USEFUL MODES & INSTRUMENTS OF MULTIMEDIA FOR e-LEARNING

Dr. G. A. PRASAD RAO
Lecturer in Lib.Sc.
Andhra Loyola Colleg, Vijayawada.

INTRODUCTION

Many nations are increasing their investments in education and education technology to support the transformation of teaching and learning. Yet, not enough attention is given to the development and availability of instructional "content ware" that makes the investments in hardware economically useful and educationally meaningful. Multimedia in its broadest sense is among the most effective and egalitarian of computer-based resources available.

By establishing the potential for the artful interaction between learners and content-intertwining information skills, and even the synthesizing vision that is so important to comprehension-multimedia "content ware" is effective across the wide range of circumstances. This paper presents multimedia as a tapestry of possibilities - for creation, experimentation and communication that is woven by students, teachers and modalities of multimedia ; environments and tools for multimedia development and ensuring quality in multimedia.

CONTEXT FOR MULTIMEDIA DEVELOPMENT

A decade and more ago, efforts to introduce Information, Communication, and Technology (ICT) in education anticipated increases in efficiency, without attending to the nature of learning. But later the perspective of the use of Multimedia has broadened which encompassed the building of knowledge, beyond memorizing skills. New pedagogical rubrics have emerged that include cooperative learning, active learning, problem-based learning and recently "learning by doing".

These all approaches aim to a transfer of emphasis away from rote - based methods. Instead they emphasize the roles that analysis, synthesis and other higher order cognitive skills play in learning, with particular focus on learners building their own knowledge. It is under this broad context, the development of Multimedia is necessary to facilitate active teaching-learning strategies.

MODES AND INSTRUMENTS OF MULTIMEDIA

Content can be presented to learners using tools ranging from books and lectures to the Internet and or even handheld computers. Each different instrument, whether a book or a handheld communicates, it's content in one or more modes. Each modality offers specific affordances. Current major modalities for content presentation are text, images, audio, video and simulations.

TEXT: The instrument for this mode is web page. The affordances are - dynamic and easily modified, hyperlinks enable non-sequential navigation, low cost of development and very low publishing costs and supports interactivity like navigation, user- entered information, etc.

IMAGES*:* The instruments for this mode are: digital photos; maps and schematic drawings. The affordances include concrete, specified, detailed information; appropriate for learners with 'visual intelligence' and engaging and motivating for many learners.

AUDIO: The instrument apart from ordinary radio or audiotape includes digital audio or web and CD-based digital audio. It can present contemporary and topical information easily (web), which is durable i.e; it can be reviewed many times; moderate production costs; low reproduction costs; easily scaled and can be indexed or catalogued to enable non-sequential access.

VIDEO: Part from analog and broadcast videos, the digital or web-bases and CD-based videos are more appropriate for Multimedia material production. It provides highly accessible and potentially engaging format (no literary skills required); can present contemporary or topical information very easily; easily catalogued and reused.

SIMULATIONS: The instrument for this mode is interactive web and CD-based simulations development. It ensures active learning by engaging learners via several paths to reinforce concepts; Quantitative elements are supported and will engaging and motivating for several learners.

ANIMATIONS: Animations stand in contrast with videos and simulations; they do not use real images, nor do they enable interaction with the learner. Despite these significant constrains, animations are powerful, especially as a means of enhancing otherwise static images - whether in textbooks or on Web pages.

Animations often may be the best tools for highlighting the path between modeling and reality. They are created by digitizing and sequencing hand-drawn images, or directly through the use of 3-D and other software.

TOOLS FOR MULTIMEDIA DEVELOPMENT

There has been notable progress in development of professional authoring tools, allowing non-specialists to work in areas previously unavailable to them. There are several visual or menu driven tools which perform functions like decrease image sizes, and render web pages across different platforms and browsers. Using these tools it is also easy to import and format images, text pages on target browsers, and adjust fonts, colours, etc. Dynamic Hypertext Markup Language (DHTML) is a standard tool that allows objects to move within web pages. DHTML coupled with latest Internet browsers; including Java machines and plug-ins such as Shockwave make creation of sophisticated animations and simulations feasible and easy. Other tools, such as Photoshop, Fireworks, Dreamweaver and GodLive, have greatly facilitated publishing and maintenance of Websites in the professional world.

ENSURING QUALITY:

As the list of potential multimedia authors grows to include students, teachers, and academics, evaluation and quality assurance become critical. In specific circumstances, such as acquisition

of commercial software products, any of the widely available evaluation frameworks will yield acceptable results. The different areas that could be looked into include pedagogical issues (e.g., instructional methodology); subject matter (e.g., information accuracy); surface features (e.g., interface design) and invisible functions (e.g., security). Thus usage of properly developed Multimedia materials in the teaching-learning process will go a long-way in enhancing quality in higher education.

Research in e-learning began nearly two decades ago and different research studies show that there is a growing demand and user acceptance. The demand is more from those who are engaged in knowledge-intensive activities like education and research. Usage of multimedia in e-learning creates more interest in learner and varieties of e-books services have appeared in the market and operate under different terms and conditions.

REFERENCES:

1. JISC., National e-Books observatory project. Key findings and recommendations, 2009. http://www.jisce-booksproject.org
2. Bunkell,J and Dyas-Crreia,S., e-Books vs Print : Which is the better value? Serials Librarian, Vol. 56(1-4), 2009, pp.215-219.
3. Chowdhury, G. and Fraser,M., Towards a new service model for the content supply chain, The seventh book conference, University of Edinburgh, 16-18 October, 2009.
4. Kenneway, M. , Fittest will survive in a semantic world, Research Information, Vol. 46(Feb/Mar), 2010, pp.14-19.

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