Chapter 11

Anti-Models for Architectural Graphic Expression and UX Education

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ABSTRACT

We present the main motivations why the excellence of the university education related to architectural CAD, graphic art/expression, and UX may be inexistent in Spain, by focusing exclusively on graphic design. A set of online examples allows to orient the potential users of computer systems, user experience (UX), electronic information systems and generators of original multimedia contexts towards the epistemological principles of the formal and factual sciences. Besides, we detected an educational anti-model and the mercantilism in CAD, architectural graphic expression, art and UX education with a semiotic analysis of the dynamic and static media in university websites.


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INTRODUCTION

Computer-Aided Design (CAD) allows to order and process the information related to the characteristics of a material object (Demel & Miller, 1984). In architecture CAD serves to build an analogous model of the building, for example (Newman & Sproull, 1979). Although it is true that in interactive design it may start with a folio and a pencil, this does not mean that the designer of the 21st century has to be a graduate in fine arts or an illustrator to carry out their tasks. One of the advantages of CAD is what prevents the need from working with the hand, that is, the architect or the civil engineer decides what things are like and the CAD shows how they are seen (Newman & Sproull, 1979). Currently there is a very wide variety of commercial programs or systems, which allows to draw lines and store them in bitmap files or vectorials. Starting from these lines and sketches it can be imported in another set of commercial programs with worldwide circulation (AutoCAD, DataCAD, TurboCAD, etc.) to turn them into 2D and/or 3D objects. In this work, the notion of object refers to a building or to the component thereof, for instance, a door, a window, a plant, etc. In other words, CAD takes care of the exclusive design tasks, such as technical drawing and its documentation. However, with the passing of time, some commercial products have included the animation to architectural CAD (Van Welbergen, et al. 2006). For instance, in the transit from the 20th to the 21st century, the 3D Studio Viz of Autodesk (www.autodesk.com) included the day light phenomena. Now although a CAD system, commercial or not, it may adopt a myriad algorithms of graphic computing which allows it to work in many different ways, there are some common elements, which all share and which have been adapted as rules: it is spatial, Cartesian and vectorial.

Traditionally, in Spain graphic illustration has been more aimed at the fine arts rather than at architecture. However, there are university contexts where the exception to the international academic rules is always a constant practice in some departments or members thereof. Now the exception to the academic rules doesn’t mean that we are talking of excellence. As a rule, the expression “transversal discipline” is fashionable in some pedagogic academic environments where allegedly the students attend master or educational excellence classes whether it is in situ that is, within the classroom, or virtually thanks to the new ICT (Information and Communication Technology).
Implications of Similarities in Instructional Design, Learner Interface Design and User Interface Design in Designing a User-Friendly Online Module

Performance Measurement of Technology Ventures by Science and Technology Institutions
Artie W. Ng, Benny C. F. Cheung and Peggy M. L. Ng (2019). *Advanced Methodologies and Technologies in Artificial Intelligence, Computer Simulation, and Human-Computer Interaction* (pp. 924-936).
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