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Minna-Maarit Jaskari, University of Vaasa, Finland

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[to cite]:

[url]:
http://www.acrwebsite.org/volumes/1011185/volumes/ap11/AP-10

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ABSTRACT

The paper adopts a user-centred approach to the construction of a creative and effective learning environment for business students. The literature review introduces the earlier theoretical discussion on internal, external and virtual learning environments. A projective collage technique is applied to reveal the students’ ideas and thoughts concerning their studies. These meanings include tensions between (a) business and pleasure, (b) I and others, (c) concentration and inspiration as well as (d) safe and extraordinary. A metaphor of a safety net is used to illustrate the creation of the learning environment. The paper provides suggestions for how teachers can create and maintain a creative and effective learning environment.

Key words: learning environment, marketing students, projective techniques, content analysis

INTRODUCTION

Contemporary pedagogical approaches emphasise learner orientation rather than teaching orientation (Zepke, Leach and Prebble 2006). Instead of shallow learning strategies, pedagogy needs to focus on constructive, deep understanding. Frameworks such as constructive alignment provide tools for teachers to enhance deep learning among students (Biggs and Tang 2007, 50-54). The size and the form of the place of learning govern much of the teaching that happens. Although its influence will vary from teacher to teacher, the physical environment plays a significant role in how teachers approach their teaching or how they view what is possible within a particular place (Jamieson et al. 2000).

The success of a learning-oriented perspective depends on the creation of an effective learning environment (Gonzalez et al. 2004). Researchers have suggested that an integrated learning environment improves students’ ability to be creative and effective in solving problems in different contexts (Eickmann, Kolb and Kolb 2004); nevertheless, learning programmes still focus more on activities, and less on space and place (Beard and Wilson 2006, 79).

Classrooms have remained very similar for over 100 years, and some scholars have argued that they have been designed more to facilitate the work of teachers than to support learning (Beard and Wilson 2006, 80-81). The slightly sarcastic argument has been put forth that we know more about how to prevent heat loss in designing learning environments than learning loss (Higgins et al. 2005). In spite of these provocative arguments, it seems clear that we have a limited understanding of how the physical space enables teaching and learning (Neill and Etheridge 2008).

According to Higgins et al. (2005), the research that has been done is largely predicated on a traditional view of “chalk and talk” learning in standardised “one-for-all” institutions. However, our understanding of teaching and learning is evolving in a more constructive direction, and thus learning environments also need to be redesigned to reflect the changes in pedagogical development (Bransford 2000, 131). Even though there is a growing body of literature on learning environments in a broad sense (Herrington and Herrington 2005; Paladino 2008), more research is needed to understand the design of more integrated learning environments.

Furthermore, earlier studies on learning environment research neglect to focus on the end-users, even though successful innovation processes are argued to require a deep understanding of customers or end-users (Olson, Waltersdorff and Forr 2008). Also, Higgins et al. (2005) point out that in order to design a learning environment successfully, it is vital to involve the end-users in the design process. Thus, in this study, the end-users’ thoughts and feelings are taken as a starting point for creating the learning environment.

The aim of this study is to construct suggestions for developing a creative and effective learning environment. First, a brief literature review introduces the earlier research on internal, external and virtual learning environments. Second, I apply a projective collage technique to reveal the students’ ideas and thoughts concerning their studies, and discuss the results alongside relevant earlier literature on learning environments. Third, I apply this knowledge in the creation of a model of a creative and effective learning environment. Finally, the paper provides suggestions for how teachers can create and maintain a learning environment. This study contributes to the
development of learning environments that support students’ learning processes.

IDENTIFYING DIFFERENT LEARNING ENVIRONMENTS

Learning goes on all the time and in all kinds of places (Chism 2006). Typical learning environments include lecture halls, laboratories and libraries. That said, a learning environment in a broad sense is not just a particular place, but also encompasses the factors – internal, external and virtual – that affect the learning process (Koli 2003).

The internal learning environment is the mind of the learner, including earlier experiences, beliefs, fears, emotions, skills, knowledge, motivation, learning styles, approaches to learning and other factors that affect how the student learns (Koli 2003). Approaches to learning reflect the individual differences in the strategies students use to achieve a learning task. The deep approach to learning involves trying to find and understand the meaning of the ideas; it is a holistic process, where the student is looking at the broad picture and actively aims to relate the ideas to his or her previous knowledge and looks for patterns and underlying principles. The surface approach involves coping with course requirements, reproducing content and routinely memorising facts and procedures in order to complete the given tasks with minimum effort. A strategic approach refers to organised, self-regulated studying that involves managing time and effort effectively and being alert to assessment requirements and criteria (Entwistle and Peterson, 2004). The internal learning environment is crucial in learning; especially, subjective attitudes, beliefs and emotions may either enhance or hinder learning (Andersson 2006). Although teaching and coaching can help change attitudes, it is up to the individual herself to accomplish the mental change.

The external learning environment includes the physical and social environment that can be changed and altered by other people (Koli 2003). The starting point for creating a learning environment is to consider what is taught, how it is taught and how it is assessed (Biggs 1996). However, the physical environment – such as lecture halls and libraries – also affects the learning process (Koli 2003). Basic physical variables such as air quality, temperature and noise have a strong, consistent influence on learning. However, once minimal standards are attained, the effect seems to be less significant. Other variables such as acoustics, lighting and colour may have an impact on learning, but the relationship remains more complex (Higgins et al. 2005). The external environment can be designed to enhance certain moods or mind states (Beard and Wilson 2006: 82), thereby also affecting the internal learning environment. Environments that elicit positive emotional responses may lead not only to enhanced learning, but also to a powerful, emotional attachment to the place (Graez 2006). On the other hand, environments that cause discomfort may hinder learning. For example, unreliable Internet connections, slow computers, and indifferent or aggressive teachers may be factors that dampen the motivation of even the most eager students.

Social factors such as faculty, coaches, other students and different working groups all affect the learning process. Indeed, the teacher’s input may be crucial in creating an interactive and responsive environment that inspires learning (Paladino 2008). Gonzalez et al. (2004) point out that social capital is a crucial building block in an effective learning environment. It consists of four factors, namely connections among students, building trust with students, establishing shared values with students and providing equitable opportunities for students. The more of these factors are present, the higher the social capital of the learning environment. Higher social capital will lead to collaboration, commitment and a positive learning environment.

Physical learning environments are places, but new technologies and online environments are referred to as spaces (Jamieson et al. 2000) or virtual learning environments. The most traditional form of such a learning space is a computer that provides the student with different kinds of materials such as videos, lecture notes and exercises on some topic. It can be structured as a course or it may just be a space that contains information (Koli and Silander 2003). Internet-based virtual worlds such as Second Life are three-dimensional communities that mimic the real world without physical limitations, aiming at creating real world experiences in virtual world environments (Tuten 2009) while also highlighting social and interactive aspects, thereby seeking to build social capital in virtual life. A virtual learning environment can also take the form of a game, that is, “edutainment”, education and entertainment put together (Hietanen and Rubin 2004). More recently, the rise of social media such as YouTube, Facebook, Twitter and blogs is opening up new dimensions of virtual learning environments (Granitz and Pitt 2011). However, even if technological tools may enhance the
learning experience, many students wish for human presence and guidance (McGabe and Meuter 2011, Buzzard et al. 2011).

The internal, external and virtual are closely connected to each other. Together they form the context, atmosphere and circumstances in which the learning takes place (Koli 2003). One of the challenges is to construct environments that support a student’s experiential learning process (Kolb 1984). For example, students may be resistant to adopting creative practices due to barriers to expressing creativity such as fear of failure, fear of doing something different and fear of taking risks (Anderson 2006), all of which arise from the internal learning environment. Thus the external learning environment should support students’ creativity, facilitate trial-and-error, build up the confidence of students and help their thinking. Also, curricula impose time and budget constraints on teaching and learning. For example, student project work needs to be completed in a certain timeframe. It can be asked whether an effective learning environment that enhances deep learning can also account for these time and possible budget constraints.

Future learning environments should enable greater flexibility and mobility of people, knowledge, furniture and other artefacts (Beard and Wilson 2006, 80). They should allow for multiple modes of instruction and learning. The flexibility of the learning environment has been found to contribute positively to student engagement, collaboration, flexibility and learning (Neill and Etheridge 2008). Activating the learning environment fosters quality interactions among students and between students and teachers (Meeuwisse et al. 2010), helping students to integrate (Prince 2004), to feel they belong (Umbach and Wawrzynski 2005) and to achieve good study results (Zepke et al. 2006).

The extent to which and the ways in which the users are engaged in the learning environment design process determine the success or failure of the resulting design. There are no off-the-shelf solutions; the users’ ability to articulate a distinctive vision for their learning environment is what matters. Indeed, no single design solution will work forever. User involvement must be continually refreshed and iterated to support ongoing change. This also provides the users with a sense of ownership of the learning environment (Higgins et al. 2005).

**METHODOLOGY**

The study was conducted in the Business School of the University of Vaasa, Finland. The researcher chose to gather data from a master’s level (4<sup>th</sup> year) marketing course with 20 students. This course is pedagogically based on experiential learning (Kolb 1984). The course requires full-time marketing students to work in teams of 3-4 students and solve authentic real-life development projects for companies. The learning objectives emphasise the skills of project management, creative problem solving and teamwork skills. In order to pass the course, the students have to be bold and do something completely new and work in an area where there are no right answers; in this effort, they need to be creative and have professional know-how in different aspects of marketing.

In order to collect data for this study, the researcher used a pictorial collage technique. It is a method in which participants are asked to represent a phenomenon visually by composing and gluing a collage of images, drawings and texts on a piece of cardboard. This collage is then used as a stimulus for discussion in the interviews (Moisander and Valtonen 2006, 96). The collage technique requires people to use metaphors, that is, they must experience and explain one thing in terms of another. Metaphors are powerful because they reveal thoughts, feelings and experiences (Zaltman 1997).

The students were asked to collect pictures, words, photos or other materials that elaborate their thoughts and feelings on the topic of “my studies”. In order to produce metaphors related to the theme, the students were instructed not to include pictures of their studies. This broad theme was chosen in order to understand different kinds of learning environments and to ensure that the students would not focus on only a limited number of topics. The students were asked to glue the pictures onto an A3 sheet of paper.

Altogether, the students completed 20 collages. The pictures used in the collages were diverse in nature. The students also cut text out of magazines and glued these onto the collages. After completing the collages, the students were interviewed in six groups. The first group was interviewed by the researcher; the later groups were interviewed by three students. The interviews followed the Z-met method (Zaltman 1997; Zaltman and Coulter 1995), where (a) the students were asked to openly describe their collages and explain why they chose certain pictures and words in order to elaborate the meanings attached to different pictures. (b) They were asked to group
the pictures in different themes and elaborate on those themes. (c) They were asked to point out if some pictures seemed to be more important to them than others and then to explain whether some pictures hid deeper meanings, secrets that the pictures do not show and things that happen outside of their borders. (d) The students were asked to tell what kinds of colours, smells and feelings they associated with the picture. (e) In the end the students were asked how they understand the concept of the learning environment and what kinds of learning environments they use, when and why.

The data consists of the collages and the interview reports. The data was analysed using qualitative content analysis (Miles and Huberman 1984). First, the interview transcriptions were read through several times and, second, the data was coded inductively based on the meanings that emerged from the data. Third, the coded data was categorised into different themes and finally the categories were grouped together on the basis of similarity and difference. Eight abstract themes emerged and these were further combined to form four categories, representing the tension between the themes (Spiggle 1994). The analysis was done at aggregate level and thus differences between different collages are not evaluated.

MEANINGS ATTACHED TO LEARNING ENVIRONMENTS
The data enabled the researcher to gain rich information about students’ thoughts concerning their studies and different learning environments. The four aggregate themes include opposing themes and are termed (a) business and pleasure, (b) I and others, (c) concentration and inspiration and (d) safe and extraordinary. These are elaborated below.

The extracts from the interviews are translated from Finnish and are coded with sex and identity number.

Business refers to everyday learning activities, such as attending lectures, completing exercises, doing teamwork and passing exams. The students described these activities as being hard work, as they need to schedule lectures and assignments in order to do them properly and reach their goals. As for places, the students considered that business involves traditional learning environments such as lecture halls and exercise rooms. Indeed, business has a goal orientation that reveals an emphasis on a strategic approach to learning (Entwistle and Peterson 2004).

Students stated that their future goals were to get a diploma from the school or a good job. Some students emphasised the learning process itself, taking a deep approach to learning (Entwistle and Peterson 2004).

The students mentioned their social environment several times, revealing its importance.
Friends, teamwork, social networks, parties and communality emphasised the social aspects of learning. Also, Meeuwisse et al. (2010) found that students’ informal relationships with fellow students led to a sense of belonging and thereby helped their academic progress. Teamwork and working groups were mostly mentioned in positive terms, serving to challenge thinking, enhance learning and deepen understanding. Sometimes the students described teamwork as being depressing and stressful, for example if the group did not work well or if there were freeloaders present in the group.

“Here is a picture where guys are carrying wood. It symbolises communality, friendship, socialisation and teamwork. When we study, everyone does their own thing, but at the same time we all are here studying together in the same place and helping each other.” (3, female)

Larger social networks develop over time not only in university surroundings, but also at parties and other social gatherings. Students noted that the networks and social community they build during their studies are important in helping them grow as a person and making life-long friendships – and that these networks may even help them later in life.

“And your networks are important. During your studies, you create networks that are helpful to you later, both when looking for a job or socially. Also, study time and interaction among students makes you grow as a person.” (12, male)

The social aspect has been noted in earlier studies as well. Paladino (2008) discusses how creating an interactive and responsive teaching environment inspires learning. She proposes engaging in problem-based teaching and collaborative learning to foster discussions between students and between faculty members and students. This leads to growth in social capital (Gonzalez et al. 2004) and enhances learning. Also, Chism (2006) notes that the social setting greatly influences learning and this should be considered in, for example, seating arrangements.

**CONCENTRATION AND INSPIRATION**

Learning environments that support focused studying help the students to concentrate on their given tasks. Students needed to have focused concentration and the time to read and think alone in order to go deep into the topics and to memorise and understand things. The library and home as physical environments were mentioned as learning environments that support peaceful, concentrative studying. The campus library features a scenic window with a view of the sea – the students mentioned this window several times as something that helped them concentrate when reading alone in the library.

“I made this collage at home. I wanted to do it in peace. In the library I would not have been as creative or thought so freely about things. You go to the library to study hard and memorise – it’s a more serious place.” (1, female)

Whereas concentrative studying was seen as happening at the university, inspiration and creativity were often considered to happen outside the university campus. An exception to this was the campus café, which provided an important meeting place where students could engage in inspiring teamwork. Students described how they gained inspiration from creative stimuli – seeing, trying and learning new things. However, faculty and teachers may provide inspiration by, for example, introducing active and collaborative learning techniques and engaging students in real-life experiences (Umbach and Wawrzynski 2005).

**SAFE AND EXTRAORDINARY**

Successful learning needs an environment where the students feel basic security. As a theme, safe refers to a situation in which students know what to do and what is expected from them. The years students spend at university comprise an important phase in their lives. It is also a period of time when they can still make mistakes and learn from them. They need a feeling of safety for trying new things, discussing ideas with other students and with coaches. They do not have to know all the right answers yet, and they need to engage in trial and error in order to understand things deeply. Students need to feel secure in expressing their own ideas without the fear of being laughed at. Indeed, a good learning environment provides the “licence to make mistakes” (6, female). This secure foundation allows students to set their sights on tackling more challenging, controversial and ambiguous problems. The theme of security is in line with the findings of Andersson (2006), who found that MBA students were afraid of making mistakes and losing face in front of their peers. A secure environment encourages trial and error processes that foster deep learning.

“To be able to study, one must have a feeling of a basic security, concentration, creativity and self-discipline.” (2, female)

When one is in a safe environment, it is easier to try something new, step into new and unknown
territory, challenge oneself and try new things. However, it seemed that the local university milieu was more effective at serving as a safe platform than providing extraordinary new events. Students sought extraordinary experiences from trainee programmes and travelling.

“This picture of an aeroplane illustrates that I was on a traineeship and I am going again. In its own way, studying is travelling. You learn a lot from travelling. During traineeships one can learn so much more than if you were just studying in Finland.” (Chism, 2006, female)

Chism (2006) points out that environments that provide experiences, stimulate the senses, encourage the exchange of information and offer opportunities for rehearsal, feedback, application and transfer are most likely to support learning. Chow and Healey (2008) conducted a study where they followed first-year university students who were making the transition from home to university. This transition involves changes for students and is frequently greeted with mixed feelings. While moving to university, some students distance themselves from their existing social support networks like family and close friends. Some students experienced feelings of displacement as they left their home, which had provided them with safety, security and identity (McAndrew 1998). Thus, at the beginning of the studies, the role of university learning environments is to provide safe places, whereas later in the studies, their role is more to serve as sources of inspiration and challenges.

CONCLUSIONS
This study started by asking what would be a creative and effective learning environment for master’s level business students. A projective collage technique was used in order to reveal students’ ideas and thoughts concerning their studies. The results show a wide range of meanings, and, indeed, the university years comprise an important phase in students’ lives. Based on these meanings, the researcher constructed a metaphor of a safety net. It represents a creative and effective learning environment that can enhance the students’ learning. The safety net is presented in Figure 1.

![Figure 1. A safety net – dimensions of a creative and effective learning environment.](image)

Teachers and faculty can support students’ deep experiential learning processes by creating and maintaining a learning environment that supports creativity and effectiveness. This can be done on several levels, such as at the university, faculty, programme, course or class levels. Based on the results gained from this study, several practical suggestions can be made.

First, business is maintained at the level of professional know-how, for example, using context-dependent experiential learning, such as real-life applications and contextual problems. The focus is on gaining professional know-how. The business factor can enhance professional development by revealing the tacit knowledge involved in working life, for example, when students negotiate with entrepreneurs.

Second, higher education learning is learning for one’s own benefit, and thus the I-factor is important. Each student earns his or her own degree and this makes university learning individually-oriented. Teachers can support this by enhancing the professional development of students – that is, not only their skills and knowledge, but also self-understanding, self-esteem and career development. However, others and social capital are extremely
important for the learning environment. Teachers may enhance the creation of social capital by means of team-building exercises and team coaching. Teamwork can be used, but team coaching is needed to overcome the problems in teamwork. Working in different kinds of teams, some of which may be cross-functional, cross-organisational and/or international, will create wide social networks for students, even though at the same time it may mean new challenges for teamwork.

Third, for the students studying also meant balancing between concentration and inspiration. Concentration can be enhanced by means such as constructive alignment (Biggs 1996) in order to give students clear ideas on where to focus in learning. A teacher can explain clear learning objectives, plan methods suitable for reaching those objectives and assess the outcomes. This helps the students to know where to put their focus and what the most important things to study are. Students found that they could focus and concentrate in places like libraries, where it is quiet. Also in libraries one sees others who are studying, which may produce social pressure to stay focused. Teachers can bring inspiration into the learning environment in several ways. Inspirational guest speakers, new creative methods, new technical tools, moving to other places and doing something unexpected may help the students to “think outside the box”, get inspired and even reach a flow state. When students put their mind (concentration) and effort to the topic they often get inspired by the topic itself. For example, qualitative user data gathering for project work has often involved and inspired the students to work hard and learn more.

Fourth, the feeling of safety and basic security is important in enabling a person to be more creative and open-minded. Indeed, in the first phases, teachers need to foster a safe environment. Teachers can support discussion on different solutions and multiple ways of reaching the solutions. Also, it is eye-opening for the students when the same development problem is posed to many student groups and the groups reach very different but equally valid solutions by the end of the course. However, later on the students can be pushed further away from their comfort zones to try something extraordinary. This can be done by introducing new challenges into the project, such as by incorporating cross-functional or international teamwork. Working in special environments such as designers’ labs, overseas or simulators may provide extraordinary experiences.

This study has focused on constructing a learning environment that supports students’ learning. The model of the learning environment should not be considered to be set in stone. The social capital and the ownership of the learning environment are redesigned every time a new student group starts to work. Thus the learning environment needs to maintain flexibility over time; it should allow different learning, working and teaching styles to flourish. Teachers may enhance the learning experience by using the different dimensions presented in this paper to guide their teaching.

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