?

Intensity

18. Who are the users of Kafis?
19. How do you use Kafis (e.g. by routine, intuition, habit)?
20. How does using Kafis feel like?
21. How did you learn to use Kafis?
22. What kinds of changes are happening in Kafis?
23. What do the changes feel like?

Interaction

24. How do you reach Kafis?
25. What would be the best location in the building for Kafis?
26. How does Kafis guide you to act?
27. For what kind of different purposes have you used Kafis?
28. How has Kafis supported these functions?
29. How do you solve the challenges relating to the use of Kafis?
30. In what kind of situations have you met new people in Kafis?
31. How do the other users of Kafis have an effect on your actions in Kafis?

Breath

32. How would you describe Kafis to outsiders?
33. What qualities of Kafis support your description?

Triggers

34. Does Kafis have a specific scent? What is the meaning of this scent for you?
35. Does Kafis have a specific voice landscape? What is the meaning of this voice landscape for you?
36. How does Kafis look like? What is the meaning of this looks for you?
37. How does Kafis feel like? What is the meaning of these feelings for you?
38. How does Kafis taste like? What is the meaning of this taste for you?
39. What features of Kafis do you not prefer? Why?

- 40. What features are missing in Kafis? Why?
- 41. What is the meaning of the "worm hole" and info screens?

Significance

- 42. Is the proportion of the spatial components of Kafis suitable: kitchen, dining room, cafeteria, lounge?
- 43. In what situations have you invested your resources (time, energy, money) in Kafis (e.g. emptied the dishwasher or bought coffee)? How have you felt about it?
- 44. What kind of effect does Kafis have on your work?
- 45. Is Kafis important to you? How?
- 46. What would you remember about Kafis after 30 years?
- 47. What is the role of Kafis as a part of Aalto University or Society?
- 48. How would you summarize Kafis?

APPENDIX 2: The workplace experience (WE) framework.

DURATION

- For what purpose is the space used?
- How often is the space used?
- How long times at once is the space used?
- How long times has the user used the space?

INTENSITY

- Who are the users of the space?
- How well has the user adapted to the space?
- How easy is the space to use?
- What are the problem solving strategies?
- How is the space changing and how is this change coped with?

INTERACTION

- How reachable is the space?
- What is the meaning of its location?
- What behavioural codes does the space support?
- How applicable is the space for different purposes of use?
- In what kind of situations are new and familiar people met in the space?
- What is the effect of a user of the space on other users' actions?

BREATH

- What are the first impressions of the space?
- How well does the space meet the expectations of the users?
- How is the space described to outsiders and which qualities of the space support this description?

TRIGGERS

- What is the specific scent, voice landscape, appearance, feeling or taste relating to the space and what is the meaning of these sense stimulations for the user?
- What does the space symbolize?
- What features of the space are preferred and why?
- Are there some features that are missing?

MEANING

- What are the most important features of the space?
- How does the space affect the actions taking place in the space?
- In what situations does the user invest his or her resources (time, money, energy) in the space and how are these investments experienced?