

BASIC DESIGN PEDAGOGY WITH DIGITAL MEDIA

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1. Introduction

How can we motivate students to learn? This is a question that educationalists have always tried to find the answer to. This leads to the question what are students interested in? Games, they are fun, interactive and very popular with students. Therefore we attempt to tie the technology of games with the learning process. Technology has always played an important role in trying to connect the academic experience that a person experiences with the professional world. Especially in architecture a gap exists between the design studios and the various software classes that students take.

It's essential to internalize the concept that sophisticated software and high-end animation can not only help communicate design ideas but have the capability to help comprehend spaces in the third dimension. While the initial resistance to technology being used as a tool in pedagogy, especially in the field of architectural pedagogy has reduced, the full potential and the scope of technology to improve the performance of students and interest levels is yet to be harnessed.

Students often have performance issues when they are introduced to alien concepts, and they usually render assignments more as class exercises and fail to internalize important concepts in design. Students usually render assignments more as class exercises and fail to internalize the principles of design. In order to imbibe the students with the capacity to design efficient architectural structures the paper proposes the technology of games as a technology tool.

“.....play as a theme encourages a greater degree of participation and comprehension.” (Rasmussen, 1962)

2. Background

The proposal will attempt to tackle the problems of: How to make assignments more interesting to students? How to make the process of learning more interactive and fun?

In order to address at least some of the issues that the rudimentary methods of teaching cannot tackle (possibly due to the limited time and the disproportionate ratio of student to teacher), the paper proposes to develop a format where the process of learning would be non-linear yet structured. The paper will also explore the various possibilities and positive effects of teaching with a digital tool.

3. Game plan

The paper proposes a 3 fold game model, which would be used to introduce a student to a structure. The game model is designed in a pattern using the chronological psychology of learning. The first phase intend to merely expose the student to a structure and then to challenge them to play a game based on the underlying concepts of the structure. In this case the game takes the example of the Atheneum by Richard Meier. (figure 1)

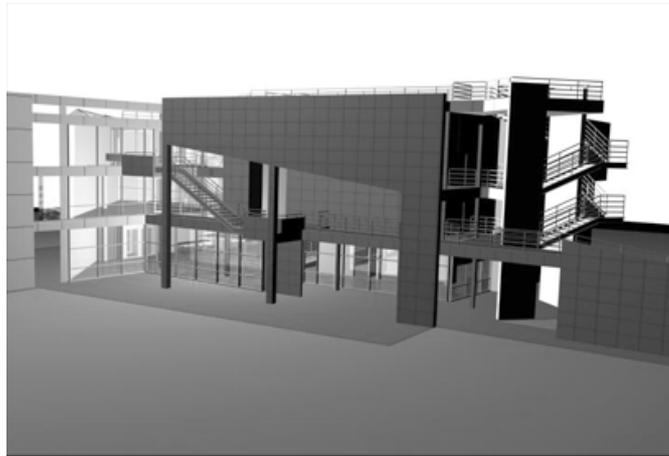


Figure 1

The methodology of design adopted in the paper is such that the interface for the game itself would be generated from a model created in 3d studio max. The model would then be designed to help the structuring of the game itself. Students from a higher-level design studio generate the structure of the game and the model. Students in the beginning level studio to internalize the

concepts of design, hence benefiting student from different studio levels, would then use this.

4. Game levels

The game will consist of three levels, the beginner's level where the student is allowed to basically understand the concepts of space organization, the basic principles of design such as Axis, Symmetry, hierarchy and transformation and the elements of form such as scale and geometry.

In the case of the Atheneum, the predominant concepts of composition with a grid, the representation of the hierarchy of spaces either through a change in scale or a change in the orientation of the grid, the combination of additive and subtractive forms creating an interesting play of elements are highlighted.

Game level 1

Understanding the structure (partially interactive, flash platform)

The students are provided with a 3 d model of the structure accompanied by a set of animations each highlighting the various spatial paradigms of the building.

This level would be partially interactive based and merely provide the player with the options of the predominant design principles such as axis, hierarchy or symmetry and the overall form in terms of additive or subtractive forms. Once the students internalize these concepts they would be provided with the abstract model of the structure and asked to identify the concepts. (Figure 2)

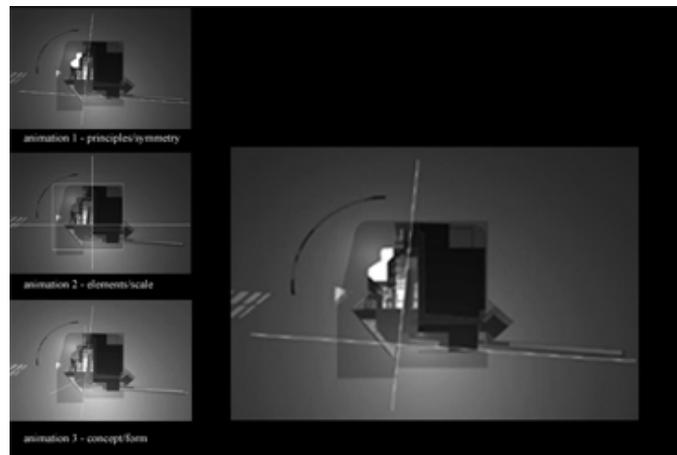


Figure 2

Advantages:

1. The student is offered a more interesting platform to study the structure
2. The student has the freedom to set the pace of learning/ understanding.
3. The concluding simplistic (no rules) game creates interest in the student and simultaneously testing the knowledge that he has gained.

Game level 2

Testing the knowledge (interactive, director platform and or 3d max and ion reality/quake based)

The students are asked to design a set of street furniture, which would then be used as a part of larger scale project. Students are asked to design furniture such as a). Lighting fixture b) seating c) water fountain based on the forms and the shapes that the students were most affected /influenced by from the structure. The students are then asked to save their work in the form of 3d model that can be used later to create a space. (figure 3)

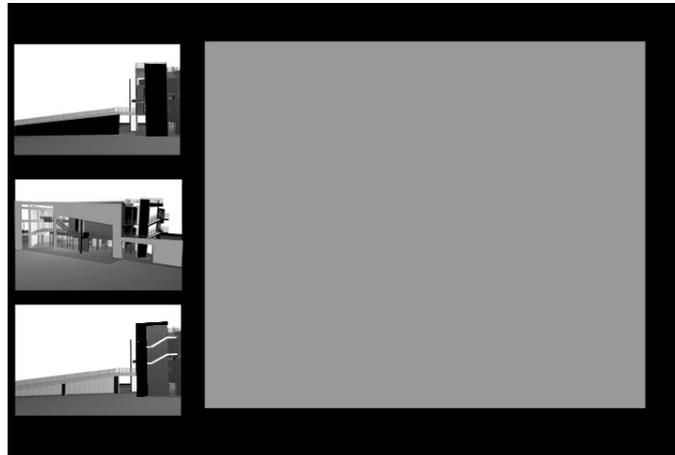


Figure 3

Rules:

1. The students have to use at least one predominant forms or shape seen in the section of the structure.

Advantages:

The scale of the elements and the nature of the game help students to understand and observe the various aspects that they might have learnt during the process of learning from the previous level.

Game level 3

The students are asked to design a plaza using the street furniture that they might have designed in the previous section. Here again the student is given a chance to exercise his creativity controlled by a certain set of defined parameters. This section will help the students internalize the concepts of access in combination with the principles of design. (figure 4)

Rules:

1. The space should have to follow the grid that exists in the structure
2. The space should have a minimum of three elements that the student might have picked up from the 3d model of the structure for examples the predominant curved wall or the interesting use of ramps both internally and externally.
3. The space should also tastefully use the street furniture designed in the previous level of the game.

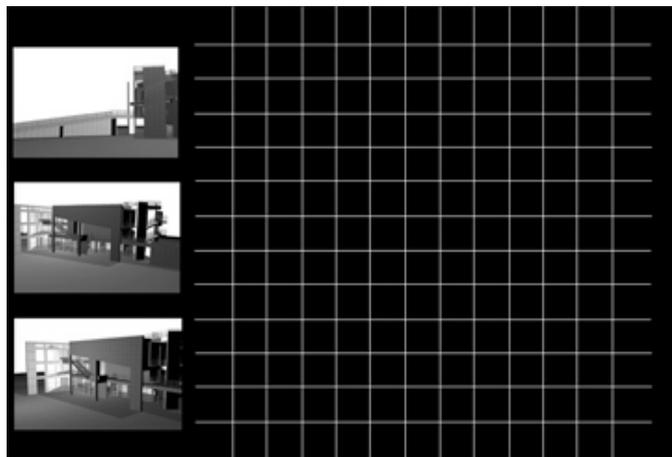


Figure 4

5. Conclusion

The paper hence attempts to provide a platform for integrating architectural theory with technology solutions. It aims to offer the students a more interactive and challenging tool to learn in the form of a game. The game model also has an advantage at a different level of fostering a link between the students from different levels of the design studio. The emphasis fun and highly entertaining yet educational angle of using a game to learn are the highlights of this paper.

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