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Experiencing a space: Applying experiential methods to support the learning of art and design

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Abstract

The purpose of this study is to promote the experiential learning (EL) method in the pedagogics of art and design in higher education. This article is based on a case study consisting of two pedagogical projects in interior design courses, the probing project and the multisensory space project, carried out between 2014 and 2016 with trainee teachers. Using the data from these projects I analyse using the qualitative content analysis method how and with what implications EL supports learning of art and design in higher education. The results show that EL was found to be inspiring and self-expressive, and was an unusual and motivating way to learn interior design. In a teacher education context EL gave students ideas about collaborative and EL-based methods of learning that could be applied to their own future teaching projects.

Keywords

art and design
design education
experiential learning
collaborative
learning
self-expression
interior design

Abstrakti

Tutkimuksen tarkoituksena on kehittää kokemuksellisen oppimisen menetelmää osana muotoilun yliopisto-opintoja. Artikkelin taustalla on tapaustutkimus kahdesta sisustuksen alueisiin liittyneistä pedagogisesta projektista, jotka toteutettiin vuosien 2014 ja 2016 välisenä aikana. Tutkimuksen aineisto koostuu yliopisto-opiskelijoiden yksilö- ja ryhmätöiden toteutuksista niihin liittyvine raportteineen ja reflektointeineen sekä omista, kurssien ohjaamisen aikana tuotetuista reflektoinneistani. Tulokset osoittivat, että kokemuksellinen oppiminen tukee hyvin muotoilun opettajaksi opiskelevien sisustussuunnittelun oppimista. Menetelmä tukee itse-ilmaisua ja on perinteisiin suunnittelumenetelmiin nähden uusi ja erilainen tapa analysoida tilaa ja ympäristöä. Lisäksi opettajaksi opiskeleville menetelmä antoi ideoita siihen, kuinka kokemuksellista oppimista voi myöhemmin omassa opetuksessa soveltaa.

Avainsanat

taide ja muotoilu
muotoiluopetus
kokemuksellinen oppiminen
yhteisöllinen oppiminen
itse-ilmaisu
sisustussuunnittelu

Introduction and settings

This study promotes experiential learning (EL) in the context of higher education of art and design. The utilization of experiential knowledge in a design process and the endeavour to develop methods and approaches based on that knowledge in design

education is nowadays widely encouraged (Budd 2011; Clemons 2006; Demirbas and Demirkan 2007; Niedderer and Reilly 2010; Nimkulrat 2012). In Finland the National Core Curriculum 2014 underlines the utilization of multimodal experiences as part of ideation and design tasks even in basic education (FNBE 2014). Organizing the teaching-learning process primarily around EL arrangements is, however, demanding for the teacher, considering that teachers tend to organize their teaching around 'predictability, patterning, control, linear-thinking and universality; ways of thinking that view the world as an ordered mechanism' (Ramiah 2014: 63). This search for predictability in the teaching-learning process is scarcely possible in EL processes because identification and an understanding of content arise through learner experiences that are always situated and unforeseeable (Wurdinger and Carlson 2010). According to Demiskas and Demirkan (2007: 345), design students in particular should learn by experiencing, reflecting, thinking and doing in the process of finding solutions to assigned design problems. Design education as such is in the line with the EL theory of David Kolb (1984) (Demiskas and Demirkan 2007: 345).

Research has shown that especially among adult learners realization of EL unifying real-life experiences function as a strong motivation for learning (Blair 2016; Chisholm et al. 2009). The enhancement of EL in higher education, for example, can be achieved through the creation of learning spaces that promote growth-producing experiences for learners (Kolb and Kolb 2005: 205). This study is a case study based on two projects conducted with higher education art and design students who are training to become teachers. The aim for the students is to teach design to pupils or adults rather to become professional designers. The data through which the experiential approach in these learners is examined are derived from two

pedagogical projects: The Design Probes project in the spring term 2014 to 2016 and the Multisensory Space project conducted in the autumn period 2015. The purpose of combining these two projects in this case study is to see how EL connected to analysing and building a space can support art and design learning.

What is also common to both of the pedagogical projects analysed here is the focus on EL and the emphasis on collaborative learning methods in design education. Awareness and training in collaborative learning methods has been found to be of value to future teachers of art and design (Lahti et al. 2016: 36). Both projects were obligatory courses in interior design, although given at different levels: The Multisensory Space project was part of basic studies in art and design, and the Design Probes project was given at the advanced level.

Promoting experientiality in this study is executed in two ways: first, by using probing as a method to acquire experiential knowledge of the space and second, by building spaces to promote experientiality in the learning process of a chosen topic. The research questions of this study are as follows:

> Project 1: How and with what kind of implications do design probes support EL in the context of higher education art and design?
>
> Project 2: How and with what kind of implications does the building of multisensory space support EL in the context of higher education art and design?

The description and analysis of the two pedagogic projects in this study represent *a holistic case study* with the aim of uncovering the interaction of significant factors characteristic of the phenomenon examined (Merriam 2009). According to the case study approach chosen, the purpose of the study is not to generalize the results but to provide a 'thick description' of the phenomenon examined (Brailas et al. 2017: 274). This meant that as the course teacher, I investigated approaches and findings in the data that appeared to be *significant ones* in the students' processes and significant from the point of view of pedagogy in higher education of art and design. In project 1, the data of the study consisted of students' individually made reports on their probing process (*n*=51). In project 2, the data consisted of the reports (*n*=4) written about the purpose and process of the multisensory space build during the course. In addition, my observations and reflections as a teacher of these courses are included in the data. The data were analysed with unifying qualitative content analysis, focusing on identifying categories or themes that both summarize the content found in the full data set and highlight key content (Drisko and Maschi 2015).

I begin by outlining the theoretical framework and the EL method, sharing how it is adapted in this case study. I then describe the projects in which the approach is applied and the methodology and settings. The implementation and findings of each project are then presented. In the conclusion, I discuss the results of the study when promoting EL in art and design in higher education.

EL

What in fact is ‘an experience’? Fox has examined the concept of experience and asks, ‘once the “experience” begins, how does an individual, observer, researcher, participant, or leader identify “the” experience? How is an experience demarcated from the flow of life?’ (Fox 2008: 39). Pragmatists, like Dewey, have insisted that ‘experience is more a matter of functions and habits, active adjustments and readjustments, coordination and activities, than just passive states of consciousness’ (Roberts 2008: 24). Experience is not something that occurs in isolation but is a multi-layered phenomenon in which both our individual contexts and our personal values and norms and larger societal and historical interconnected networks are involved (Fox 2008: 41).

Despite the various forms and methods of implementing EL for example in education, Kolb’s theory is in many cases used as a starting point (Roberts 2008). The Experiential Learning Cycle also known as Kolb´s model consists of four main learning phases: *Concrete experience, reflective observation, abstract conceptualization* and *active experimentation* (Kolb 1984: 42, 2005). In an EL process, the learner gains experience from concrete activities and reflects on that experience. The experience is used both to conceptualize knowledge and to understand how abstract knowledge can be applied to active experimentation (Kolb and Kolb 2009; Cheung and Delavega 2014). Some researchers have, however, pointed out the model to be too schematic (Bergsteiner et al. 2010; Itin 1999) and the learning process to be merely a spiral of processes than just one cycle (Kolb and Kolb 2009; Cheung and Delavega 2014). Despite the different emphases, it is

always the learner's active participation in the learning process that is the centre of EL (Wurdinger and Carlson 2010; Blair 2016). The method focuses on the centrality of personal significances and commitment in the learning process and reflectivity during the process. Therefore, the results of the EL process are unpredictable in nature (Andersen et al. 2000: 234; Brailas et al. 2017).

In this study, I adopt Fox's (2008: 41) approach to experience as a multi-layered phenomenon, with personal and larger networks taken into consideration. In both projects the students were usually in the role of designers and participants. The EL phases in this study were flexible and partly overlapping. The C*oncrete Experience* learning phase in both projects included experiencing a space and making *reflective observations* about it. *Active Experimentation* involved in a very concrete way building the space in project 2 and performing the probing tasks in project 1. Analysing the probing results in a report and reflecting on the purpose and use of the multisensory space demanded *abstract conceptualization* and theorizing. The EL approach was chosen to support learning art and design in higher education for five reasons, the aims of the teaching-learning process being to:

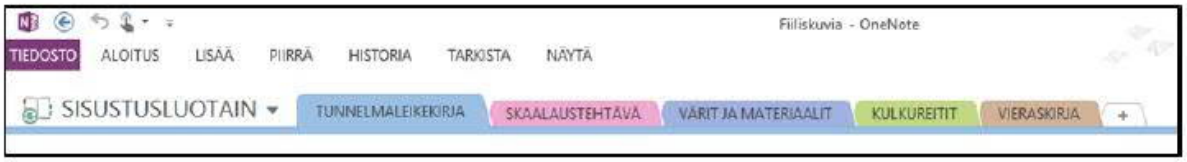
1. Emphasize the collaboration between learners and participants
2. Approach learning as a versatile and fluid process,
3. Support learning by doing or practice-led orientation rather than an exclusively theoretical approach,
4. Take learning out of the classroom and
5. Increase the learner's activity and self-knowledge.

Design probes

In the field of design, probing is a method that more aptly applies to the future than traditional design methods (Mattelmäki 2006; Millet and Patterson 2012; Madden et al. 2014). Also, as a tool of collaborative design, probes are *used to understand human phenomena and explore design opportunities based on self-documentation* (diaries, photography, collage) and *to unify the user's personal context* (Mattelmäki 2006: 39). Design probes have been developed on the basis of *cultural probes*. Cultural probes are a design-oriented way of gathering inspirational glimpses of communities targeted for design (Mattelmäki 2006: 42). The participants are usually at a distance and return the data over time. Cultural probes are usually used to inspire a design team, with the data collected when designing new products (Mattelmäki 2006; Forlizzi 2008). Since cultural probes, several others, such as *technology probes*, *empathy probes* and *value probes*, have been developed (Madden et al. 2014). Probes, for example, were used to examine how to maintain family communication between multi-generational family members living separately abroad (Madden et al. 2014) and how social technology between grandchildren and grandparents could be used in everyday life in a user-friendly and fun way (Pedell et al. 2014).

In this study design probes were applied in a compulsory, advanced-level interior design course with students training to become teachers of art and design. To obtain user experiences from the chosen environment in this study, the probes, made and designed by students, were applied in domestic or in public interiors according to the student's choice. Designing and carrying out a probing process was, however, mainly applied in domestic interiors. The purpose of tasks contained in a *probe kit* is to *collect and observe emotions, needs and attitudes as they occur in everyday life*

and also help conceptualize them. Tasks might be descriptional or could search for new ideas and viewpoints. Inspired by these tasks participants are able to collect their thoughts and ideas (see Mattelmäki 2006: 72–75). In previous studies on students' reflections of probing, it was shown how important it is to design the probe kit just for the group that it is targeted for and to commit participants to the process (Kärnä-Behm 2016). Positive emotions evoked during the probing process promote flexible thinking and problem solving in conducting probe tasks (Isen 2004; Mattelmäki 2006). In this study the probe kit could be a virtual or a physical one (Figures 1 and 2).





Figures 1 and 2: A probing kit as a virtual and as a physical realization. Used with permission.

Pedagogical project 1: Applying the probes

After choosing a space to probe, the students create a probe kit for participants to use in the probing process. The probe kit should contain tasks that help analyse the space from the point of view of participants' user experience: analysis of the daily use of space, lighting, colours and atmosphere, smells and kinds of feelings and emotions that arise from the space. It was possible to emphasize the probing process in gaining knowledge from the space or in placing more emphasis on the artistic and self-expressive process. From these emphases the latter is highly valued in Finland in the context of teacher education for creative and aesthetic subjects such as craft, art and design (Pöllänen 2011; Collanus et al. 2012: 17). The spaces probed were mainly home interiors, and public spaces and workrooms were also analysed. The first objective (1) of the teaching-learning process was to *emphasize the collaboration between learners and participants*. This was implemented, particularly, in pedagogical project 1, where participants outside the official learning contexts (like family members, neighbours, relatives or friends) also participated in the process.

Analysing functionality and the materials of the space

With the analysis of space utilization it was possible to examine the functional features of the space, what kind of action is possible in the space and to reflect whether the furniture was arranged in an optimal way in relation to the use of the space. The analysis of space utilization was carried out in a very concrete way by, for example, marking daily observations of the space with note stickers or by illustrating them with an enlarged floor plan attached to a fridge door. The daily use

of the space was also pictured as walking routes (Figure 3) or by making tables of functions, actions and the time spent in the space.

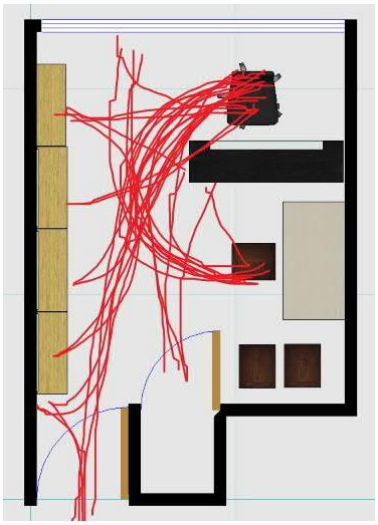


Figure 3: Analysing the functionality of the space pictured as walking routes. Used with permission.

The materials used in an interior affects its atmosphere. The materials in the space were analysed by observing and photographing and by making material maps or collages using different techniques (see Figure 4). When the atmosphere of the space was analysed from the point of view experience, it became possible to increase one's consciousness of the phenomenal factors related to the space, such as an unpleasant voice or a scent. Photographing the space from different angles and at all hours of the day was felt to be useful in analysing the rhythm of using the space. Making collages with different kinds of materials (with clippings from interior design magazines or with making virtual executions) as part of the probing process was a popular activity among family participants.

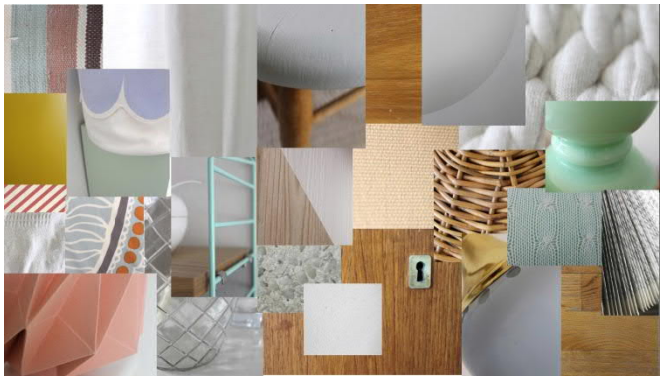


Figure 4: A collage portraying the style, materials, surfaces and forms of the space. Used with permission.

Through experiential analysis of a space it can become clear that the space is not used for the purpose that it was designed for and would better serve another purpose. In addition, presumptions about space utilization sharpened during the probing process. These can be realized from student reflections:

> An important idea that dawned on me during this project was the importance of the child's own territory. A small and safe place inside the home where it is possible to make his illusions and plays come to life. (Student's probing report 2016)

> When we analyzed the space from the view of social interaction, we realized that the space rejected the interaction or, at least, forced it into a certain shape. The space directs the users to function either side by side or back to back. (Student's probing report 2014)

Among art and design education the study of interior spaces offers a context for learning in the physical environment (Clemons 2006: 279). In pedagogical project 1 the aim was to focus on the user and her/his experience of a space. From the data analysed and implemented here it become obvious that utilizing EL produced *creative and* even *self-expressive methods* in analysing the functionality and features of the space.

Reflecting on feelings and emotions deriving from the space

In design education, there is a tendency to externalize the users of the space and think of the design process only as a rational action, hence avoiding intuitive elements (Budd 2011: viii). Verbalizing these elements might be difficult for students and so I instructed them to start by analysing the space using binary oppositions, such as cold/ warm, light/ gloomy or personal/ impersonal. Students made collages, virtual or physical, to ascertain the atmosphere of the space as it is or to visualize the space as it wanted to be. In some realizations, participants photographed objects in the interior that aroused negative feeling and objects that did opposite. To conceptualize experiences awakened from the space, for example, making tables was found useful (see Figure 5). There were discussions like those found in interior design magazines about what might be desirable and what was not. In many cases and especially connected to domestic interiors, this was the first time that the students discussed designing an interior with their family in a way that all family members participated.

Good feeling	External adverse factors of the space	Inner adverse factors of the space	Noises and smells of the space
lightness *softness* *aesthetics* *relaxing* *a big window* *my own home* *need for light* *the roof space* *sunny morning* *rest* *beauty* *armchair* *blanket* *peacefulness*	*rumble from upstairs* *rattling noise from the neighbour* *stamping noises* *a scream from the staircase* *a washing machine in the neighbourhood*	*closed, troublesome kitchen* *troubles in adjusting the right height of the computer*	*loud noises from the fridge* *noises of the fluorescent lightning* *mail coming* *fresh air* *ticking of a clock* *humming of the computer* *noises of the radiator*

Figure 5: Emotions aroused from the probed space. Used with permission. (Student's probing report 2014).

Getting experiential-based knowledge from the space, students used materials and methods that are not conventionally used in interior design. For example, *emotional cards* were used to analyse the space. In this student's project the space chosen was the kitchen and the purpose of the probing process was to identify the emotions that arose from the space and uncover the facts that created a positive or a negative atmosphere in the couple's kitchen. The student states that the couple has a good sense of humour and by using emotional cards she wanted to allow this characteristic to be displayed. Sometimes a space can arouse powerful reactions:

> We [members of the family] discussed our feelings about the space [a balcony] with its many roles in our family as a playroom, a dining room, a place to rest and as a place to sleep. This really aroused a storm of emotions and we had a very interesting discussion about the space as well as got new ideas about using it. (Student's probing report 2016)

According to Kolb and Kolb (2005: 208), 'making space for conversation as part of the educational process provides the opportunity for reflection on and meaning making about experiences that improve the effectiveness of EL'. In pedagogical project 1 sharing the experiences, for example in a home interior, clarified the personal significances connected and increased student's self-knowledge (5). The method also raised discussion between the family members about the significance of living together. In the context of EL this is an example of how learning is a *versatile and fluid process* (2) but also assists in making students aware of their *knowledge connected to a dwelling*.

The Multisensory Space

Multisensory input in learning mixtures of visual, auditory, tactile and kinaesthetic approaches to learning has been promoted, for example, in the Montessori Method of education (Montessori and Orem 1966). According to Shams and Seitz (2008: 411), 'the human brain has evolved to develop, learn and operates optimally in a multisensory environments'. They argue that more efficient learning is activated in a multisensory environment than in a unisensory one; therefore learning mechanisms operate optimally under multisensory conditions (Sham and Seitz 2008).

The Multisensory Space Method applied in this study was first executed in 2007 as a pedagogical development project at the Laurea University of Applied Sciences in Finland. The project called *With All Sense – Developing Open Learning Environments* continued in cooperation with various partners and learning institutes in 2011–15. The project aim was to develop new methods for use in multisensory learning environments for different target groups (Räty 2014).

In the Multisensory Space Method, the physical space is created around a chosen topic. During the shared creation process of a space, values, memories and experiences related to a theme or a topic are discussed and shared. In the ready-made space, people can gather together to encounter, interact and freely discuss. The purpose is to use the space as an inspirational learning environment, making learning more versatile and interactive (2). As a physical construction, in the Multisensory Space, there are elements that attract our different senses; visual effects such as photographs and landscapes created with projectors and lightning; and objects and fabrics to touch and see, music and other sounds to hear, or even food and drinks to smell and taste. All these elements together formulate a multisensory experience for the visitor to the space (The Multisensory Space Method 2018).

In this study, the higher education course unifying the Multisensory Space Method in EL was organized together with the Home Economics section and the material help and expertise of the Laurea University of Applied Sciences, and yet the projects presented here represent art and design students. The content of our three-credit course, *Space, dwelling and interiors*, handled topics shared with both the educational fields (of home economics and art and design) and were connected with

the phenomena of dwelling and the home from various theoretical points of view. The course was a compulsory for students of art and design and included lectures, excursions and training lessons. The building of a Multisensory Space from a chosen topic was organized in small three–five-person groups, with 30 (*n*= 0) students participating in two halls of our campus. In the presentation of the spaces, other students visited the built space and the designers of each space were on the spot to talk about their aims and discuss topics and experiences that the space raised.

Pedagogical project 2: Making Multisensory Spaces

According to Räty (2014), the purpose of the Multisensory Space is to ensure that thoughts and memories on a certain theme are concretized to a space, producing positive experiences and encouraging discussion among the visitors. In this study the Multisensory Space was used as an inspirational learning environment enabling multisensory experiences and reflections and discussion of the chosen topic. The following examples of the Multisensory Space represent two different kinds of approach to the Multisensory Space realization. Altogether seven spaces were built, of which four represented students of art and design. In the Multisensory Space named ‘the alternative state of rest’, the focus was to build a movable space for children in a nursery school. According to the group, the aim was to build a peaceful space with elements targeting especially tactile senses and relaxation. The other space, called ‘a dream of Helsinki in the future’, was a Multisensory Space built to inspire and draw the visitor’s attention to considering Finland’s capital as a desirable urban space in the future. Therefore, following the objectives (4) of the teaching-learning process in this study, learning was *taken out of the classroom* in all of these cases, which was also the aim with pedagogical project 1.

The project of a night in a hut

The purpose of the Multisensory Space was to build a hut where (adult) visitors could reminisce about their experiences of childhood games, building huts and camping out. Designing a hut started with collecting memories and experiences of this kind. The notion of a hut was personal for each individual in the group and as such it was felt to be a productive theme. As a child it was exciting to spend a night in a hut and so the group brought some night elements into it: darkness and night sounds and objects to make spending the night in a hut possible. The interior of the hut consisted of fabrics, rag rugs, dim lighting and natural materials such as stones, branches, leaves and cones.

The acoustics in the space were created using a CD player with sounds taken from nature: the whisper of the wind, a patter of rain and the singing of birds. The visual presentation of the space aimed at a hut that children might build into a forest and so some incompleteness and allusiveness was encouraged. The Multisensory Space was dark and a roof lit with small lamps represented stars in the sky. Visitors to the space were encouraged to write down their memories awakened by the hut in a visitor's book. To add to the sense of taste, cinnamon buns and cocoa were provided.



Figure 6: Visiting the multisensory space: A night in a hut. A note to the visitor read: ‘Do you want to hear the sounds of a forest? Please push the play button [of a CD-player]’. A photo by Jaana Kärnä-Behm.

The baby’s world project

The purpose of the Multisensory Space was that an adult would be able to experience the surroundings from the point of view of a baby. A bed where adults and others could experience the feeling of safety produced by swaddling that was placed in the Multisensory Space. The group thought that with the help of the sense of hearing babies become orientated to the sounds of their environment and identified familiar voices and their own native language. Therefore, when entering the space, the music heard is that which the mother has, perhaps, also heard during her pregnancy. In addition, the mother's speech, of which the baby can already distinguish a few words, is heard. The visitor could take a closer look at the toys that

hang from the roof and touch the things that are found in the space. Even warm mother's milk substitute was offered in the space as a taste sensation.





Figures 7–8: The multisensory space: A baby's world. In a space (an adult) visitor can feel, taste and hear the baby's world in a most concrete way. Photos by Jaana Kärnä-Behm.

According to Räty (2014), multisensory stimulation helps us to remember and therefore the method has been connected with, for example, reminiscence work among elderly people. In our case and in the context of art and design education, the students reflected that a Multisensory Space could be applied in familiarizing students about design materials and techniques. Exploring the material of wool, for example, the space could offer *the possibility of learning-by-doing* and *formal knowledge* of the subject. In the Multisensory Space project making the space and visiting spaces involved concrete action as part of the EL. Kolb (2005: 208) emphasizes the significance of *action* as an important part of the learning cycle because it closes the cycle by bringing the inside world of reflection and thought into contact with the outside world of experiences created by action. In this project, a concrete building process materialized the group's ideation of the chosen theme. By

doing so, this pedagogical project *supported learning by doing rather than an exclusively theoretical approach* (3) as one objective of the teaching-learning process.

Conclusion and discussion

In this section I reflect on the findings and explore the EL method in the context of art and design education with university students. According to Demiskas and Demirkan (2007: 356), the phases of EL cohere well with design education where design tasks include materialization and theoretical aspects. There is also an increasing interest in experiential knowledge in art and design studies, where it has been found to be important to verify theoretical conjectures or observations (Niedderer and Reilly 2010: 5). In this study, in the students' material realizations and their reflections and assessments during the two pedagogical projects, it became apparent that the EL approach encouraged *playfulness*, *creative problem-solving*, *self-expressive outcomes* and *collaboration* in the learning process. In the materialization of the ideation in each of the projects, various kinds of multisensory elements were used that deepen the learning experience (see Sham and Seitz 2008). The experiential emphasis was found to be an inspiring, unusual and involving way of learning about interior design, also giving ideas and insights when carrying out projects of this kind in the students' own *future teaching projects*.

Knowledge and skill in executing collaborative learning projects has been found to be valuable for future art and design teachers (Lahti et al. 2016: 36). Probing is widely used in a collaborative design process to reflect and discuss participants'

experiences in various design situations. In this study, also the Multisensory Space project was highly collaborative in nature when the design and building process of the space included sharing participants' views and ideas concerning the theme chosen. It became obvious that along with the collaboration skills, students developed the *skills of interior design* and became more aware of their *knowledge connected with dwelling*. This was particularly indicated in project 1, where analysing the space with an experiential method brought to light aspects of dwelling that would probably not have been uncovered with any other method. I agree with Clemons (2006: 283), who has found that design education projects in interior design operating with concrete, multisensory spaces and interiors as in this study are successful with design students because they enhance creativity, explore multiple design solutions, relate to real life and increase their understanding of human behaviour within the context of the physical environment.

The case described and analysed in this study is a unique one and cannot be generalized to any pedagogical project as such. Still, according to my experience in applying the method to higher education, or in other stages of education as well, it is essential to schedule enough time for *reflection and discussion* with the students and between the students. Sharing reflections improves the effectiveness of EL (Kolb and Kolb 2005: 208). The teacher must also respect the ethics of working with deeply felt experience. To avoid any kind of embarrassment, it has to be always the decision of the student to decide how much and what sides of the experience she/ he want to share with other students (Andersen et al. 2000: 227). On the other hand, versatile and fluid learning processes of EL usually narrow the gap between the teacher and the learner and cast the teacher more in the role of facilitator than an

instructor providing opportunities for active engagement by learners (Dineen and Collins 2005: 46). Together with the versatile and deeper learning results for the students, EL is also rewarding for teachers.

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