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Learning Objects: The return of the "visual" to active learning?

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Learning Objects: The return of the "visual" to active learning?
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In a recent issue of *New Chalk Talk* (Vol.6, Issue 2) I relied upon John Berger's pioneering work *Ways of Seeing*, (1972) in order to suggest the primacy of "visual texts" in the learning relationship and especially with regard to our continuous concern, as educators and facilitators of the learning process, to enhance critical thinking and self-learning. Upon reflection, however, I came to realize that I may have been using a massive-sized hammer in order to knock in a drawing pin. Let me explain.

Consider one of our science or engineering colleagues who has completed a conventional lecture to be delivered to undergraduate students. Consider the fact the s/he has paid careful attention to his audience, the style used, organization of thought, etc. Nevertheless, a final reading of the text generates a feeling of unease as s/he reads paragraph after paragraph and page after page and realizes that there are no graphics or visuals whatsoever. You will suspect a ruse now as you know only too well that it is practically unthinkable that this would actually happen. Scientific texts rely so heavily on "visuals" that in fact most scientists design the "visuals" even before engaging with the text and in many instances the text is not much more than an elaboration upon the "visuals". It is the various "visuals" that exemplify the research involved and the data that needs to be communicated; in graphs, tables, etc. Similarly our colleagues in economics, art history, geometry, physics, chemistry, media studies and so on would find it impossible to communicate knowledge without some use of "visuals". Thus, you rightly ask yourselves what is the point of an issue dedicated to the use of "visuals" in learning!

Of course you are right. From Euclid's geometric forms and then to the most recent semiotic approach to the study of urban graffiti scholars have relied heavily on "visuals" of all forms in order to convey analytical accounts of our conceptual and physical environment. Nevertheless, I will argue below that there are two critical issues that still need to be addressed.

First, and despite the fact that we have made use of "visuals" as a vital element in our communication for centuries, since early cave drawings and graphics, we have yet to "master" the art of using "visuals" in communication. There are, of course, several exceptions such as in the area of art, media etc, but in general academic is far from being competent in the use of "visuals" for learning purposes. This is partially due to the fact as humans evolved and the primitive cave drawings and graphics became alphabets, we dedicated many centuries to perfecting written and aural communication; literature and public discourse. It is only recently that "visuals" have experienced a re-birth and this has coincided with two significant developments: the dramatic expansion of digitized modes of communication (ICT) and the enhanced respectability within academic of epistemologies relying upon semiotics and post-modernist conceptual frameworks. Thus, it can be argued that we are presently only at the portal of a new and unexplored communication arena where conventional textual and aural forms are already being challenged by a large variety of "visuals" and the end result cannot be foreseen. Let us be inquisitive and enter the arena in order to witness at first hand the forthcoming grand spectacles.

Second, there is presently a significant confusion in the minds of many in academia and beyond as to what "visuals" are. In fact the confusion is so acute that many use a number of different terms such as "visual", "visual rhetoric", "visual literacy", "graphics", "image", "graphic design", etc., interchangeably and with little or no appreciation that they signify very different approaches and methodologies. This, of course, inhibits the development of better skills in the use of "visuals" or for that matter a better understanding of required in different disciplines and circumstances. "Visual rhetoric", for example, is a very recently developed analytical framework which does contrast the visual image to the text and aural form, but also draws on semiotics and thus acknowledges such images as rational expressions of cultural meaning. (Handa, 2004) As such it demarcates a new disciplinary space within academia for scholars who have a specific interest

in looking at non-textual artifacts when exploring complex social reality. Therefore, it is clear that it has little to offer a scholar who wishes to use "visuals" in order to illustrate how molecules in motion in effect constitute *nanomachines*. Furthermore, it is of little help to an instructional designer who wishes to use both visual and graphic material in order to assist an economics professor to convey complex conceptual issues related to what is money, how depreciation is calculated, etc.

It is beyond the scope of a very short essay such as this to attempt to elaborate on the various and in some cases contested definitions of what all the different terms noted above actually mean or reflect in academic practice. Nevertheless, it is possible to identify one particular use of "visuals" and indicate how it can enhance learning without reference to semiotic theory or any other complex analytical frameworks. In fact it can also be suggested that for those of us who have yet to "plunge" into the ocean of "visuals" it is possibly best that they are used solely as **illustrations** of textual material and/or as a means of enabling us to **"see",** what the human eye is unable to see, such as *nanomachines* (chemistry & engineering), *black holes* (mathematics & physics), *landscapes* (topography), etc. Furthermore, "visuals" (both static and dynamic) can also enhance learning in such areas as language acquisition, history, economic trends, voting patterns, etc. Here, "visuals" are used in order to elucidate a particular issue or concept and as such the "visual" is in fact a virtual image of what we have already acknowledged as being reality through research. In other words the "visual" doe not itself constitute a problematic requiring deconstruction and analysis. This, of course, is very different from "visual rhetoric" or "visual literacy" which are disciplinary approaches to study and understanding of social reality.

It is for the above reasons therefore that is best to refer to such "visuals" as **"learning objects"** and move away from the fact that they may well involve visual or graphic material. "Learning objects" in whatever form or shape are intended to facilitate and enhance the learning process itself and thus need to be carefully **"designed"** in order to achieve this objective. Furthermore, not all concepts or aspects of social reality can be illustrated or exemplified in a "learning object" and thus it is critical to consider carefully can be. Thus, it is possible to suggest that the use of "learning objects" follows a process which starts by a faculty person identifying a concept, an aspect of social reality, a chemical process, etc., that s/he wishes to elucidate further. Furthermore, the faculty person needs to identify what are the "learning outcomes" to be derived from students engaging with such a "learning object", and then it can be designed in order to achieve both objectives. Thus, it is the design of such "learning objects" that constitutes the most important role of a teacher. It is here that the professional quality of the educator is appreciated and of course what should constitute the focus of continuous professional development for faculty.[1]

Designing appropriate "learning objects" is a highly complex and professional activity in which a variety of skills have to come together in order for them to achieve the desired effect of stimulating and enhancing critical thinking amongst students. Not to do so is to present students with learning objects whose quality will detract form the actual learning process. CLT, of course, is capable of providing such support to faculty at AUC and welcomes anyone who is interested in exploring the role of and/or producing "learning objects" for their respective courses.

<u>**Sources**</u>:
- Handa, Carolyn, ed. (2004) ***Visual Rhetoric in a Digital World,*** New York, Bedford/St. Martin
- *Berger, John (1972) **Ways of Seeing***, *Hamondsworth, Penguin Books*

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[1] It should be pointed out that learning objects are also referred to sometimes as "bites of learning", "learning packages" and/or "learning activities".