

## **THE SIGNIFICANT ROLE OF AN ELECTRONIC GALLERY TO THE EDUCATION EXPERIENCE AND LEARNING ENVIRONMENT**

E. AMIR SHARJI, AND A. R. MOHD. ESHAQ  
*Centre of Interpretation and Expression*  
*Faculty of Creative Multimedia*  
*Multimedia University*  
*elyna.amir@mmu.edu.my*

**Abstract.** Multimedia has brought new paradigms to education where users are able to use the technology to create compelling content that truly represents a new archetype in media experience. According to Burger (1995), the synergy of digital media is becoming a way of life where new paradigms for interactive audio-visual experiences of all communicative arts to date are mandatory. It potentially mixes technology and disciplines of architecture and art. Students can learn on their own pace and they can be tested in a non-linear way while interactivity allows the curious to easily explore related topics and concepts. Fundamental assumptions, theories and practices of conventional design paradigm are constantly being challenged by digital technology and this is the current scenario in architecture and art and design schools globally. Thus schools are enhancing the methods and improvising the technology of imparting knowledge to be in consistent with recent findings and knowledge. To be able to cater the use of digital media and information technology on architectural and art design education, four criteria are required, which are; the SPACE and place to accommodate the educational activities, the TOOLS that assist imparting of knowledge, the CONTENT of syllabus and information and the acceptance and culture of the receiving end users and HUMAN PERCEPTION. There is a need for the research of realization and activating the architectural space that has been equipped with multimedia tools and upgraded with recent technology to facilitate and support the community of learners and users. Spaces are now more interactive, multi functional, flexible and intelligent to suit the trend of computing in normal everyday life of the education sector, business and management, art and leisure, corporate and technological area. While the new concept of computing in education is still in the earlier phase, the conventional analogue paradigm still dominates the architectural design discourse which acts as a barrier to the development of digital designs and architectural

education. A suitable approach is in need to bridge the gap between what theory has been explored and the practice of knowledge. A digital support environment with intelligent design and planning tools is envisioned to bridge the gap and to cater for the current scenario.

## **1. Introduction**

It is with the issue of a paradigm shift in education that suggests research on a new approach and methodology to present the existing content of knowledge. This exploration intends to make a study of the Electronic Gallery or e-Gallery of Faculty of Creative Multimedia, Multimedia University on how the gallery as a versatile hybrid container can act as a digital support environment for the art and architectural design course. The main objective is to seek whether the envisioned gallery as an intelligent space is able to cater for an educative environment exclusive for the benefits of the students and staff of the design faculty. The gallery is chosen as it is seen to have a great potential for a multiuse of space and function for various activities and for the credibility of being able to attract visitors with its basic function of public collective space. Students need a space that is well equipped for their educational activities apart from their classroom teaching. To what extent, what kind of digitally supported space and to what level of interactivity and flexibility of the space required by the learners would be the ultimate research objective.

Are university galleries capable of holding opportunities for end users of education and are they being fully explored to serve multiple functions? Do they become a place of necessity or communal node to the design faculty? Does it have the potential to provide content and display such as interactivity, installation, navigation, games and audio and visual that can interest students and staff to make it a learning hub that is easily accessible. Can users use it as a platform and vehicle in acquiring knowledge and to hold various functions such as demonstrations, exhibitions, performances, discussions, classes, critique sessions, installations, archiving and others where they can benefit from a change of classroom teaching.

According to Lawson (2001) space is needed for a change of mood, to establish relationship, to separate activities, to suggest appropriate behavior and creates settings.

## **2. e-Gallery**

A museum is a non-profit making, permanent institution in the service of society and of its development, and open to the public, which acquires, conserves, researches, communicates and exhibits for purpose of study,

education and enjoyment. Material evidence of man and his environment. (International Council of Museums (ICOM) 1974)

Galleries, museums and collective nodes are highly suitable for the exploration of space as defined by <http://dictionary.reference.com>, the meaning of space is an extent or expanse of a surface or three-dimensional area and an area provided for a particular purpose.

### 3. Objectives of e-Gallery

- i. To promote a new media as a medium for creative expression.
- ii. To enhance the teaching and learning environment.
- iii. To set up a new media showcase and R&D unit .
- iv. To showcase the best of student's works of the Faculty of Creative Multimedia.
- v. To act as a digital support environment for the art and architectural design course.
- vi. As an intelligent space is able to cater for an educative environment exclusive for the benefits of the students and staff of the design faculty.
- vii. As a great potential for a multiuse of space and function for various activities and for the credibility of being able to attract visitors with its basic function of public collective space.
- viii. As a communal node to the design faculty where digital archiving and art projects databases area centered.
- ix. To provide content and display such as interactivity, installation, navigation, games and audio and visual that can interest students and staff to make it a learning hub that is easily accessible.
- x. As a platform and vehicle in acquiring knowledge and to hold various functions such as demonstrations, exhibitions, performances, discussions, classes, critique sessions, installations, archiving and others. (<http://www.mmu.edu.my/~mmcampus/web/home.html>: Jan 2002).

Also included are seasonal showcase of a group or one-man show and workshops, demonstrations, presentations and drawing sessions. Basically it

is used for almost any event due to its flexible quality. Figure 1 shows the plan of e-gallery and Figure 2 shows the interior view of e-gallery from the entrance as presented in Sarji, Hussain & Eshaq (2002).

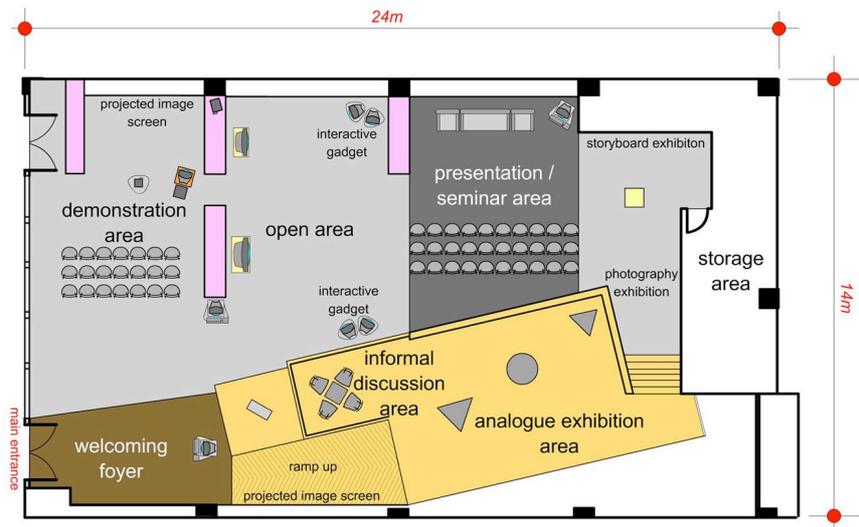


Figure 1. Plan of e-Gallery



Figure 2. Interior view of e-Gallery from the entrance

#### 4. Five Study Areas

The five main areas of concern are the General Factors, Space and Utilization, Content of Gallery, Multimedia Tools Usage and Human Interaction.

General Factors' issues cover aspects on general gallery organization such as accessibility, opening hours, peak periods, types of visitors and

reason of visits, external service to other branches and links to other educational, cultural or social institutions, staff structure which includes the director and management team: keeper, curator, chief administrator, museum specialists, commercial staff, technical staff, administrative, security and ancillary staff. While works and maintenance area include Building Maintenance of fabric/structure, lighting and plumbing, Environmental Equipment and Controls such as heating, humidity, air pollution and security systems, and Gallery and Exhibit Maintenance of the décor, display, graphics, audio-visual, information technology and mechanics. (Matthews 1991)

Gallery Space and Utilization according to Matthews (1991), are spaces that should adhere to different functions such as for collection, public spaces, administrative areas and ancillary space. For each of the space we need to analyse the nature of activity, relationship to other spaces/functions, types, size and number of collection items to be exhibited and stored away, number of users and staffs to be accommodated, special requirements such as surveillance and information technology, equipment, furniture and fittings, environmental services and controls such as lighting, heating, humidity, air pollution and acoustics and extra provision for flexibility.

Content of Gallery depends on the concept and purpose of the gallery, gallery space and accommodative aspects, density of display/storage, open or controlled access, special display, storage problems and availability of content either analogue or virtual, flexibility to accommodate different types of exhibition, adaptability of space to alternative usage and appropriate exhibition tools.

Multimedia Tools Usage is vital in any field of study which requires a representational medium, a surface on which ideas can be recorded. This is not only vital for communication with others but is also important for further evaluation and development.

Human Interaction is on the appearance and behavior of persons communicating and increasing attention is being given to the influence of nonhuman factors on human transactions as well.

## **5. Methodology**

All Survey Questions and Interviews are based on the five main areas mentioned.

- i. 4 groups from students and staff of the faculty, the professional practitioners, school children and general visitors were

investigated. They were brought in separately during allocated duration of time, left to explore the gallery and examined through method of observation and answered questionnaires.

- ii. Further interviews were conducted with people related to the gallery as well as students and staff of the faculty to determine issues, problems and suggestions.
- iii. An experiment on a controlled group consisting of Foundation Year students were brought in. They were tested according to their actual studio activities on one of the selected projects of Design Fundamental subject. A comparison chart is tabulated that records students' participation, output, advantages and benefits, problems and arising matters that occur when a class is conducted outside of their classroom.

## 6. Findings

TABLE 1. Tabulation on e-Gallery's space and function, aid of tools, content and users.

Space	Function	Activity	Multimedia Tools	Content	Human Interaction
Foyer	Welcoming Area Over Flow Area	Introduction	Computer Kiosk	Faculty Introduction 5 Majoring Information www	Human and Machine
Main Exhibition Area	Exhibition Official Reception Seasonal or Main Exhibition Multi Functional	Exhibition Reception Multi Function	Computer Video Projector Audio Visual	Current Exhibition or Function	Human and Machine Human and Human
Analog Exhibition Area	Analog Art Works Sculpture Painting	Exhibition Archiving		Student and Staff's Art Works	Human and Art Works Human and Human

Presentation Area	Presentation on the Related Function	Presentation Discussion Area	Computer LCD Screen Projector	Faculty Introduction 5 Majoring Information www Related Function	Human and Human Human and Tools
Discussion Area	Informal Discussion Mini Class	Discussion			Human and  Human
Demo Area	Demo	Demo Presentation	Computer Projector Screen	Demo Information	Human & Tools Human and Human
Temporary Display Area	Temporary Seasonal	Exhibition	Computer	Temporary Works	Human and Machine Human and Human
Digital Interactive Area	Exhibition	Exhibition Surfing Information Games	Computer Touch Screen	Archiving	Human & Tools

TABLE 2. Comparison between the Existing Classroom Teaching and e-Gallery as an Additional Education Aid

No.	Stages of Design	Space	Activity	Existing System
1	Project Briefing	Discussion Area	Short Briefing and Discussion	One way Briefing System at the Lecture Theatre
2	Brainstorming	Outdoor gallery Foyer	First Ideation Discussion include ideas and sketches	Done at the Studio Space
3	Design Stage	Discussion Area	Exploration of ideas using multimedia equipments	Done at the Studio Space for manual analogue drawings
4	Critique and Presentation Session	Presentation Area	Students present their work	Done at the Studio Space where the design process takes place Same area usage
5	Exhibition	Analogue and Digital Gallery Space	Exhibition include Analogue Exhibition, Digital Interactive Exhibition, Installation, Audio & Visual Presentation	Exhibition at Studio Space Same area usage
6	Archiving	Digital Archiving	Interactive Digital Archiving Database	None

TABLE 3.

Subject: Design Fundamental Level: Alpha Foundation Year

Number of Students: 30 Number of Lecturers: 1

Duration: 1 semester of 3 months Venue: e-Gallery

No.	Stages of Design	Existing Problem at Design Studio	Solution at e-Gallery
1	Project Briefing	No communication	A smaller space for interaction Better visuals
2	Brainstorming	Loose Space No Facilities	Controlled area Fresh space for Ideation
3	Design Stage	Suitable only for Analogue Drawings	Suitable only for Digital Drawings
4	Critique and Presentation Session	No definite space allocated for pinning up works or digital presentation Loose space and lost of concentration	Well allocated space for analogue and digital presentation Presenter and examiner can concentrate better
5	Exhibition	No allocated space for proper analogue and digital exhibition Temporary exhibition only because of limited space	Proper Exhibition for Analogue and especially Digital Exhibition with proper curators, tools and space area
6	Archiving	No tools for storage	Minimum space as archiving is done digitally. Multimedia tools needed Fast database search.

The experiment was done on a controlled group of Design Fundamental class. This subject is taught at Alpha Foundation level which is in the first year of their Degree course in Multimedia University. They are taught Basic Design Elements, Colour Theory and Introduction to 3Dimensional Character Design. Their projects are analogue art works with the aid of computer tools to assist in their some of their design projects. Sketching, painting, drawing, photography and production are their end products while discussion, critiques sessions and presentations are carried out throughout their semester as a way of communication. As tabulated, it is seen that the gallery acts as an enhancer or additional aid to the existing system. Conventional Design Studio is essential to the design education and the gallery succeeds in filling in void spaces with its credibility of a digitally supported space where multimedia tools and adequate content in a comfortable and secure space would present a hybrid space for students. Exhibition and Digital Archiving can be done at the e-Gallery where conventional studio does not allow for such activities. With these additional commotions, the gallery is able to pose as a one stop centre for design activities and multi functions at the same time as well as a centre for digital information and archive.

## 7. Conclusion

Understanding the future for digital design reorientation in theoretical and practice has provoked the research on searching further for a vehicle to cater for the progressive education of the multimedia age. Creative ideas to enhance the learning environment will provide students a better setting for the deliverance and experiential organization design students are associated with. As acclaimed by Mitchell (2002), a given space, through electronic intelligence and functionality, will not only be more responsive and efficient, it will also be programmable for wider range of activities.

## References

- BURGER, J., 1995. *Multimedia for Decision Makers*. Addison-Wesley Publishing Company.  
LAWSON, B., 1995. *The Language of Space*. Architectural Press.  
MATTHEWS, G., 1991. *Museums and Art Galleries*. Butterworth Architecture.  
MITCHELL, W.J., 1991. In: N. LEACH, *Designing for a Digital World*. Wiley-Academy.  
SARJI A.E., HUSSAIN H. AND ESHAQ A.R., 2002. Electronic Gallery: Case Study of a new Design Approach in Malaysia. In: *Education in Computer Aided Architectural Design in Europe (ecaade)*. Drukarnia Braci Ostrowskish, Warsaw, Poland.