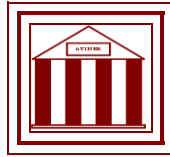


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**ART2014-1047**

**Environment as Learning  
Instructors**

**Mohammad Ali  
PhD Candidate  
Birmingham City University  
UK**

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## **Environment as Learning Instructors**

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### **Abstract**

The term ‘effective learning environment’ is discussed from several perspectives which clearly identify the significant effects that learning environments have on learning. Two key factors are considered to be important in enhancing the learning outcome; educational structure and practices, and educational environment.

Educators and scientists are mostly concerned with modifying and developing the pedagogic system and curriculum in search of the best appropriate style of learning and teaching efficiency. They recommend creation of a self-organised learning system that leads the learners to drive their education without continual supervision (Robinson, 2006). The alternative view among educationalists promotes the development of a structured learning system that stresses supervision and is fully managed by teachers and educators (Powell, 2012).

On the other hand, designers and architects interact with the “environment”, which refers to everything around us, and within it; each aspect of which has a different effect on human behaviour, productivity and perception. The main purpose of a learning environment is to support and enhance the physiological modes of human understanding, including visual, auditory and kinetic. The learning environment consists of numerous factors that shape the physical environment which consequently have direct or indirect effects on learning, productivity, behaviour and academic achievement (Kopec, 2006, Allen and Hessick, 2011, Wannarka and Ruhl, 2008).

The proposed paper analyses the above views and proposes the consideration of learning environments. In addition, it examines some of the important factors that the designers should take into account for providing a learning environment that supports needs for this century. The research methodology is based on social relation methods and mixed approaches, such as surveys and case studies within the Kuwaiti public school environment.

**Keywords:** learning environment, Interior space for education, effective Learning environment, human behaviour, enhance learning, Physical settings, Interactive space

## Introduction

Education can be defined as giving or receiving systematic instruction. It also means giving someone intellectual information on a particular subject with different methods and disciplines. However, education processes lead to learning theory which aims to cause a behaviour change or influence as a result of experience, and ongoing acquisition of knowledge and skills in a directed educative process which formalized learning. These processes are linked with several theories and systems such as pedagogy, curriculum, technology and communication. Two key factors are considered to be important in enhancing learning outcomes: educational structure and practices, and educational environment. The educational environment is the particular focus of this paper and is a feature of all these theories. Educational environments are a significant factor in shaping the learning system and learners' engagement; it facilitates ideal adaptive learning behaviour, motivation, and achievement. The interaction between humans and their environment has been discussed and classified within the fields of environmental science, psychology, education and design. All agree that this relationship between the learning system and the setting where learning takes place is vital. Obviously the physical learning environment must be created with due consideration given to the various educational factors which have serious impacts on learners and the education system. The paper considers what constitutes an 'effective learning environment' from several perspectives, clearly identifying the significant affects that learning environments have on learning. ([Frith & Whitehouse, 2009](#); [Hirschy & Wilson, 2002](#); [Hutchinson, 2003](#); [Patrick & Ryan, 2003](#); [Rutter, 1979](#); [Skinner, 1953](#); [Smith, 2003](#); [Uline, 2000](#); [Wannarka & Ruhl, 2008](#))

Therefore, there are two groups mainly engaged and responsible in developing the physical learning environment: the first group is educationalists who are working to provide effective environment most suited to their policy and purposes in addressing the various aspects of social organizational disciplines, while, the second group are the designers and architects who pay more attention to the quality of the physical learning environment and settings depending on the educator's needs and beliefs. Indeed both groups seem to have different responsibilities which result in a formalised understanding of an effective learning environment as each educational authority demands. Some obligations are not clear in terms of the responsibilities between educators and designer, where the power of one group can prevail at the expense of the other. In addition, this cooperation seems to be missing or lacking in some educational authorities. So this paper describes the aspects of the educators in terms of designing learning environments and then the designers' and architects' aspects, followed by the proposed research scope and perspectives.

## **Educator Aspect**

Educators are mostly concerned with modifying and developing the pedagogical system and curriculum in exploration of the best appropriate style of learning. The fundamental concerns of educators are divided into two main areas, which are pedagogy and curriculum. Firstly the curriculum, which is what supposed to be taught, that's all about the whole knowledge and practice that educational authorities are planning to deliver to learners. The second area is pedagogy, which refers to how the content is going to be taught, the ways of teaching and conveying information to students. These two focus areas are critically linked with each other, which means the quality of the curriculum will be seriously affected by the quality of teaching and pedagogy, and vice versa. ([Allen & Hessick, 2011](#); [Barber & Mourshed, 2007](#); [Carr, 1979](#); [Wolff, 2003](#))

Educationists' recent discussions of new ways of education pay more attention to learning theory and achievement, instead of traditional (dictation) teaching methods, on which most educational authorities are based. They recommend creating an open learning system completely or partly removed from the control of the educational authority. This leads to learners leading their own education without continual supervision. It assumes students grow better with a broad curriculum in which they may discover hidden skills and the things which interests them. It also recommends teachers to take responsibility not just for delivering information, but also for engaging and stimulating the interest of students, since education is based on learning not teaching ([Robinson, 2006](#)). While another theory suggests offering students more freedom to learn through self-organised systems that gives students the opportunity to choose how they want to learn. This approach might be undertaken by providing them the materials without any instruction, and then leads students finding their own way to achieve their learning and certainly will direct them to be learners without teaching. ([Mitra, 2010](#)). In addition, the alternative view among educationalists promotes the development of a structured learning system that stresses supervision and management by teachers and educators in order to develop successful students, who have the ability, drive and skills as a foundation for their future life and career. Definitely this approach is quite similar to the existing system in many educational authorities currently. ([Powell, 2012](#))

Education theory is a structure of rules and schemes that facilitate educational needs and represent understanding. On the other hand, social and organizational aspects are taken into account by educators as vital in affecting the quality of the learning environment. Studies in these fields show that effective learning is not based on the acquisition of information and knowledge only, but also has to take account of the skills, abilities, engagement, approaches and practises that students develop. Consequently, these views and disciplines have to be considered significantly in order to investigate the relationships between the physical environment and learning outcomes. Each approach requires different settings and arrangements which must be put in

place by the environment designers to obtain the best effective environment that suits the particular approach. ([Carr, 1979](#); [Smith, 2003](#))

### **Designer and Architect Aspects**

As mentioned, designers and architects mostly concentrate on the physical setting of the learning environment. The term “environment” refers to everything around us, and within it; each aspect of which has a different affect on human behaviour, productivity and perception, “*The ways in which children perceive their surroundings greatly affects how they will perform*” ([Allen & Hessick, 2011, p.7](#)). Much research on this subject shows that students spend most of their time at school from primary to high grades, which raises the significance of developing the effective learning environment. The main purpose of a learning environment is to support and enhance the physiological modes of human understanding, including visual, auditory and kinetic. The learning environment consists of numerous factors that shape the physical settings which consequently have direct or indirect effects on students’ learning, productivity, behaviour and academic achievement, which are; spatial environment, visual environment, acoustic and thermal environment. The effectiveness of a classroom environment comes from student’s perceptions of interaction within the classroom. ([Allen & Hessick, 2011](#); [Edwards & et al., 1993](#); [Kopce, 2006](#); [Rutter, 1979](#); [Wannarka & Ruhl, 2008](#))

Children are aware of their classroom environment even if they do not understand the implication of the environmental settings on learning. Research shows the balance of students’ perceptions in the different classroom settings which affect their academic achievements and interaction. ([LaRocque, 2008](#)). So the following points will cover the physical factors within the learning environment:

- **Spatial environment:** this factor refers to the physical elements that affect learning. First is the space strategy setting which refers to the ways that educators would use the space as to be appropriate with the pedagogical system or other philosophical approach, to help students internalize new learning. The second element is seating arrangements, where suggestions have been made to provide flexible seating arrangements in order to allow for a diversity of learning activities. Teachers can organise the furniture in rows, cooperative groups or clusters that are easy to access. The third element is density which refers to human psychological behaviour regarding people’s reaction to crowding. It has been suggested that a low density environment encourages more participation and positive attitudes, as well as creating a sense of friendship and greater academic achievement. ([Bonus & Riordan, 1998](#); [Moore & Lackney, 1993](#); [Taylor & Enggass, 2009](#))

- Visual Environment: psychological studies clearly show the impact of visual elements on students' behaviour which indeed could improve the quality of the physical environment. Firstly appropriate lighting enhances the academic achievements and reduces off task behaviour. Incandescent lighting is more appropriate in learning environments due to its impact on students. Secondly colours influence students' mood, judgment and behaviour. Each colour has different behavioural implications and psychological effects, so designers are advised to use cold or warm colour palettes in a learning environment depending on the activities that will take place in them. Thirdly, personal displays are important features that have an impact on students' behaviour and sense of worth which have been stated as crucial elements in physical environment. ([Allen & Hessick, 2011](#); [Sleeman & Rockwell, 1981](#))
- Acoustic Environment: basically this means the auditory quality in the learning environment. The teacher's voice, for example, has to be audible by all students in the classroom, as well as noise levels being kept to an acceptable level. External noises that enter the classroom from outside sources like cars, airplanes and traffic must also be kept to a minimum. Internal noises like students' movements and voices are also a significant concern for the designer. Moreover this element also connects with other important factors are related to the classroom environment, such as achievement, spatial cognition, privacy, and density. ([Bronzaft & McCarthy, 1975](#); [Klatte, Hellbrück, Seidel, & Leistner, 2010](#))
- Thermal environment: The temperature in learning spaces affects students' behaviour and achievement. Each student has different expectations of an ideal thermal environment. High temperature classrooms decrease student achievement on class tasks as well as low temperatures. The ideal temperature varies and depends on the climate in each country, but it has to be controlled in each classroom. ([Harmon, 1953](#))

Therefore, the learning environment has to be an important consideration in the success of any curriculum. All environmental factors should be considered carefully when designing a classroom, as this will have a direct or indirect impact on learning and behaviour. Taylor concludes that, "The ideal educational environment is a carefully designed physical location composed of natural, built, and cultural parts that work together to accommodate active learning across body, mind, and spirit" ([Taylor & Engass, 2009](#)).

## **Environment as Learning Instructors**

The proposed research is concerned with the above discussion and disciplines focusing on a particular research location that not goes beyond the standards level of learning environment. Kuwait is a small wealthy Arab country in the Middle East. In 2009 the population reached 3,4 million, among which around 400,000 were students in public education. The Kuwaiti government took control of the education system in 1939. Then in 1965 the Kuwait Ministry of Education issued the compulsory Education Law which provides a free education for all citizens from kindergarten through to high school graduation. ([Education, 2010](#); [M.O.E., 2008](#))

Nowadays, the education Strategy is mostly concerned with modifying and developing the pedagogy system and curriculum, and pays less attention to the learning environment as mentioned above. In addition, there is a lack of awareness and knowledge regarding the physical learning environment. So the main aim of this research is to investigate the relationship between academic outcomes and the quality of the learning environment in Kuwaiti public schools. Moreover, the research attempts to develop a better understanding of the dynamics of change in the learning environment by exploring the interrelationship of social and spatial/physical changes within it. This research will go some way adding to the knowledge base among Kuwaiti education authorities and worldwide. The research methodology is based on social relation methods and mixed approaches which combine qualitative and quantitative investigation. This is a flexible research method, within the Kuwaiti public school environment. ([Creswell, 2009](#))

To conclude, the physical learning environment has a crucial impact on learning. Much research is required in order to verify the power of environment as instructors in learning, also new approaches to learning are flowing the understanding to furnish this idea which might see the light someday.

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