

# A MULTISENSORY MUSEUM AS A MODERN LEARNING ENVIRONMENT: A FINNISH PILOT STUDY AT THE SIBELIUS EXHIBITION IN THE CASTLE OF HÄME

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**Abstract.** A multisensory environment (MSE) is known as a place where individual's senses and body awareness are activated or relaxed in various gentle ways through all senses using music and sounds, colors and lights, vibration and movement, tactile objects, smells and tastes in various combinations. However, multisensory environments (MSEs) can also be used as modern learning environments for cultural purposes.

**Keywords:** Multisensory Environment, Museum Experience, Modern Learning Environment

## Introduction

What is a Multisensory Environment ?

Pagliano (1998) defined a Multisensory Environment (MSE) as a dedicated space or room

*... where stimulation can be controlled, manipulated, intensified, reduced, presented in isolation or combination, packaged for active or passive interaction, and temporally matched to fit the perceived motivation, interests, leisure, relaxation, therapeutic and/or educational needs of the user. It can take a variety of physical, psychological and sociological forms. (p. 107)*

Furthermore, in his latest book 'The Multisensory Handbook', Pagliano focuses on the role of MSE's in creating pleasure and happiness (Pagliano 2012, pp. 23-34). Pagliano (2012, p.76) names 15 types of rooms. One of these room types is a portable environment, which can be seen as a theoretical frame for multisensory museum exhibitions. As MSEs can be applied to various purposes, future focus will be more on community's public places like care homes, hospital cafeterias, libraries, parks, and art happenings (Sirkkola 2009; 2010).

**The aim of the paper:** A group of four Häme University of Applied Sciences' bachelor level social work students together with their teacher were asked to plan and build a multisensory 'Sibelius Anniversary year 2015' - exhibition together with two professionals from the Hämeenlinna City Theatre and the curator of the Hämeenlinna Historical Museum. Later on, four other social work students were asked to organize a multisensory workshop for a group of first grade pupils in the same multisensory environment of the exhibition. They were asked to build a modern and interesting learning environment, not only for themselves, but also for the visitors and employees.

**Research method:** An interdisciplinary team was created, it included two theater professionals, one museum professional and eight social work students and their teacher. They planned, built, used and evaluated one multisensory exhibition room in the Castle of Häme. Participatory action research met-

hods were used to support student participation in the process. They tried to find exciting multisensory solutions for light- and soundscapes, natural aromas matching to enlarged photographs, and possibilities to relax and focus on the multisensory environment's details. Results were based on summarizing the eight students' qualitative report contents, which were then combined with the writer's own experiences of the pilot study process. Field observations, digital pictures, video materials and professional team discussions were used when critically reflecting on the process.

## A Multisensory Museum - pilot study

In the Multisensory Museum - pilot study (Mu-Mu) HAMK's bachelor level social work students planned, built, used and evaluated a multisensory environment at the 'Sibelius Anniversary year 2015' - exhibition in the Castle of Häme during the spring 2015. The Sibelius - exhibition was organized by the Hämeenlinna City's Historical Museum and it is open until March 2016 (Riikonen 2014), (see picture 1).



*Picture 1. Entrance to the Castle of Häme and Sibelius-Exhibition (photo by M.Sirkkola)*

Before the pilot study started, the curator of the historical museum visited HAMK's MSEs and took also part in the 'Everyday Multisensory Environment, Wellness technology and Snoezelen.'- World Conference at HAMK (Sirkkola 2014). Participation to these events encouraged her to invite HAMK's students with their teacher to create 'something new' for the Sibelius- exhibition.

A participatory action research was applied for this purpose and qualitative data was collected. Eight students together with their teacher participated together with two theater professionals and the curator of the historical museum in this pilot study. Every team member's ideas and practical abilities were used along the process where 'they had a strong and authentic sense of development and evolution in their practices, and the situations in which they practice' (Kemmis & McTaggart, 2000, p. 595).

### Participatory and multisensory actions for Sibelius-exhibition's visitors

Visitors of the Sibelius-exhibition were encouraged to walk slowly through five large vitrines, normally used for historical or artistic objects. Visitors were instructed to stop and listen to the nature sounds, smell the natural aromas in the boxes and to observe the large photos of nature - or to relax on the large floor cushions or swing outside the vitrines- (see pictures 2, 3, 4 and 5).



Picture 2. Multisensory environment where visitors pass through large vitrines and stop smelling aromas, listen to nature sounds, view the nature pictures, and enjoy the colorful lamps the atmosphere and enjoy the relaxing swing. (photo by Nina Keski-Korpela / Yle) [http://yle.fi/uutiset/koe\\_sibeliuksen\\_lapsuuden\\_aanet\\_tuoksut\\_ja\\_tunnelmat\\_janne-nayttelyssa\\_isontalon\\_antinkin\\_kadenjalki/7879829](http://yle.fi/uutiset/koe_sibeliuksen_lapsuuden_aanet_tuoksut_ja_tunnelmat_janne-nayttelyssa_isontalon_antinkin_kadenjalki/7879829) (7.9.2015)

Pictures 3. , 4. and 5. Multisensory spaces in Sibelius Exhibition, enlarged photo from Aulanko and Hämeenlinna (by T. Eskola) sounds from nature (cranes and water dripping), smells ginger and chamomile, forest (in the boxes). (photos by M.Sirkkola)

At the Sibelius-exhibition's workshop, students helped children to weave colorful 'paper rag mats' and then play their 'colorful melody' accordingly with similar color codes on a keyboard (see pictures 6 and 7).



*Pictures 6. and 7. From the Sibelius-exhibition's workshop, weaving of colorful 'rag mats' and then playing the melody accordingly with color codes on a keyboard. This workshop used the 'synesthesia' tendency of Jean Sibelius, as he connected sounds to colors or smells in his mind. (photos by M.Sirkkola)*

This workshop demonstrated Sibelius' synesthesia tendency. Synesthesia is generally known as a neurological tendency in which stimulation of one sensory system leads to involuntary experiences in a second sensory system. Sibelius connected sounds to colors or smells in his mind.

### **Participatory action methods and collecting data**

Participatory action methods were used in several ways throughout the pilot study. Kemmis and

McTaggart's (2000, pp. 575-578) five aspects of practice were applied in the process in a following way:

1. "Practice as individual behavior, to be studied objectively" was used e.g. when students wrote their own personal reports and discussed about those in small groups and with their teacher.
2. "Practice as group behavior or ritual, to be studied objectively" was experienced e.g. when discussing politely in the interdisciplinary teams with the professionals.
3. "Practice as individual action, to be studied from the perspective of the subjective" was practiced e.g. together with the teacher, when reflecting the student's practical actions in the learning process.
4. "Practice as social action or tradition, to be understood from the perspective of the subjective" was experienced e.g. while the workshop for school children was taking place and as the children visited the museum exhibition with their own teacher and acted similarly as in the normal class situation (raising their hand when willing to say their opinions, ask something or when asking advice how to continue with their work).
5. "Practice as reflexive, to be studied dialectically" this aspect was practiced in small group evaluations, but might need more time and better planning in future pilots. Reflection times within the interdisciplinary group meetings were limited and real critical evaluation was rare. Politeness and lack of time prevented authentic dialogue.

Data was collected throughout the pilot study. Eight students wrote qualitative reports concerning their learning goals, activities and achievements. These reports were analyzed according to their contents and combined with the writer's own experiences of the pilot study process. Field observations, digital pictures, video materials and professional team discussions were used when various group meetings were held. Main results are described and discussed as next.

### **Qualitative results of the pilot study**

As mentioned earlier, most of the data was in a narrative form and consisted of qualitative reports and students' evaluation discussions. Digital materials (pictures and video clips) were used to remind of the process episodes during the students meetings along the process. Results are discussed in a qualitative way.

All students reported that it was possible to plan, build and use an interesting multisensory exhibition as an interdisciplinary team. They reported that participatory actions were useful not only for creating

modern learning environments for them as students, but also for the participating theatre - and museum professionals. This aspect was also mentioned by the professionals' own discussions, in which the teacher was joining a couple of times.

Students and professionals participated together in planning of the multisensory exhibition and while building the exhibition they tested modern technology for best sound- and light effects. Already during the opening ceremonies of the exhibition and later at the work shop, the students noticed, that the used modern technology was too difficult for some of the visitors and they suggested that more attention to easy access technology should be developed and used in future MuMu-pilots. The students underlined that this type of cultural learning opportunities need to be supported by individually adaptable technological solutions. This might happen through possibilities in controlling the multisensory environment's lights and music, by offering more touchable objects and diverse gentle smells, by using more interesting textures of surfaces, and by providing ergonomic furniture for relaxation. Developing 'smart technology' towards user accessibility and 'design for all' was suggested.

In this pilot study students learned to make decisions and work as an interdisciplinary team. They evaluated critically their learning and they also learned how to analyze the group process. However, they wanted to learn more about being critical in a polite way in their next learning processes.

Joy of learning and the use of mobile technology in a modern learning environment was a new experience for the students. The general idea of the Sibelius-exhibition was to create multisensory experiences and increase feelings of joy of the visitors and this aim was demonstrated well during the workshop.

Creating a multisensory exhibition in a historical museum was a relatively new thing in Finland. Offering a sensory walk through vitrines happened first time in a Finnish museum.

This exhibition created rich discussions among the participants and visitors. More workshops in the Häme region's historical and art museums, an 'art happenings for all' and an international research project are forthcoming. Museum pedagogues are interested to learn new ways to offer cultural inheritance for all and arrange workshops in hospitals, libraries and other societies' open spaces.

These were our main remarks made during the pilot study:

- all students reported that it was interesting and useful to be a member of a real working life's team during the pilot study
- it was easier for the students to experience positive learning experiences while the workshop than while planning the pilot
- the technology used in the pilot study was

not accessible enough for all visitors of the exhibition. The amount of need seemed to depend on the amount of visitors, their age and abilities

- extra help might be needed in future workshops, when visitors are exploring the multisensory exhibition
- the pilot study demonstrated, that learning occurs well in real life situations, and in interdisciplinary teams which function out of the academic environments and with authentic clients (compare to Sirkkola, Veikkola & Ala-Opas 2008).

## Results

Two main results demonstrate, that it was possible to plan and build an interesting multisensory exhibition as an interdisciplinary team work and that participatory actions were useful not only for creating modern learning environments for students and exhibition visitors, but also for the participating theatre - and museum professionals. Furthermore, all students reported that it was interesting to be a member of a real working life's team. However, those students which planned the multisensory exhibition, were occasionally disappointed on the fact, that some of their ideas were either too expensive or technically too difficult to build. Additionally, the pilot study showed that in future, without student's help, extra help might be needed in workshops, when visitors are exploring the multisensory exhibition. The historical museum's curator wanted to continue multisensory exhibitions in the next exhibitions. One indicator of museum's interest was, that the students' workshop was repeated by the museum employees a couple of times during the same year.

## Conclusions

It is important to develop and implement more workshops in museums and discuss about the meaning of future possibilities of movable museums in community's open spaces like libraries, cafeterias, care homes and similar accessible places. The technology used in the pilot study was not accessible enough for all visitors of the exhibition. The amount of need seemed to depend on the amount of visitors, their age and abilities. Therefore also development of arrangements and accessible technology is needed.

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#### MULTISENSORINIS MUZIEJUS KAIP MODERNI MOKYMOŠI APLINKA: SUOMIŲ PILOTINIS PROJEKTAS HÄME PILIES SIBELIJAUS PARODOJE

##### Santrauka

Multisensorinio muziejaus – pilotinė studija kaip Sibelijaus paroda buvo įgyvendinta isorinėje Häme Pilyje, Suomijoje. Tarpdisciplininė pilotinės studijos komanda susidėjo iš profesionalų (Istorijaus muziejaus ir Hämeenlinna miesto teatro) bei aštuonių socialinio darbo studentų ir jų dėstytojos.

Veiksimo tyrimo dalyvaujant metodai buvo taikomi planuojant, kuriant ir naudojant multisensorinę muziejaus parodą, studentų mokymosi protokolai buvo panaudoti kaip pagrindiniai tyrimo duomenys.

Parodos patalpoje buvo eksperimentuojama su spalvomis ir besikeičiančiomis šviesomis, natūraliais garsais, didelėmis nuotraukomis, natūraliais miško aromatais ir atsipalaidavimui skirtais badais kuriant tamsų, kosminį parodos stilių. Studentai, o vėliau ir muziejaus darbuotojai surengė 'synesthesia'- seminarą.

Raktiniai žodžiai: multisensorinė aplinka, muziejaus patirtis, moderni mokymosi aplinka.

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