Visual Learning Objects: enable faculty to focus on active learning
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In two recent issues of **New Chalk Talk** (Vol.6, Issue 2 & 6) I suggested that "learning objects" enhance active learning and that "visual learning objects", in particular, contribute significantly to the learning relationship. In this issue I wish to elaborate on how such "visual learning objects" are the key element that liberates faculty from having to design and construct their own demonstrations and illustrations (re-invent the wheel) in their respective courses and thus enable them to focus on critical and active learning instead. *"Well",* you might say to yourselves, *"what is this new brave world where critical and active learning is practically ensured."* Furthermore, you might go on to say, *"if only we knew what they are and how to use them we may even get several of them from CLT for our respective courses."* Thus, let me explain so that you may in fact make use of them and enhance your teaching so as to achieve active learning.

Visual Learning Objects (VLOs) have recently emerged as a new concept within the field of instructional technology and have generated a significant debate that is premised on the belief that it is possible **"to create independent chunks of educational content that provide an educational experience for some pedagogical purpose."** (Quinn, 2000) Longer definitions of such objects suggest that *"the main idea of 'learning objects' is to break educational content down into **small chunks** that can be reused in various learning environments, in the spirit of object-oriented programming".* (Wiley, 2001) Furthermore, the current debate identifies certain characteristics of such objects which can be summarized as follows:

➢ Learning objects are a new way of thinking about learning content. Traditionally, content comes in several hour chunks. Learning objects are much **smaller units of learning,** typically ranging from 2 minutes to 15 minutes.

➢ Are **self-contained** – each learning object can be taken independently.

➢ Are **reusable** – a single learning object may be used in multiple contexts for multiple purposes.

➢ **Can be aggregated** – learning objects can be grouped into larger collections of content, including traditional course structures. (Wisconsin Online, 2001)

The essence of the above is that knowledge or learning can be achieved via "small chunks", constructed in a virtual reality, and which in effect can be used in different learning contexts and across multiple disciplines; i.e. that cut across specialized and targeted course content. As such this does constitute an important shift in pedagogy since it suggests that some knowledge is not necessarily associated only with specified course material but is in fact generic and "independent" of particular course ware or disciplinary boundaries. For example, a virtual flash animation of a tsunami is an independent chunk of knowledge that can be used in a variety of courses in geography, oceanography, etc., in order to illustrate this natural phenomenon.

In this sense VLOs do constitute a significant new innovation in contemporary pedagogy as they invite faculty to choose from a plethora of ready-made chunks of knowledge in order to illustrate particular concepts within their respective and specialized courses. This, of course, has a number of benefits associated of which the most important is that faculty are now able to focus more on analytical and critical thinking rather than the tedious activity of constructing their own individual demonstrations at each an every learning situation. Furthermore, such VLOs can be made available for individual as well as group learning and can be used within and beyond the classroom. For example, a complex VLO that illustrates the particular characteristics of the Arabic alphabet and script (from right to left and how letters can be

elongated or shortened), can be used by a variety of Arabic language courses and can also be used by students wishing to learn on their own time. Arabic language teachers can then concentrate on other aspects of teaching the language rather than the mechanics of recognizing script.[1]

Assuming that such VLOs are compatible with existing learning technologies and learning management and operating systems they also contribute to significant savings in resources. Practically every introductory Arabic language course has to face the dilemma of how to teach non Arabs the fact that the Arabic language is written from right to left. The availability of a VLO which achieves that independent of the type of course or approach to teaching the language is a major benefit. It reduces dramatically development costs as the VLOs are available "on the shelf" so to speak. Clive Shepherd, for example, predicts that development costs will drop from 50-80%.(Shepherd, 2006) This, of course, is sweet music to any academic institution struggling to maximize added value from shrinking resources. Furthermore, well designed and constructed VLOs gain commercial value and can in fact add resources to the institution or department that produced them. As with text books, VLOs will compete in the market and thus academia will be the beneficiary as better, more sophisticated and cheaper VLOs become available.

"Wow", I hear you saying. Are we to let instructional technologists completely take over education? Well, programmers like to think that they are the main and sole source of such VLOs and that it is they that in fact contributed to this new approach to learning. Of course, they are wrong. The uses of Learning Objects and Visual Learning Objects for educational purposes are more than 50 years old. LEGO and MECANO existed even when I was a child and the educational purpose behind these objects was exactly the same as it is today. To enable children of different ages, playing alone or in groups, to learn from the way in which they assembled the different objects and thus construct complex items such as fire engines, houses, etc. The use of objects in learning therefore is not new and we as children and/or parents have already acknowledged their value. What is it, therefore, that stops us from making such objects, albeit in digitized formats now, the cornerstone of our learning architecture?

Shepherd among others argues that the problem is more cultural and psychological. He suggests that "so much of our experience of media and learning events is essentially sequential". (Shepherd, 2006) TV programs, lectures, classes all have a start and a clearly identified end, whereas VLOs have no start and no clearly defined end. They are part of a wider learning process. When a child is given several pieces of LEGO it is impossible to predict what will emerge at the end. We are unable to control what will be produced, but we are certain that a learning experience does take place. In this respect it is a different pedagogic paradigm, which although available for several decades is only just now becoming acceptable in academia. As teachers we have to acknowledge the learning potential of "objects" whether visual, virtual, digital or physical and allow our students the opportunity experiment, explore and learn. Our task is to select the best available objects from the shelf and then focus on the critical and analytical dimensions of their use in our respective courses. CLT, of course is more than glad to help faculty choose such learning objects and/or assist in constructing them if not available on the shelf.

Sources:

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- Wisconsin On Line (17/5/2001), http://www.uwm.edu/dept/CIE/AOP/learningobjects.html

Share with us your experiences by contributing to the New Chalk Talk series, or by simply sending comments/suggestions to pandeli@aucegypt.edu , and/or aellozy@aucegypt.edu

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[1] I am indebted to Dr Suzanne Massoud from ALI for sharing with me her pioneering work in developing a VLO for teaching the Arabic alphabet