



● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ● ●

2010 Kerava

Laurea University of Applied Sciences
Laurea Kerava

Experiencing Nepal in a Peer Student Created Multi-sensory Environment

Erose Sthapit, Sajina Kansakar
Degree Programme in Tourism
Thesis
October 2010

Erose Sthapit, Sajina Kansakar

Experiencing Nepal in a Peer Student Created Multi-sensory Environment

Year 2010

Pages 42

The idea that learning experienced through all the senses is helpful in reinforcing memory has a long history in pedagogy. From the earliest teaching guides, educators have embraced a range of multi-sensory techniques in order to make learning richer and more motivating for learners. The term multi-sensory is used to refer to any learning activity that combines two or more sensory strategies/ modalities simultaneously to take in or express information. The sensory modalities include visual (sight), auditory (hearing), tactile (touch) and kinesthetic (movement). From a student learning perspective it helps to “facilitate students’ ability to learn and recall information” by combining explicit instruction and multi-sensory strategies. In practice, considering the five senses, most research in this area has focused on the visual stimulus. However, studies show that harnessing of all senses could yield phenomenal results. In the case of multi-sensory teaching, the collective experience of thousands of practitioners affirms the power of these techniques. Multi-sensory approaches have been particularly valuable in literacy and language learning, for example, in relationships between sound and symbol, word recognition, and the use of tactile methods such as tracing on rough or soft surfaces.

The purpose of this thesis is to examine the effectiveness of student created multi-sensory environment as a learning approach in experiencing another culture. The research topic arose from our experience in creating multi-sensory space as part of internship for the Encounters in Multi-sensory project. The study involves students as both creators and learners. The study was conducted using action research through use of semi-structured questionnaires to collect primary data from 30 students of Laurea University of Applied Sciences, who visited a Nepalese multi-sensory space. The empirical part was executed within Encounters in Multi-sensory Environment project coordinated in Laurea Tikkurila on 5.5.2010.

The scenario when learning about another culture is to visit and experience/understand it on the spot with all senses. The results of the study support our argument that smell, sound, touch, taste and sight must be aroused when learning about another culture as the activation of multiple senses enhances the feeling of authenticity and modeling a space together activates student learning. The overall student visitor experience was perceived as positive. The study showed the use of multi-sensory method as an effective learning approach and in assimilating information provided which isn’t easily adaptable only by visual or oral communication.

Key Words: space, environment, multi-sensory, culture.

Table of Contents

1	Introduction	6
1.1	Choice of the research context	7
1.2	Thesis Goals	8
2	Introduction to Senses and Multi-sensory	10
2.1	Senses.....	10
2.2	Multi-sensory	10
2.3	Multi-sensory Environment	11
2.4	Multi-sensory Learning	12
2.5	Use of colours in multi-sensory environments	12
2.6	Previous Studies about the use of multi-sensory environments	13
3.	Multi-sensory Approach to Learning about another Culture	14
3.1	Encounters in Multi-sensory Environment Project	14
3.2	Learning Styles	15
3.3	Culture.....	15
3.4	Multi-sensory Approach	16
4	Conducting the Study	22
4.1	Purpose of the study and the research questions	22
4.2	Research Method	22
4.3	Participants	23
4.4	Session Developments	23
4.5	Data Collection.....	23
4.6	Reliability and validity	25
5.	Findings	26
5.1	Student Creators' Perception	26
5.2	Student Visitors' learning and experience	27
5.3	Summary	33
6.	Discussion	36
	List of References.....	37
	List of Figures.....	40
	Appendix.....	41

1 Introduction

The idea of using sensory stimuli to enhance student learning and output is not new. Since the 1970's, a number of researchers have examined the use of sensory stimuli in facilitating learning. For example, Vaac and Vacc (1979) suggested the use of sensory and verbal cues as aids in learning manuscript writing. The approach was found to be useful not only with normal ability students but also with learning-disabled and emotionally disturbed children. Hillocks and Kachur (1979) found the sensory approach useful in developing elementary students' writing skills and in stimulating their interest in writing. According to Walling (1978) the use of sense exploration exercises to help students develop descriptive writing. From a learning perspective, the use of sensory experiences has been found to be useful in helping students understand and remember learning materials and; the use of sensory experiences to appeal to students in the learning process is consistent with the important mission of creating an effective environment for learning in class (Pohan & Kelly, 2004). In language output, Nelson (1976) commented that the five senses, including image, touch, smell, taste, and sound, can be used to add a creative touch to students' output.

In the course to providing an effective environment for learning, teachers need to try and facilitate meaningful and deep learning (Findley, 2002). In relation to facilitation of deep learning and success of both student and teacher, the use of sensory experiences generated meaningful connections, which are believed to help students develop deeper and more enduring understandings (Pohan & Kelly, 2004; Wiggins & McTighe, 1998). For example, students' learning about sea creatures were asked to have a close look at sea shells and attend to such details as the patterns, colors, shapes, and textures. To facilitate a more thorough understanding of the descriptions about scuba diving, students were allowed to actually try on the scuba diving gear including the fins, tank, weights, and regulator. The appeal to the imagery and touch of the students was found to be very powerful (Pohan & Kelly, 2004; Wiggins & McTighe, 1998).

The study is based on creation of a non-authentic and easily adaptable space built through student's memories and experiences of ones culture and where landscape, sound, smell, taste and objects lead visitors to an overall experience in learning about another culture. Memories are used through use of images (photographs, maps, symbols, posters), audio (vocals, bird and animal sounds, vehicles sounds, various technical equipment sounds), words (place names, stories), flavors (food, drinks, sweets, medicines, unusual, exotic flavors), fragrances (medicines, perfumes, herbs, flowers, food odor), contact (various textiles, heat, human or animal contact) and business (games, dance, the work relating to the adoption, such as typing, knitting, religious rituals) (Mapping memories). The landscapes are not authentic, but rather an indication, so that they stimulate thoughts, memories and emotions. Different sensory experiences obtained through the memories are activated.

The thesis examines a learning mode whereby student creators' create a multi-sensory environment and student visitors' encounter the environment by visiting the physical space and experiencing it with all senses. Rutherford (1991) suggested that even pieces of candy can provide students with memorable lessons whereas the scent and taste of the candy may stimulate to produce a more vivid picture of the candy and further trigger the sensory experiences. "The best way to help student learning is to bring them to memories that would stimulate the expression of things more vividly and more intensely by appealing to the various senses" (Baart 2010).

The study focuses on the post analysis of the impact and effectiveness of a multi-sensory learning method based on students' encounter and experiences of another culture. The learning and creation concept of the environment is based on Learning by Developing (LbD) model and student-centered learning approach. The study draws on the assumption that traditional way of learning about another culture in a classroom setting is not sufficient as they tend to be overstated by visuals or oral communication. "The major difference between the multi-sensory and traditional learning method is that in the traditional method, students comply with the teacher's instructions and the requirements of the specific genre in question. With such constraints, students hardly have any room for creativity and produce output based on their real feelings" (Baart 2002). Hence in the study, our further assumption is that incorporating a multi-sensory method would produce an output based on individual, genuine and improved learning experience.

1.1 Choice of the research context

The research topic arose from our experience in creating multi-sensory environments as part of internship for Encounters in Multi-sensory Environment project. We created numerous Nepalese multi-sensory environments based on memories and experiences linked to our culture using the multi-sensory elements - touch, sound, smell, visual and taste in an artificial and unauthentic environment.

During the project we as student creators' got acquainted with theoretical and real life understanding of creating a multi-sensory space reflecting ones own culture and that of others. We learnt about the components of a multi-sensory environment - visual, sound; touch, smell and taste whereby experiencing different cultures in a space highlighting different multi-sensory elements. We were given the task to create a Nepalese multi-sensory space at Laurea UAS, Tikkurila.

The project helped us to gain multicultural experience and learn more about different cultures through visits and encounter with different multi-sensory environments. The use of multi-sensory environment as a learning module was integrated in learning. Being a student it

helped us to promote the student community by creating multi-sensory cultural environments and marketing it to other students and vice versa.

1.2 Thesis Goals

Thesis goals are clarified as follows:

1. To gather information about student visitors' experiences and perceptions of multi-sensory environment, who encountered a Nepalese multi-sensory environment; the meaning is to understand visitors' experiences in light of our scenario. This will benefit in understanding the impact and effectiveness of such a learning mode in a student learning environment. The main research question in this study is "whether a multi-sensory environment as a learning mode is an effective tool to learn and experience another culture".
2. To suggest student creators of multi-sensory environment about the creation process and learning outcome of such a learning method.
3. To enhance recognition of multi-sensory environment as a method to introduce ones culture for deeper and enduring experience.

Personal goals are explained as follows:

1. To gain deeper knowledge about multi-sensory environment and its use in a student learning environment targeted towards a multicultural student community.
2. To gain better insight in terms of comparative analysis of such a learning method compared to traditional classroom setting based on visitor's feedback.

1.3 Structure of the Study

The structure of this thesis study is divided in six sections. The first section of the study consists of background information. Choice of research context, thesis and personal goals, and structure of the study are explained in this section. The second section comprises of theoretical background with introductions of senses, multi-sensory, multi-sensory environment, and previous studies about the use of multi-sensory environments. The third section of the study focuses on multi-sensory approach to learning another culture with introduction to Encounters in multi-sensory environment project and theories about learning styles and culture. The fourth section concentrates on methodology of the study. The research approach and methods are explained furthermore. In addition, research reliability and validity are included in

this section. The fifth section of the study focuses on empirical study area. Description of empirical research and analysis are conducted in this section. In addition, findings and conclusions comprising author's findings and suggestions are also included in this section as well as theoretical linkages. The final section comprises discussion on theoretical linkages from tourism perspective and future research challenges.

2 Introduction to Senses and Multi-sensory

2.1 Senses

According to Wallis (2009) it is through the five common senses - sight, hearing, taste, smell and touch with which we experience our world. Senses generally refers to how our nervous system that brings information in, links that information to what we already know and allows us to bring the knowledge out and use it.

According to Lindstrom & Kotler (2005:69) vision is the most important and persuasive one with a share of 58 % when it comes to bonding. Sight is thus traditionally perceived as the most seductive sense and the most obvious one.

Smell is considered the second most important one with a proportion of 45 % in terms of bonding. Studies thus show that pleasant scents create pleasant states of moods. Visual and auditory elements generally tend to dominate the communications process. Whilst sight and sound are crucial components.

Sound on the other hand help to generate moods by creating feelings and emotions. Sound helps us generate moods by creating feelings and emotions. Sound is a participatory medium which actively engages the listener in the on-going processing of aural information. The symbolic language of sound is purely auditory. It includes the spoken word, music, noise, and silence (Crisell, 1986). Taste and smell are closely connected, although is smell more sensitive as it taps right into our memory (Kennedy 2008: 34).

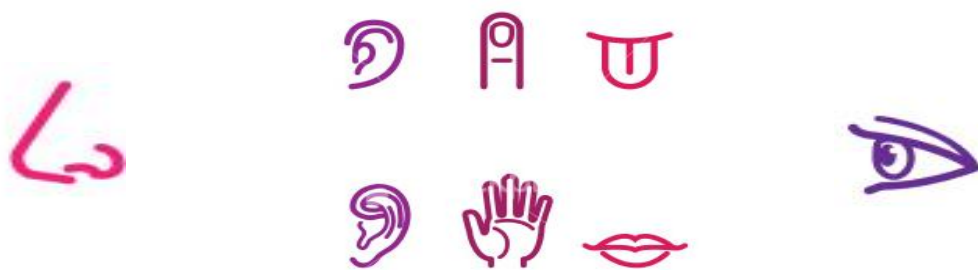


Figure 1 The Senses

2.2 Multi-sensory

The Department for Education and Skills (2004) defines multi-sensory as 'using visual, auditory and kinesthetic modalities, sometimes at the same time'. Kinesthetic refers to perceiving through touch and an awareness of body movements.

According to Rätty (2010) in social science, multi-sensory means use of many senses simultaneously from sensory experience. Sensory stimuli have usually been assigned to those with disabilities, stimulating senses and experiences based on education, rehabilitation and therapy work for relaxation, learning and activation purpose. Multi-sensory methods comprise music, drama and dance, various memorable activities and role-playing. In other words, multi-sensory or multiple senses mean many senses simultaneously from sensory experience.

Multi-sensory work is an umbrella term that from and applies recognized mediums like Snoezelen (Hulsegge & Verhuel 1987), Multi-sensory Environment (Pagliano 1999) and Sensory Integration (Ayres 1972). The word 'snoezelen' means to smell and to doze. Cleland and Clark are the founders of the concept of a multi-sensory room ("sensory cafeteria") (Pagliano, 1999, 155). Hulsegge and Verheul further expanded this concept, coining the term 'snoezelen', creating a series of sensory rooms (tactile, oral, visual, ball bath, water, smell, and taste). These mediums are often combined with creative methods and therapies like music, aroma, gardening and body awareness therapies.

Multi-sensory work is usually assigned to work on disability, which makes a lot of senses and experiences based on education, rehabilitation and therapy work. The goal is relaxation, and learning on the one hand and activation on the other. Music, drama and dance, and various memorial and includes role-playing multi-sensory work methods.

2.3 Multi-sensory Environment

A multi-sensory environment (MSE) is defined as a designated space where stimulation can be controlled, manipulated, intensified, or reduced. The central concept behind the use of the rooms is the stimulation of the primary senses by utilizing a range of objects and materials (Hope, 1997). This dynamic environment allows the user to choose the stimulation of which they are in need. Through research conducted by Pagliano (1999), the MSE attributes include:

1. Opportunity for affective/emotional development
2. Stimulation for all senses
3. Relaxation
4. Enhancement of communication (Pagliano, 1999, p.24)

According to Jan and Ad Verheul Hulseggen, a sensory environment is described as a functional aspect of experience and observation referring to peaceful activities. A space in which different sensory channels are activated for pleasant sensory experiences and sensations achieved through activating activity and a balance of relaxation, which can be found in a favorable state of alertness to learning, imagination, emotions, creativity, self-confidence in the construction, the stress and pressures.

According to Rätty (2010) a multi-sensory environment is a non-authentic and easily adaptable space. The landscapes are not authentic, but rather an indication, so that they stimulate thoughts, memories and emotions. The approach is contrary to traditional learning style of oral communication aided with visuals in learning about another culture. The background of the multi-sensory room could be in a wide range such as a white room, black light room, music room, the activation room, a memorial room, dark room, ocean room, aroma room, quiet room, and adventure and nature garden room.



Figure 2 Multi-sensory Environment

2.4 Multi-sensory Learning

The term is used to refer to any learning activity that combines two or more sensory strategies/ modalities simultaneously to take in or express information. Multi-sensory approaches have been particularly valuable in literacy and language learning, for example, in relationships between sound and symbol, word recognition, and the use of tactile methods such as tracing on rough or soft surfaces.

2.5 Use of colours in multi-sensory environments

In multi-sensory environments, colours are used all the time. Colours not only express and create mood, they also give meaning to and influence our observations of our inner and outer world. Various researches prove that colour is meaningful and it has an essential role in people's visual experiences. When taking the form of communication, colours are powerful and irreplaceable (Lee 2008). Colours awake feelings and affect in how people perceive the intended association: colours' effects are physiological, psychological, and sociological (Va-

nAuken 2006). People are comfortable when colours remind them of familiar items or situations. A soft shade of blue reminds people of the sky and it psychologically calms them down.

2.6 Previous Studies about the use of multi-sensory environments

Although few published research studies have evaluated the effectiveness of such multi-sensory rooms, one study based on ‘Sensory Approaches in Inpatient Psychiatric Settings’ demonstrated that the exchanges occurring within the rooms were effective in reducing stereotypical behaviors (Hutchinson & Haggard 1991).

A study in medical science reported that, among certain individuals, the use of multi-sensory environments appears to facilitate an improvement in the ability to concentrate during task performance. These studies were based in a hospital targeted towards consumers and comprised of a room approximately 9 feet by 16 feet, with sponge-painted walls on which posters of nature scenes were hung. It contained a variety of seating options (i.e., bean bag chairs, rocking chairs, and a glider rocker), a bubble lamp, music, and other items that addressed each of the sensory areas. Self-help books and magazines focusing on health, wellness, yoga, and nature were available. The primary goal was to evaluate the consumers’ perceptions of the effectiveness of the sensory modulation room and sensory-based approaches. It was reported that 89% of the sensory room sessions had a positive effect, 10% had no effect, and 1% had a negative effect (Ashby, Lindsay, Pitcaithly, Broxholme, & Geelen, 1995).

Another example is related to “Interactive Therapeutic Multi-Sensory Environment for Cerebral Palsy Users”, a system turned into a tool that allows users to explore, express, play and enjoy. By means of activities carried out in the multi-sensory room, users develop capabilities - sometimes unconsciously- such as participation, communication or creativity and, thus, led to an improvement of their quality of life. The room focused on people with cerebral palsy but it could also benefit other people with cognitive disabilities (e.g. autism, Down syndrome, mental retardation, elderly, and so on). In addition, the system was considered useful and could be used as a learning tool for people without special cognitive needs.

3. Multi-sensory Approach to Learning about another Culture

3.1 Encounters in Multi-sensory Environment Project

Encounters in Multi-sensory Environment project began to develop at Laurea University of Applied Sciences in 2007. The starting point of the project was to create a space where immigrants can go back for a moment as if in their homeland. The aim was to develop methods that support the immigrants' own culture in the transition from one generation to another, and increase understanding between cultures. The main idea was to produce multi-sensory experiences manner (Räty 2010).

The aim of the project was to build a multi-cultural, multi-sensory environment, which allows immigrants in developing new methods to support ones own culture and internationalization. The project led to creation of a multipurpose environment in which University of Applied Sciences, municipalities and organizations together develop and produce methods of multi-sensory integration for immigrants to partake in.

The core idea of the project is a multi-sensory working method for the purpose of introducing and promoting ones culture using the technology. The project highlights a new kind of approach to the creation of internationalization and multi-cultural society, the challenges of responding to, and in particular exploitation of new technologies for example, use of objects instead of memories to create experiences through technology. It is an approach towards multicultural society practice development i.e. creating a public space in which minority cultures feel at home and creates basics for a functioning multiculturalism. Multi-sensory mode works for different ages and in which good experiences are shared as a producer, and thus reconstituting identity tool.

The concept of multi-sensory space evolved to support the immigrants' identity development and building of a new life situation. Public spaces with right environment where immigrants may feel at home are defined by the dominant culture. In particular for the elderly immigrants, who, despite the dreams can never return home would make sense to create a public space that would feel familiar. Such a familiar space for minorities also would be liable to the transfer of cultural traditions. It would help a second-generation immigrants perceive their own parents and grandparents' culture, the idea of the world and the "soul of the landscape."

According to Räty (2010) in the multi-sensory space reminiscence activities, which help recall and shared memories with others are carried out. Reminiscence activities are based on community building by sharing memories. Sharing similar experiences of their own with the feeling of belonging to community and, secondly, the promotion of cultural integra-

tion: reminiscence brings together people of different ethnic, cultural and religious background. The multi-sensory environments serve multi purpose and are also used for cultural exchange between students of different nationalities at Laurea University of Applied Sciences.

3.2 Learning Styles

Research indicates that some of us are visually oriented, some are auditory, some are kinesthetic (action oriented), and some are tactual. Most of us can process information in any mode but learn best in one or two preferred modes (Gardner, 1991). In this study we have focused on activation of all senses - visual, sound, touch, smell and taste to allow student visitor's to learn in their preferred modes as the assimilation of information availed may otherwise be difficult to understand only through use of visual and oral communication.

3.3 Culture

"Culture is always learned. It does not derive from genes and is not therefore innate" (Hofstede & Hofstede, 2005, 4-5). According to Reisinger & Turner (2003) culture is learned, not inherited, and it is a collection of beliefs, rules, customs and traditions, shared by a certain group and the community. Culture defines people's behavior and guides in terms of interacting with others. Culture provides the means to satisfy the psychological, personal and social needs and binds people together and helps to identify who they are.

According to K.T.Solis (2010) "It's important to develop an appreciation for different cultures in order to become a well-rounded person who is sensitive to the unique qualities of others, for instance, one way to develop this appreciation is to try to learn about other cultures around the world". There are several ways to become knowledgeable about different cultures, for instance, by reading books written by authors from a particular culture. In this context, we deal with learning and experiencing another culture i.e. Nepal, through creation of a multi-sensory space and through mutual encounter, participation and interaction.

In Nepal, culture reflects 'the way of life for an entire society' as every aspect of life, food, clothing and even occupations are culturally classified. The culture of Nepal is a combination of tradition and novelty comprising codes of manners, dress, language, rituals, norms of behavior and systems of belief. Culture in Nepal is an assemblage of music, architecture, religion and literature (Nepal Culture, 2008).

3.4 Multi-sensory Approach

A Nepalese multi-sensory environment was built with a purpose of experiencing Nepal with all senses using multi-sensory learning method. The space was built in Laurea Tikkurila on 5.5.2010. In the Nepalese multi-sensory environment student visitors' were asked to use all the five senses in assimilating the provided information such as looking closely at the object (image), feeling (feel), tasting (taste), smelling (scent), and listening (sound).



Figure 3 Nepalese Multi-sensory Environment

We as student creators' undertook three main strategies under the multi-sensory approach, namely, visual, auditory, and kinesthetic-tactile. Visual strategy included activities such as use of visuals and images - pictures, video clips, and posters. Auditory strategy included activities such as oral discussions and music for relaxation. Kinesthetic-tactile strategy involved activities such as touching/feeling - Nepalese handmade fabrics and practicing meditation including tasting of Nepalese food and drinks and smelling of Nepalese spices and fragrances.

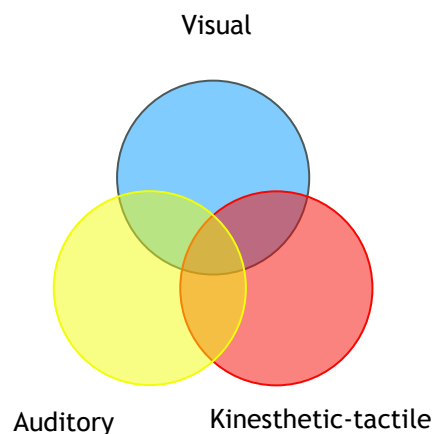


Figure 4 Multi-sensory Approach

Information was availed in stages with different genre such as narrative, descriptive and expressive to provide a deeper understanding of Nepalese culture among student visitors. From a narrative genre, student creators' shared personal stories, memories and experiences of homeland with student visitors and were asked to respond by reflecting on ones cultures. Sharing of memories and experiences led to interaction as student visitors asked numerous questions.

From a descriptive genre, student visitors were given jars with Nepalese spices and served Nepalese tea and sweets. They were instructed to make full use of their senses and to reflect on it in terms of feelings such as soothing, strong or overpowering. Majority of the respondents described the smelling of Nepalese spices and fragrances as a new learning experience. Respondents were keen in smelling and feedback was gained through participant observation i.e. facial expressions and interaction. A sense of curiosity was seen among respondents as they practiced meditation.

From an expressive genre, different visuals and sounds were played and student visitors' were asked if it evoked any emotions and new feeling. Student visitors' also shared personal views about the benefits of such environments such as hands on experience about another culture, easy to remember and allowed assimilation of information using different senses.

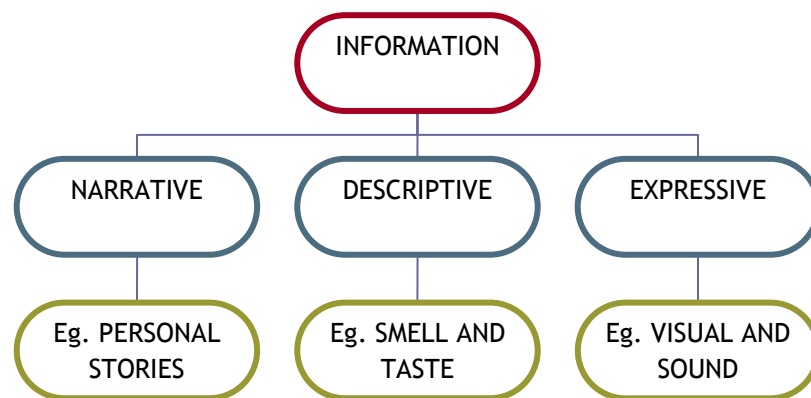


Figure 5 Dissemination of Information

3.5 Student creator's learning, creation and implementation process

The learning concept is based on Learning by Developing (LbD), defined as a method applying investigative learning to authentic situations. It is contrary to traditional learning defined by Neo and Kian (2005) where a teacher controls the instructional process and is regarded as the source of expert knowledge, which is communicated through lectures in a classroom environment.

The learning approach represented a move away from the traditional modes of education to one where the learners are active participants in the learning process (Oliver, 1998). Learning is accomplished through the process of development in a professional setting, while at the same time the needed knowledge and skills are acquired. It is a way for students to practice working as experts while still building their professional education (Salmi 2008). The key concepts behind the Learning by Developing (LbD) model are authenticity, companionship, an experience-based, investigative approach and creativity (Raij, 2005, 27-28).

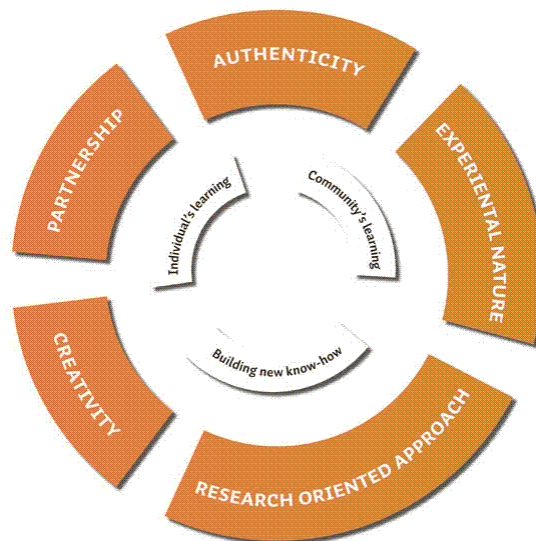


Figure 6 Learning by Developing (LbD) Model

The description of student creators' learning process, creation and implementation are as follows:

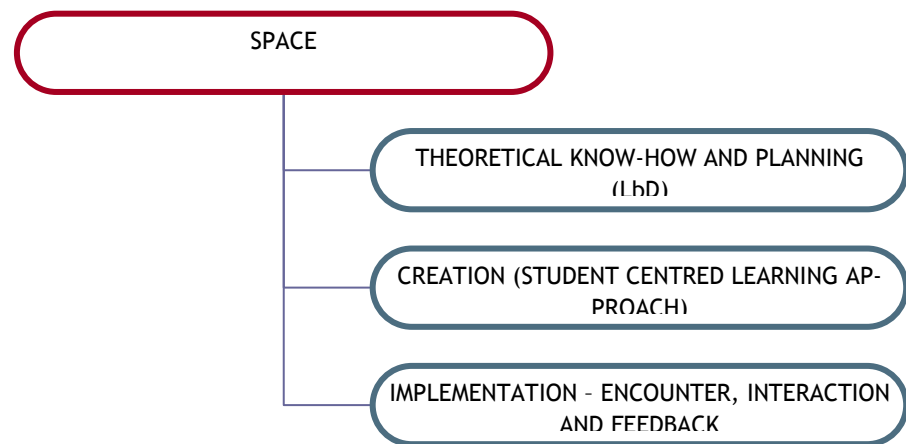


Figure 7 Student Creators' Learning, Creation and Implementation Process

Learning and Planning Phase

In the initial stage, learning took place through lectures and discussions to gain theoretical know-how on following issues:

- Purpose of creating multi-sensory environment
- Target group
- End result
- Creation concept

The purpose of creating a multi-sensory environment was to avail a public space where various senses can be used to switch to a different cultural environment. In such space, representatives of a culture feel being at home and create basics for a functioning multiculturalism and promoting internationalization. Multi-sensory spaces could be indicative, built together in groups and combined with personal memories using the current state of technology. The multi-sensory environments were targeted towards students of Laurea University of Applied Sciences. The end result of using such approach was - stimulation of all senses, relaxation, and enhancement of communication, learning and gaining new knowledge, and deeper and enduring experiences. The use of multi-sensory elements was introduced as a tool to create such environments.

Creation Phase

The multi-sensory environment creation concept is consistent with Neo & Kian's (2005) definition of student-centered learning approach. The approach allows students to play an active part in their learning process and become autonomous learners who are actively engaged in constructing new meaning within the context of their current knowledge, experiences and social environments. Student creators' construct one's own knowledge contributed by experience and creativity to create multi-sensory environments offering edutainment. It is a collaboration of members from similar cultural background and nationality. The student learning-mode as constructivist learning places emphasis on the learner and propounds that learning is affected by their context and their beliefs and attitudes. Visitors to these environments as learners are encouraged to seek information and knowledge through involvement and contact that build upon their prior knowledge and experiences rather than relying totally on the supply of information.

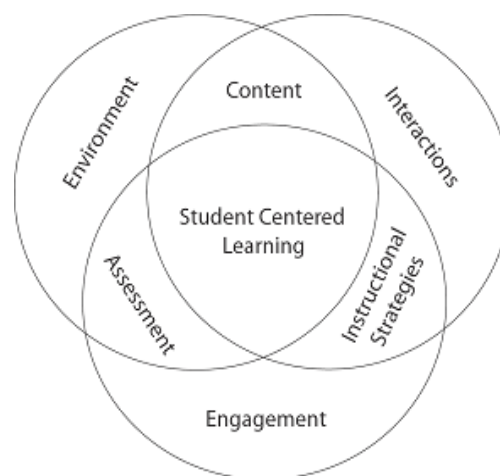


Figure 8 Student Centred Learning Approach

From a student creators' perspective, the major task involved modeling a space into a multi-sensory environment whereby learning took place. Apart from the creation process, student creators' were involved in providing cultural sensitivity education to visitors and in generating feedback about the encounter. The created multi-sensory environment was a space that reflected familiarity and where creators have a better chance to present their culture, values and ideas; a space where people can understand and experience different cultures by visiting and experiencing it with all senses.

The working approach for the project was based on the following:

- Learning by Developing Model
- Student Centered Learning Approach
- Producing of experience based environments

- Creation of space based on the method of a multi-sensory approach.
- Space must be easily modifiable using modern technology and mobile equipments to create an environment to stimulate all senses
- Must support ones cultural identity
- Recollection of memories and sharing them with others
- To develop cultural sensitivity on the university level

Learning took place also in terms of meaningful interpretation of cultural contents to make the environment interesting and educative. Brainstorming, developing themes to represent Nepal's social, cultural and tourism aspects for example - "A Day in Kathmandu" was undertaken in this stage. Based on a theme, use of different strategies, content and genre for the dissemination of information was planned such as starting with visuals and image display of Kathmandu, playing of sounds of the streets of Kathmandu, introducing visitors with the smell of spices used in local household in Kathmandu, feeling the fabrics and tasting local tea as well as sharing of personal stories.

Implementation

The implementation stage involved inviting student visitors' to the environment and engaging in mutual encounter, interaction and getting feedback. Invitations were sent to students and staffs of all units of Laurea University of Applied Sciences to visit and experience Nepal in a multi-sensory space. Student creators' were involved in making observation of student visitors'; knowing about their experiences and to engaging in interaction. In the multi-sensory environment, use of various visual solutions made the state of visual interesting. Sound or hearing was activated with music, natural or human voices. Tactile sensory was stimulated through different surfaces and pleasing objects which can be touched. Smell sense was stimulated with pleasant aroma and taste senses being activated with food and drinks. The use of multimedia application offered new ways of disseminating information in an innovative way (Agnew, Kellerman & Meyer, 1996). Apart from the use of multimedia application, sharing of personal experiences, childhood memories was of major importance.

4 Conducting the Study

4.1 Purpose of the study and the research questions

The aim of the study is to gather the experiences and perceptions of student visitors' about the peer student created multi-sensory environment, having encountered a Nepalese multi-sensory environment; the meaning is to understand the visitor experiences in light of our scenario. This will benefit in understanding the impact and effectiveness of such a learning mode in a student learning environment. The main research question in this study is "whether a cultural multi-sensory environment as a learning mode is an effective tool to learn and experience another culture".

The study will rely on finding out whether or not having visited and encountered a multi-sensory environment with all senses add to student visitors' learning of new knowledge, variation in the experience over the old perception i.e. differences or similarities to any previous experiences etc. (such as memories, images, stereotypes or knowledge of a culture or country), opinion about the overall experience, i.e. the combination of several senses in order to arouse interest and learning and the role of each senses in contributing to the new experience.

4.2 Research Method

The subject of the study is theoretical and descriptive in nature rather than being numerical. Therefore, a qualitative research approach is used throughout the study. As the main interest of this study was in presenting student creators' and visitors' experiences and perceptions, the qualitative research approach fitted the study better than the quantitative. Statistical repetition or saturation was not sought for, but the individual experiences of participants. The first phase of the study includes perceptions of the learning model from creators' learning point of view. The second phase deals with visitors' perceptions of the model assessing their experience being in the Nepalese multi-sensory environment. The learning model will be evaluated against traditional approach of oral presentation aided with visuals. Apart from the learning aspect, the research will explore the role of multi-sensory elements.

According to Williams (2003, 9-15) qualitative research concentrates on the qualities a research problem might include and it searches its achievements by interpreting and seeking to understand the societal world on a micro-level. This type of technique includes observation, unstructured interviewing, and group interviewing. A qualitative researcher is less likely to be narrow and restrictive in his/her approach to research. A researcher applying qualitative methods use more flexible approach to the research process and focus on emergent themes or even alter the course of research during the research process. In qualitative approaches the

perspectives and interpretations of those being researched become the key to understanding human behavior.

In qualitative research open coding is the process of labeling and breaking down raw data in order to find patterns, themes, concepts, and propositions. Qualitative approaches are used when we are interested in unique results and research context, detailed information, subjective experiences, closeness to the context, respondent, non-numeral and not measurable data. Qualitative research interpretations emerge through user profiles, typology, new content, themes, narratives, descriptions, rich information, surprises, pictures, diagrams, speech bubbles (quotations), theory -previous understanding (Isacsson 2010).

4.3 Participants

The study was conducted among thirty participants comprising twenty nine Finnish students and a foreign intern. The participants were students of Laurea University of Applied Sciences, Tikkurila unit. Two Nepalese multi-sensory environment sessions were held with fifteen participants at a time. Participants varied widely in age. The age group of the participants ranged from 18-55. Majority of the participants were female.

It was considered in this study that feedback would be generated immediately after the multi-sensory session; as there was a higher chance of getting more accurate information on visitors' experiences, than if the interviews were made some time afterwards. Also, it was believed that higher chances of getting participants would exist when giving them a chance to provide feedback right at the multi-sensory room, than if they were asked to later.

4.4 Session Developments

Each encounter session lasted approximately between 1.5 -2 hours including participant's entry, encounter, exit, and in providing feedback.

4.5 Data Collection

Action Research, systematic study of attempts to improve educational practice by groups of participants by means of their own practical actions and by means of their own reflection upon the effects of those actions (Hopkins, 1985), was used for gathering empirical data for this study.

It is a collaborative activity among colleagues searching for solutions to everyday, real problems experienced, or looking for ways to improve instruction. Action research, sometimes called "practitioner research," is a reflective investigation of a personal interest, problem or

challenge. Rather than dealing with the theoretical, action research allows practitioners to address those concerns that are closest to them, ones over which they can exhibit some influence and make change. The process of action research assists in assessing needs, documenting the steps of inquiry, analyzing data, and making informed decisions that can lead to desired outcomes. Action research is not about learning why we do certain things, but rather how we can do things better.

The collection of data is an important step in deciding what action needs to be taken. Multiple sources of data are used to better understand the scope of happenings. There are many vehicles for collection of data such as journals, individual files, audio tapes, videotapes, case studies, surveys, self-assessment, interviews, portfolios, diaries, field notes, photos, memos, questionnaires, focus groups and checklists. Data that are not quantifiable can be reviewed holistically and important elements or themes can be noted.

The information for the study was collected mainly through analysis of existing material and previous theoretical studies, use of individual learning diary, personal notes and pictures, participant observation, and through use of open-ended questionnaires. Questionnaires were distributed to student visitors after the Nepalese multi-sensory session. The reason for choosing semi-structured questionnaires was due to the nature of the research topic which is qualitative in nature and allowed visitors to share personal views and comments as the learning mode is based on experience. According to Genzuck (2003) the advantage of open ended questionnaire allow respondents to express themselves by their own words, not forcing respondents views in pre-fixed / structured answers (boxes). The primary data was collected within the Encounters in Multi-sensory Environment project coordinated in Laurea Tikkurila through a Nepalese multi-sensory session conducted on 5.5.2010 with 30 visitors.

Questionnaires for this study were built around questions related to experience and multi-sensory approach - "what student visitors' experienced in a multi-sensory environment?" and "what do student visitors' think about multi-sensory method in learning about another culture?". Experience related questions comprised similar or past experiences, new emotions and feelings generated having encountered a multi-sensory environment. Multi-sensory approach questions were directed at student visitors' perception of use and combination of each sensory element in offering a holistic experience and in learning about another culture.

Language and its use was a crucial aspect during the encounter to be able to learn and assimilate information interpreted in the form of oral communication. Instructions, guidance and oral discussion were carried out in English. As the study was carried out among Finnish students, language created communication barrier among some participants and led to passive atmosphere. The use of English language in the semi-structured questionnaires created further barrier among student visitors in expressing their individual expressions and resulted in

short answers. Few student visitors made wrong interpretation of questions being asked. Some replied in Finnish and had to be translated. Therefore, in this process, language plays a significant part in disseminating the information, so careful attention must be paid when analyzing the data.

4.6 Reliability and validity

Yin (2003, 109) explains that every research study should pursue a general analytic strategy: to define the priorities to be analyzed and obtain the reasons (why) through diverse techniques and tools available.

Research reliability and validity supports the researchers in defining if the course of study is correct and if the measures in use are consistent. A level of certainty can be obtained by drawing conclusions through valid and reliable means. Reliability may be achieved when the same results are obtained consistently or similar observation is reached by various observers. Reliability refers to the accuracy of the measuring instrument or process, while validity refers to the research instruments success in measuring what it is intended to measure. (Saunders, Lewis & Thornhill 2007, 149-150.)

The results of the study cannot be generalized as sampling was small. Hence, we cannot claim that our study represents the views of students of whole Laurea University of Applied Sciences. For this reason, it is fair to state that our research can give some indication about students' perception of multi-sensory approach in learning about another culture.

5. Findings

The findings are based on post analysis of student creators' learning experiences and feedback provided by 30 students of Laurea University of Applied Sciences, who encountered a Nepalese multi-sensory environment.

5.1 Student Creators' Perception

From a student creators' perspective, the learning process was based on key concepts of Learning by Developing (LbD) model - authenticity, companionship, an experience-based, investigative approach and creativity.

"Authenticity" was achieved through creation of multi-sensory environments as a real-life development project. It involved companionship through shared working, learning and responsibility among peers of same nationality. Practical experience was gained in the sense that student creators' got acquainted with multi-sensory learning approach in which a space served as a medium to share one's culture. The multi-sensory encounter can be considered an investigative approach to assess the effectiveness of the learning method. As the overall creation process involved student creators' as active and independent learners, it allowed creativity through interpretation of memories using images (photographs, maps, symbols, posters), audio (vocals, bird and animal sounds, vehicles sounds), words (place names, stories), flavors (food, drinks, sweets, medicines, unusual, exotic flavors), fragrances (medicines, perfumes, herbs, flowers, food odor), contact (various textiles, heat, human or animal contact) and business (games, dance, the work relating to the adoption, such as typing, knitting, religious rituals).

Student creators' acted as hosts in the space and were embedded in theoretical supervision and gained multicultural competence in four stages - awareness, knowledge, emotions and skills. Awareness was gained in terms of use of multi-sensory learning approach. The overall learning, creation and implementation phase added to student creators' knowledge of multi-sensory and its learning outcomes. Student creators' were able to learn about participants' experiences in perceiving another culture and gained skills in creating multi-sensory environments.

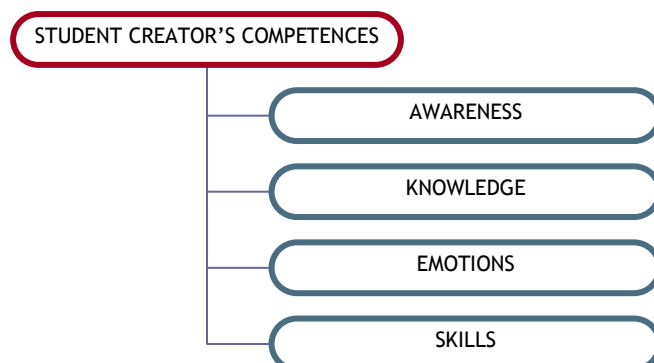


Figure 9 Student Creators' Competences

From a student creators' creation perspective, student-centered learning approach allowed student creators' to take active part in the learning process and become independent learners. The concept allowed constructing on knowledge contributed by experiences and creativity to create multi-sensory environments offering edutainment. The space had different functions: for the creator, it is a learning process of building from a space into a multi-sensory environment. In a way, student creators presented and shared own culture as experts.

In terms of understanding student visitors' perception of sensory stimulation, dissemination of information in three genres - narrative, descriptive and expressive was a boon. Personal stories shared by student creators' as part of narrative genre generated a lot of smiling, laughter and feeling of amusement among student visitors' when compared with their own culture. The use of descriptive genre contributed in better participant observation such as observing the facial expressions of student visitors after having smelled Nepalese spices and tasted Nepalese tea and sweets as they were instructed to make full use of their senses and to reflect on it in terms of feelings. The taste of Nepalese tea was considered to be new and good while in terms of smell some showed distressing facial expressions saying that it was overpowering and too strong to handle. From an expressive genre, having viewed different visuals and sounds, student visitors felt more relaxed and expressed their experiences through oral discussion. The effect of use of visual and audio lengthened the duration of the encounter sessions as the interest shown by student visitors' encouraged student creators' to share numerous experiences and personal stories.

5.2 Student Visitors' learning and experience

The environment availed visitors' a chance to gain a multi-sensory experience and a new environment in learning about another culture. Visitors were offered an interactive environment whereby questions related to familiar and unfamiliar encounters were discussed and shared experiences in order to develop further understanding and positive approach towards the culture. Student visitors' to the environment were not restricted to visuals that appeal to ones eyes but a combination of all senses.

According to Lindstrom and Kotler (2005), our senses are the link to memory and can tap right into emotion. Based on student visitors' feedback, use of multi-sensory approach - visual, auditory and kinesthetic-tactic strategy in Nepalese multi-sensory environment showed positive correlation with memory, learning. Majority of visitors' described the encounter as



“memorable”. Student visitors’ described their experience as follows:

“I think it was better to use all the elements, it helps remembering and really getting into the new culture”.

“It should be used more because we have so many different kinds of people and they understand/learn things in different ways, so it is better to have different elements”

“Each element helps to give different ideas, connections and approaches. I enjoyed it and it seems to be much more effective learning. I will remember it without hard work”

The number for those agreeing that the use of sensory stimulation helped them understand Nepalese culture was high. The fact that those questioned felt that the overall experience had enhanced their understanding is a clear indication that at least in the visitors’ estimation, the senses played a valuable part in helping the environment to achieve its goal. It further generated interest towards similar encounter in future among respondents.

Reflecting on Pohan & Kelly, Wiggins & McTighe’s theory on learning, dissemination of information in a way that is appealing to all senses led to deep learning and meaningful connections about Nepalese culture among student visitors. The technical equipments, decoration and objects in the room were chosen to support and activate the five senses. From a learning perspective, assimilation of provided information by looking closely at the object (image), feeling (feel), tasting (taste), smelling (scent), and listening (sound) was considered effective compared to traditional learning environment. Respondents described the learning approach as -

“Better way to learn about another culture than a traditional lecture”

“It is very good way to learn different cultures, like that you can get better picture because you just don’t listen what someone is saying, you can smell and see what it is like.

It implies that multi-sensory approach in learning about another culture was effective and contributed in a better learning experience and understanding having visited the physical environment and experiencing it with all senses. Following are the feedback received in response to whether such a learning approach was beneficial and effective in learning about another culture-

“Absolutely, the method is beneficial. People should get knowledge from other cultures and countries”

“I think so. I think it will encourage people to go abroad, meet new people, see the good and bad in their own culture and open their views about different culture”

“Yes, reduction in prejudices, to take the risk to encounter with people from different cultures, positive approach to another cultures encouraging curiosity, stimulation about a culture that motivates to learn more”

“Yes, they can learn, see more and experience another culture in a different way, relaxing”

As Lindstrom & Kotler (2005:69) described vision as the most important and persuasive one when it comes to bonding. Majority of student visitors’ described use of visual strategy meaning images, posters; videos of Nepal as “*beautiful, enchanting, and interesting*” and contributed in gaining their focus towards the subject. In Nepalese multi-sensory environment a lot of colours were used because of its essential role in visual experiences. As colours contribute to express and create mood, feelings and affect in how people perceive the intended association and give meaning to influence observations of inner and outer world. The ambiance of the environment was described as “*colorful*”. Use of visual strategy was intended to investigate student visitors’ reactions to the activation of visual senses in the multi-sensory environment. Respondents described the use of visuals and colours as follows:



“The visuals and colors were beautiful and refreshing”

“Beautiful, colorful. Reminded me of the Far East”

“The visuals were enchanting and created an interest toward the subject”

Kennedy (2008) stated that sound helps to generate moods by creating feelings and emotions. The use of auditory strategy meaning background music created a feeling of relaxation among student visitors and communication was fostered through oral discussion. In response to auditory strategy, 24 responded positively while 6 found it negative.



The term “negative” meant that it made them feel “sleepy”. Other statements about music being played in the cultural multi-sensory environment are as follows:

“Music was clam, relaxing and great for meditation. I have listened to this music earlier and I like the calming feel it creates”

“The music and candles created an Asian atmosphere”

“Playing the metallic instrument, the metallic cup with a stick, was a great experience for me. The sound of it, how it keeps going and going. I want to have one for myself too”

Smell is considered the second most important in terms of bonding and creates moods. Student visitors’ were asked if use of smell generated pleasant or distressing mood in Nepalese multi-sensory environment. The idea was to understand how visitors react to smell and the mood created by the effect. 22 responded positively and 8 had negative responses. Majority of student visitors’ mentioned that the use of smell created

a “*pleasant mood*”, “*captivating*” in picturing Nepal and “*new and great idea*” in creating a good atmosphere. On contrary, some considered it to be “*overpowering and distressing*”.

As part of the encounter, student visitors’ were made to drink Nepalese tea and taste sweets. Majority of the respondent described their experience of use of taste sense as “different”. Some of the respondents described it as - “*New, good taste*”

It was different to traditional Finnish tea” and “The tea was a bit strange, sweet. Without the milk it could have been better”



In terms of kinesthetic-tactile strategies, it created a new learning experience and generated active participation among student visitors' being involved in activities such meditation and touching objects. Respondents described their experience as follow:

"The materials were also well chosen for the theme, earth-bound and the handmade fabric felt unique. In Finland you hardly come across fabrics which are handmade"

The kid's clothes and mothers Sari were endearing - they created a strong feeling of how important the family and motherhood is in Nepalese culture"



Figure 10 Student visitors' perception of sensory stimulation

Majority of student visitors' to Nepalese multi-sensory environment had limited knowledge about Nepal. Student visitors' associated Nepal with - "*mountains, religion - Buddhist, hot weather, strong family bonding, colorful, old fashioned rural areas and modern cities*". Having visited and encountered Nepalese multi-sensory environment with all senses, student visitors' response was that it had enhanced their understanding and broaden the mental image of Nepal. Respondents described their experiences as -

"My emotions were that Nepal is a quite foreign place far away. Now it feels real and much more familiar. I like it"

"Yes. The overall experience of the daily life in Nepal became different in my mind. Also the knowledge of social relationships became different"

"I think the environment helped to understand a lot better how the way of life is totally different than in Europe"



Figure 11 Student visitors' perception of Nepal before and after the encounter

The fact that those questioned felt that the overall experience had enhanced their understanding is a clear indication that, at least in the visitors' estimation, the senses played a valuable part in helping the environment to achieve its goal.

5.3 Summary

Being involved in the multi-sensory project, we as student creators' got acquainted with theoretical and real life understanding of multi-sensory approach in creating a space reflecting ones own culture. The components of multi-sensory environment - visual, sound, touch, smell and taste were learned whereby we created and experienced numerous different cultures in a space highlighting cultural contents and use of multi-sensory elements. In the created multi-sensory environment, culture was interpreted through visual, auditory and kinesthetic strategy using visual, optic, olfactory, gustatory and sensible stimulations to making it more alive. We as student creators gained multicultural competence in four stages - awareness, knowledge, emotions and skills. The use of sensory stimulation not only made the content informative but also entertaining.

The overall creation of multi-sensory environment was based on personal memories and experience of ones culture. The learning and creation concept allowed student creators' to construct on their knowledge contributed by experience and creativity to create multi-sensory environment offering edutainment. Students creators' as active and independent learners in the learning process, interpreted memories in a creative way using images (photographs, maps, symbols, posters), audio (vocals, bird and animal sounds, vehicles sounds, various technical equipment sounds), words (place names, stories), flavors (food, drinks, sweets, medicines, unusual, exotic flavors), fragrances (medicines, perfumes, herbs, flowers, food odor), contact (various textiles, heat, human or animal contact) and business (games, dance, the work relating to the adoption, such as typing, knitting, religious rituals). The space had different functions: for creators' it is a learning process of building from a space into a multi-sensory environment. From a student visitors' perspective it is about learning another culture by visiting and experiencing it with all senses.

The student visitors' feedback gained from thirty students of Laurea University of Applied Sciences shows positive correlation between use of multi-sensory approach and learning of another culture, termed as "user friendly" which facilitates learning and new knowledge. The encounter was perceived as non-formal, refreshing, relaxing and reflected Pagliano's description of attributes of a multi-sensory environment. The role of sensory stimulation allowed student visitors' to assimilate information which is otherwise difficult to understand using only oral and visual communication. The environment offered hands on cultural experience as sensory stimulation showed connections to get familiar with the culture.

The use of visual, auditory and kinesthetic-tactile strategy contributed in deep and enduring learning among student visitors'. In the encounter process, visuals in the environment had contributed in making the experience memorable, sound availed calm and relaxing mood, smell was considered fascinating, touch made the experience unique while taste was considered something new. The approach of using narrative, descriptive and expressive genre in disseminating information allowed student creators' to understand student visitors' perception. Narrative genre using subjective interpretation, storytelling and sharing of personal experiences by student creators' were a significant contributor to the overall learning experience of student visitors'. Sharing of personal stories created an image of the culture. The descriptive genre was something new and fascinating for student visitors; expressive genre contributed to oral discussion and interaction.

Many respondents mentioned moderate change in existing perception having new mental picture by visiting and sensing the culture through activation of senses - fresh image, smell, taste, sound and touch. On contrary, some respondents mentioned no perceptual change, but the information received was new. The feedback also demonstrates visitors' interest towards participating in similar encounters.

The overall outcome of the study shows that multi-sensory environment led to stimulation of senses offering a relaxing atmosphere whereby it led to interaction and participation. The resultant being better experience as visitors' to the environment encouraged to seek information and knowledge through involvement and contact that build upon their prior knowledge and experiences rather than relying totally on the supply of information.

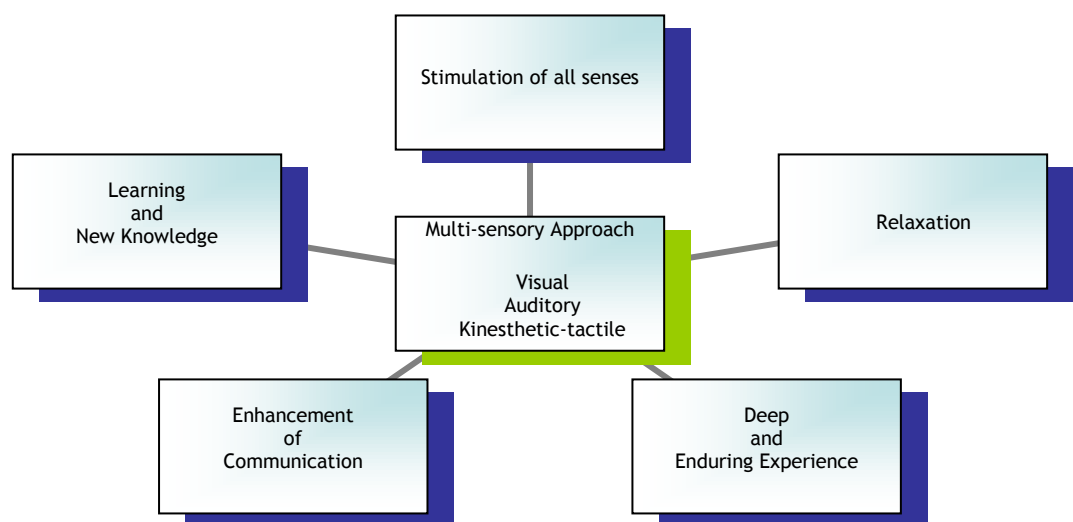


Figure 12 Multi-sensory Approach and Learning Outcome

The study has contributed in finding out that such a learning environment provided evidence on the impact of senses in order to engage emotions, feelings and bonding. Even though there is not enough research on use of such method in a student learning environment for the purpose of cultural learning, we believe that our case will enhance the understanding of the impact of such a learning method.

Apart from experiencing another culture, we believe that the resultant of visiting such environment would further contribute to achieve common goals in a multicultural student atmosphere by overcoming stereotypes. The existing mental perception of student visitors' could form a new mental picture through fresh image, smell, taste, sound and touch generating interest, curiosity towards a culture and also foster intercultural communication. Therefore, we suggest that such a learning method should be introduced to facilitate socialization in a multicultural student learning environment.

6. Discussion

As student creators', having conducted the study, we learn that the use of multi-sensory method has a direct effect on the memory of respondents. As senses are the links to memory and can tap right into emotion.

The findings of this study demonstrate that the use of smell among some student visitors' caused a distressing feel as the multi-sensory room intervention is individual. In the study, the findings also show significance of language in the encounter process as language barrier led to inactive atmosphere and short feedback rather than sharing detailed personal experience. Therefore, such issues should be taken into consideration for enhancing better encounter process among student visitors.

Similarly, findings also exhibit student visitors' interest in Nepal from a tourism perspective. Majority of participants showed interest in visiting Nepal having encountered a Nepalese multi-sensory environment and experiencing it with all senses. Studies conducted on holistic management of two senses stated that "People remember 20% of what they hear. If they see and hear it they remember about 80%" meaning positive correlation between use of senses and memory. The study also showed that results could be phenomenal by harnessing more than two, yet in many cases - experiences inform our senses, the senses being linked to our memory and memories tap right into our emotional makeups.

From multi-sensory tourism marketing communication perspective, such environments may offer a way of creating an emotional bond by directly impacting on the five senses, with the objective of influencing behavior and attitudes. This tapping into the emotional side of participants in a multi-sensory environment may influence memories they take away with after the encounter session. Marketing relies on consumers' emotional feelings within the aim of creating effective experiences. Therefore, further research would be exploring use of multi-sensory environments in generating interest upon a subject being marketed and in tourism destinations.

As the respondent's in the study were Finnish students, further research could also be done among multi-cultural student groups to examine the variation as to how students from different cultural backgrounds perceive and interpret the information availed during a multi-sensory session.

Another approach to examine the effectiveness of multi-sensory method as a learning approach would be to conduct a similar study among students in two learning environments i.e. a traditional atmosphere with oral presentation aided with visuals and another in a multi-sensory environment.

List of References

Printed Reference

Diaz, D. P., & Cartnal, R. B. 1999. Students' learning styles in two classes: Online distance learning and equivalent on-campus. *College Teaching*.

Ferrington, Gary. 1993. Audio Design: Creating Multi-Sensory Images for the Mind. *Journal of Visual Literacy*.

Kennedy, M. 2008. *Brand Strategy*.

Lindstrom, M. 2005. *Brand Sense, Build Powerful Brands through Touch, Taste, Smell, Sight and Sound*. Free Press.

Lindstrom, M. & Kotler, P. 2005. *Brand sense build powerful brands through touch, taste, smell, sight, and sound*. New York: Free Press.

McDonnell, J. 2002. Sensorial Marketing for Those Who Can Wait no Longer, In *Proceedings of the first International Conference of Sensorial Marketing*.

Morrin, Maureen & Chebat, Jean-Charles. 2005. *Person-Place Congruency*.

Orr, T. (2001). Language of the senses. *Writing*. 24(2). 17-19.

Pohan, C. A., & Kelley, N. L. 2004. Making content come alive for English learners: A student teacher's success story.

Raij, Katariina. 2007. *Learning by Developing*. Laurea University of Applied Sciences.

Reisinger, Yvette & Turner, Lindsay. 2003. *Cross-Cultural Behavior in Tourism*.

Rutherford, L. H. 1991. For sweet success, use multisensory approaches to teach writing.

Schmitt, B. 1999. *Experiential Marketing: how to get customers to sense, feel, think, act, and relate to your company and brands*. New York: The Free Press.

Smilansky, Shaz. 2009. *Experiential Marketing - A Practical Guide to Interactive Brand Experiences*.

Walling, D. R. 1978. Sense exploration and descriptive writing: A practical exercise. *Exercise Exchange*.

Williams, M. 2003. *Making Sense of Social Research*. California: Sage Publications.

Yin, K. 2003. *Case Study Research Design and Methods*. 3rd Edition. California: Sage Publications.

Zemke, D.M.V. and Shoemaker. 2006. Scent across a crowded room: exploring the effect of ambient scent on social interactions. *International Journal of Hospitality Management*.

Electronic Reference

American Marketing Association. 2009. Brand Experience: What Is It? How Is It Measured? Does It Affect Loyalty?. *Journal of Marketing*.
<http://bear.warrington.ufl.edu/weitz/mar7786/Articles/brakus%20et%20al%202009%20brand%20experience.pdf>. Accessed 12.7.2010.

- BharatOnline.com. 2008. Nepal Culture. <http://www.bharatonline.com/nepal/culture.html>. Accessed 3.9.2010.
- Birsch.1999. Multisensory Instruction. www.unm.edu/~devalenz/504Sp05/class10.doc. Accessed 6.6.2010.
- Champagne, & Stromberg. 2004. JOURNAL OF PSYCHOSOCIAL NURSING, VOL. 42, NO. 9 - Sensory Approaches in Inpatient Psychiatric Settings: Innovative Alternatives to Seclusion & Restraint. <http://www.jpnonline.com/view.asp?rID=4983>. Accessed 7.6.2010.
- Champagne, T., & Sayer, E. (2003). The effects of the use of the sensory room in psychiatry. http://www.otinnovations.com/pdf_files/QI_STUD_Y_Sensory_Room.pdf. Accessed 7.6.2010.
- Conjecture Corporation. 2010. How Can I Learn about Different Cultures?. <http://www.wisegeek.com/how-can-i-learn-about-different-cultures.htm>. Accessed 15.6.2010.
- Genzuck, Michael. 2003. A Synthesis of Ethnographic Research. http://www-bcf.usc.edu/~genzuck/Ethnographic_Research.html Accessed 2.7.2010.
- Henry, Marcia.K. Multisensory Teaching. http://www.bumpybooks.com/how_details.php. Accessed 8.6.2010.
- IATP International, Inc.2010. The Culture in the Workplace Questionnaire. <http://www.itapintl.com/tools/culture-in-the-workplace-questionnaire-cw/itapcwquestionnaire.html>. Accessed 5.8.2010.
- Isacson & Leena.2009. 4th INTERNATIONAL SCIENTIFIC CONFERENCE “Planning for the Future - Learning from the Past: contemporary Developments in Tourism, Travel & Hospitality” - Using multiple senses in tourism marketing. http://www.pompeii.net/Using_multiple_senses_in_tourism_marketing.pdf. Accessed 16.6.2010.
- KvantiMOTV. Method of teaching data resources. London: Social Science Data Archive. <http://www.fsd.uta.fi/menetelmaopetus>. Accessed 14.7.2010.
- Lee, S-O. 2008. Preferred Colors in Various Cultures based on Lexical Frequency: Comparison among Korean, English, French, Russian, Romanian, Chinese, Japanese, and Mongolian. <http://www.international.ucla.edu/calendar/showevent.asp?eventid=7056#>. Accessed 23.7.2010. .
- MacIsaac Dan. 1996. An Introduction to Action Research. <http://www.physics.nau.edu/~danmac>. Accessed 27.8.2008.
- Neo & Kian. Developing a Student-Centered Learning Environment in the Malaysian Classroom - A Multimedia Learning Experience: The Turkish Online Journal of Educational Technology. <http://www.tojet.net/articles/213.pdf>. Accessed 10.6.2010.
- Nepal Tourism Board. 2010. About Nepal. <http://welcomenepal.com/promotional/#>. Accessed 3.9.2010.
- Ng & Yeung. A Multi-Sensory Approach to Enhancing Writing in Chinese. www.aare.edu.au/07pap/ng07432.pdf. Accessed 12.6.2010.
- Räty, Minttu.2010. Multisensory Space. <http://moniaistinentila.laurea.fi>. Accessed 5.6.2010.

Salmi, Laura. 2008. LbD for Beginners - Learning Professional Expertise as a First Year Students. <http://markkinointi.laurea.fi/julkaisut/d/d05.pdf>. Accessed 10.7.2010.

The Quality Improvement Agency for Lifelong Learning. 2008. Multi-sensory Learning. http://tlp.excellencegateway.org.uk/tlp/pedagogy/assets/documents/qs_multi_sensory_learning.pdf. Accessed 8.6.2010.

VanAuken, B. 2006. Brand Identity: The Importance of Colour. http://www.brandingstrategyinsider.com/2006/11/brand_identity_.html. Accessed 27.8.2010.

Wikimedia Foundation, Inc. 2010. Cultural Learning. http://en.wikipedia.org/wiki/Cultural_learning. Accessed 6.6.2010.

Unpublished Sources

Isacsson Annica. 2010. Qualitative Methods. Laurea University of Applied Sciences.

List of Figures

Figure 1 The Senses.....	10
Figure 2 Multi-sensory Environment	12
Figure 3 Nepalese Multi-sensory Environment	16
Figure 4 Multi-sensory Approach	16
Figure 5 Dissemination of Information	17
Figure 6 Learning by Developing (LbD) Model	18
Figure 7 Student Creators' Learning, Creation and Implementation Process	19
Figure 8 Student Centred Learning Approach.....	20
Figure 9 Student Creators' Competences.....	26
Figure 10 Student visitors' perception of sensory stimulation.....	31
Figure 11 Student visitors' perception of Nepal before and after the encounter	32
Figure 12 Multi-sensory Approach and Learning Outcome	34

Appendix

Appendix 1

Interview Questions

Name:

Age:

Occupation:

Name of degree program enrolled in:

1. Have you encountered similar kinds of emotions or experiences previously, if yes, how, what was it?
2. In addition to above mentioned questions, how is this different or similar to any previous experiences etc. such as memories, images, stereotypes or knowledge?
3. Having visited the environment has it created or enhanced new knowledge, experience or emotions to old knowledge, experience, emotions etc. of the culture being presented.
4. What is your opinion about the overall holistic experience i.e. the combination of several senses in order to arouse interest and to enhance learning of cultures?
5. What is your opinion about the overall use of multisensory elements - sound, touch, smell, taste and visual contributing to new experience and learning of cultures?
6. Did you feel like having learnt something from the environment?
7. Do you think that your learning has enhanced having encountered the environment, interacted and provided feedback?

8. Would you be interested in participating in similar sessions?
9. Do you think student will benefit from the cultural multi-sensory environment experience?
10. What did you feel having viewed the visuals presented in the cultural multi-sensory room?
11. Did the sound/music played contribute to having new feeling an emotion in you?
12. Did the smell generate new experience?
13. Having touched the materials, did it contribute to generating new feeling and emotions?
14. Having touched the materials, did it generate new feeling and emotions?
15. Having tasted the food, did it generate new experience?
16. What were you previous understanding of the culture?
17. Having experienced the environment has it changed your perception about the culture?
18. Was there anything that made you feel uneasy?