Del 2012 Parallel Session 5

Thurs 6 September | 4:00 - 5:30 | Stream 5A Room HH202

Type-a-Day: Achieving Continuous Engagement with Graduate Students used to 140 Characters

Claudia Roeschmann

Texas State University

Throughout history, young adults have been the early adopters of new technology. It comes to no surprise that in today's rapidly changing world of computers and mobile devices, university students are active users of the most advanced technology available. In a time when "books" are less and less associated with the print media and "communication" is dominated by "less than 140 character" blurbs, educators in the Visual Communication Design discipline are increasingly challenged to find ways to continuously engage students and foster creativity, especially in topics that may be perceived as "out of date" by the tech-savvy adolescent of today.

Reading and writing has changed little throughout history, and as such have been the cornerstones of academia for centuries. The recent advent and evolution of mobile computing technology has brought changes to these basic elements of communication that rival the invention of movable type printing. The influence of technology continues to change literacy – effective teaching therefore requires an adaptation to those channels by means of the same technologies.

The assignment "Type-A-Day" is an example of how the use of multiple channels can enhance the teaching of traditional design skills while increasing the students' engagement in the context of a graduate typography class. The underlying principles, however, are curriculum agnostic.

Part of the course required the students to engage in online forum conversations. Merely transferring traditional discussion into the virtual world was apparently still not working after two projects. To remedy this situation the following assignment was designed:

Type-A-Day required daily online participation from each student for twenty-one (21) days after a face-to-face kick off meeting. They were asked to pick a sentence with a maximum length of ten words to use as a typographic element within a set given space of five inches. The students then received a daily prompt via e-mail which asked them to explore the organization of the words within the space while exploring different design principles.

The result was a variety of compositions in which contrast, hierarchy, legibility, and order of reading came into play. The students were allowed to choose their preferred online method to showcase the results of the daily assignments. This included using the university online platform, the student's blog, or website. After the daily exercises were completed, the students were tasked with combining and showcasing the assignments in the format of their choosing. Some chose a traditional book format, while another presented the assignment as a 3D puzzle.

During the Type-a-Day assignment students were given the option of three jokers, which allowed them to skip three daily postings, which were rarely used. The enthusiasm this assignment generated established a rhythm of participation that continued for other assignments after this assignment was over.

Even when teaching traditional design principles, it is essential for Visual Communication Design educators to embrace and incorporate new media and methods into the curriculum, and not shy away from changing communication channels in order to realize the highest knowledge transfer potential.

Using Pocket Worlds for self-directing learning and reflection

Owen Kelly

Aalto University

At last year's DoEL conference I discussed the initial stages of a long experimental project. This was intended to develop 'pocket worlds' using free and open source software, including Apache, MySQL and OpenSim. These worlds can be carried from computer to computer on a USB stick, and each provide a single-person world. In a future version, these will be able to be networked through a server-based social hub.

The project has developed into two separate areas of research. The first, known as Snowcastle Valley, aims to construct a world that children between the ages of nine and twelve can use on their own to build, discover and explore. The intention here is that the world will yield to logical inquiry in ways that will enable the users to learn without being taught. In particular they will learn how to learn. Arguably many children already do this through games like Pokemon, but our intention is to create a similar arena in which the strategies and the knowledge are more obviously generalizable.

The second are of research is known as Heart-Land-Mass, and is intended for adults. Our concerns here are similar but wider. These worlds will yield to logical inquiry, but they will also provide areas for reflection and meditiation. Users will be able to upload their own media into specifically designed 3D galleries where they can assemble and reassemble memories and recollections into meaningful collections, similar to the way people in previous centuries used commonplace books.

Both of these approaches adopt theoretical models based upon Gestalt Therapy and Transactional Analysis; and upon the realisation that rationality is inherently two dimensional while emotionality is always three dimensional. They are transdisciplinary, and are being conducted in partnership with interested parties. Snowcastle Valley is being developed with the assistance of the staff and students of a junior school in Helsinki. Heart-Land-Mass involved cooperation from the Sports Psychology team at Arcada who are looking for active athletes to work with us.

The concerns of our partners parallel ours but have their own distinct features. The teachers at the junior school wish to explore the use of the pocket worlds as a means of teaching and verifying soft skills such as logical and lateral thinking, inductive reasoning, and problem solving. The sports psychology team wish to look at the use of the worlds as tools to promote the relaxed consciousness needed for mental training, as well as exploring the possible uses of the world for actual mental training sessions.

The paper will discuss the theoretical background to the project in some detail, with reference to source material, and to other research in the areas the project covers. It will describe the processes by which we are developing the contents of the world, and show examples of the world as it has existed at various stages of development.

The pocket worlds are intended to lie outside the boundaries of any specific curricula, and to meet the increasing demand for learning know to learn, for knowing about how knowledge arises, and how we can improve our skill at being skilful.

In the Wake of SNS Challenger: Rephotographing Collectively

Gary McLeod

University of the Arts, London

In 1872 the British scientific research vessel HMS Challenger began a voyage around the world gathering data on the depths, temperature and organisms of the oceans. Alongside the charts, temperature tables and specimen jars obtained was a collection of over 500 photographs created by three photographers who served successively throughout the expedition. While the contributions of HMS Challenger to marine science have been researched in depth since its return to England in 1876, only a few scholars have undertaken an analysis of the cultural significance of Challenger's images (Codling, 1997; Brunton, 2004; McLeod, 2008; 2009), and my practice-led research looks to build on their understanding.

Central to the research is the combination of two fields of interests: the act of rephotography, a genre of photography defined as finding locations from which historical photographs have been taken and then making new photographs from exactly the same vantage points (Klett et al, 2006: p4); and the use of a custom-designed social network site titled "SNS Challenger". Through the process of rephotographing the locations in the original Challenger images with the help of participants from around the world, the hope is to learn more about the effectiveness of online collaboration.

Since the project began in 2009, continual collaboration with participants has led the project to touch upon a variety of contexts. This presentation addresses participants' use of rephotography on "SNS Challenger" within the context of developing skills through e-learning. Following a concise introduction to the practice of rephotography–from its origins as a scientific method through to its recent popularity as a genre of photography–this paper will describe the contributions (photographs, blog posts and comments) of three participants from Gibraltar, Cape Town, and the Philippines, who have each used the project as a vehicle for helping their development of visual/digital skills: Gus, a IT Systems Manager, used the project to practice computer generated 3d modeling; Eleanor, a marketer, used the project to aid her development with photography as a casual visual research tool; and Kathy, an HR Manager, used the project to push herself to be more creative. Drawing upon the descriptions of their contributions to the project, a case will be made for the combination of rephotography and custom-designed social network sites as a potentially powerful tool, for developing visual literacy and digital skills in the 21st century.

References:

Brunton, E.V. (2004) The Challenger Expedition 1872-1876, A Visual Index. 2nd ed. London: Natural History Museum.

Codling, R. (1997) HMS Challenger in the Antarctic: pictures and photographs from 1874. In Landscape Research, 22 (2), 191-208.

Klett et al. (2006) After the Ruins, 1906 And 2006: Rephotographing the San Francisco Earthquake. Berkeley and Los Angeles, California: University of California Press.

McLeod, G. R. (2008) Re-viewing the Japanese Landscapes of the HMS Challenger [Electronic Resources]: a

presentation at the Natural History Museum, London, April 2nd 2008. Murray Collection. Call Number: MSS MCL. Mineralogy library. London. Natural History Museum, Cromwell Road.

McLeod, G. R. (2009) Treasures: HMS Challenger in Japan [Electronic Resource] Nature Live Event recorded

3/3/2009 speaker: Gary McLeod, interviewer: Aoife Glass. Murray Collection, Call number: MSS MCL. Mineralogy library. London. Natural History Museum, Cromwell Road.

Innovating the collaborative future of global fashion business

Jo Conlon and Andrew Taylor

University of Huddersfield

With the increasingly ubiquitous nature of social networks and cloud computing, users are starting to explore new ways to interact with, and exploit these developing paradigms. Social networks are used to reflect real world relationships that allow users to share information and form connections between one another, essentially creating dynamic virtual organizations. (Chard et al, 2010) The reality within the fashion industry is that business practices are evolving at an unprecedented rate in accordance to Generation Y's dedicated and intuitive use of web 2.0 technologies and social networks that now demands of fashion education a re-thinking of the relationship between technology and learning.

The future employment of graduates, calls for new innovative thinking from skilled and digitally aware learners who have the capacity to participate in learning throughout their life by using technologies of their own choosing (JISC, 2009). The challenge for educational practitioners is to embrace digital technologies to harness the collective skills, knowledge and effort of all those involved in our learning communities and to transform practice to more accurately reflect the way we live and work (JISC, 2011).

This research outlines our vision of, and experiences with, creating a digital social community of design business learners, looking specifically at possible digital mechanisms that could be used to create a dynamic cloud infrastructure in a social network environment (see fig 2). The poster presents an exploratory case study (Yin, 2002) undertaken as part of postgraduate research. It documents the phases of the first two years of the intervention within the intermediate level module Global Fashion and Textile Sourcing. A transformational strategy was adopted to create a collaborative community of learning. This is based on a conceptual Product Lifecycle Management system (see fig 1) as a framework to test and support theory and practice in the fashion and textile industry.

The project aims are:

To establish multi-disciplinary, collaborative learning spaces that mimic professional practice and demonstrates the interconnectivity within global sourcing networks thereby providing an immersive, learning experience to challenge students to acquire knowledge and skills and use digital technologies appropriately.

To stimulate a dynamic connection with the global industry and its resources at the macro level through active participation in the creation and sharing of knowledge within a 'global sourcing' community at a micro level

To embed an understanding of the diversity of graduate employment opportunities that enables students to shape their own 'graduate identity' (Holmes, 2001) and lay claim to it through reflection and articulation of their skills with examples from business practice.

In the pilot, learners were randomised in interdisciplinary product development teams with a brief to connect design, finance, buying, retail, and management concepts and experiences within a digitally-connected learning community. Each learning team used personal mobiles with online social networking spaces/ e-learning tools: Blogs, Facebook, Pinterest, Twitter, Wiki, Prezi, SkyDrive, Wix.com and other free open source tools to record, edit, share, construct and present ideas around the communication of product development data.

It is envisioned that the future direction for the project will reach out into business communities and provide conduits to SME (small and medium enterprises) to create a community of learners, educators and industry communicating, learning and working together through open and flexible use of digital technologies and e-learning technologies.

Figure 1. CONCEPTUAL PLM SYSTEM

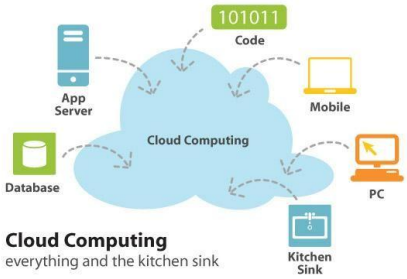


Figure 2. CLOUD COMPUTING...

References:

Chard, K, Caton, S, Rana, O, Bubendorfer, K; (2010) Social Cloud: Cloud Computing in Social Networks 2010 IEEE 3rd International Conference on Cloud Computing, pp. 99 – 106.

Holmes, L., (2001) Reconsidering Graduate Employability: the 'graduate identity' approach. Quality in Higher Education Volume 7, Issue 2, pp. 111 – 19 Taylor and Francis Basingstoke

JISC (2009) Effective Practice in a Digital Age, A guide to technology-enhanced learning and teaching Available at http://www.jisc.ac.uk/media/documents/publications/effectivepracticedigitalage.pdf

JISC (2011) Emerging Practice in a Digital Age, A guide to technology-enhanced institutional innovation Available at http://www.jisc.ac.uk/media/documents/programmes/elearning/digiemerge/Emergingpracticeaccessible.pdf

Yin, R.K., (2002) Case Study Research: Design and Methods (3rd ed) Sage Publications

Figures:

Figure 1. http://www.txtgroup.com/scm/uk/txtperform/plm.shtml

Figure 2. http://www.cloudict.com/1/Cloud_Computing.html

Citizen Science.

Using Urban Sensing for design projects in Urban Planning, City Governance and Community Design.

Salvatore Iaconesi and Oriana Persico

ISIA Design Florence, La Sapienza University of Rome

Through this paper we wish to present an on-going research and education project which, through the last three years, has produced a number of diverse, tangible results in the domains of Urban Planning, City Governance and Development, Community Design and peer-to-peer Urbanism, with direct impacts on the methodologies and practices of Social Media Studies, User Generated Content research, Collaboration and Community Building research.

The project, called ConnectiCity, uses technologies and techniques which allow to capture real-time information from social networks (UGC, User Generated Content), and then to process such information using a variety of techniques such as Natural Language Processing and GeoParsing/GeoReferencing/GeoCoding to create real-time systems which enable to observe and analyze the topics discussed by citizens in the different areas of cities, with a focus on important themes such as Ecology, Mobility, Security, Tourism, Diversity, Health, and the multiple forms according to which individuals express their emotions, desires, wishes, expectations and visions about wellness, happiness, sense-of-place and innovation.

These systems dedicate high levels of effort to the assessment of the diversity which characterizes contemporary cities: all information is harvested in multiple languages (currently 29 languages are supported) and the systems offer the opportunity to observe cities from a variety of customizable perspectives.

The theoretical background of the project comes from the ideas expressed by researchers such as Keving Lynch, Michel de Certeau, Matthew Zook, Mark Graham, David Morley, Denis Cosgrove, Jim and Nancy Duncan, Richard Schein, Setha Low, Denise Lawrence-Zunigais, Homi Bhabha, Almo Farina and Derrick de Kerckhove.

In 1960 Kevin Lynch introduced us to his vision on the ways in which we perceive our cities. He describes a city in which moving elements are just as important as static ones: a geography made not only through buildings and roads, but through the movements of people, the processes of their daily lives, the unfolding of human activity, emotions and desires.

This approach identifies the city as an act of collaborative construction which is performed at multiple levels, as “millions of people of diverse class and character” become “builders who are constantly modifying the structure [of the city] for reasons of their own”.

This observation allows us to gain deeper understandings about the ways in which people perceive and organize spatial information as they navigate through cities, as city dwellers perform these kinds of tasks in consistent and predictable ways through the construction of mental maps, in perfect harmony with the the “Practice of Daily Life” described by de Certeau, according to which the tasks we perform in our daily routines outline the ways in which individuals navigate everything, from city streets to written texts.

Multiple researchers – Cosgrove, Duncan & Duncan, Schein – have observed the collaborative and constructivist map-making processes in the city, forming the idea of urban experience through networks of multiple, fragmented and temporary data and information generated by human-place interactions and collaborative dynamics.

Furthermore it is now clear how buildings, neighborhoods and urban environments are continuously re-negotiated, re-configured and re-programmed by individuals and social groups, each with their own identity, needs, and world views. The encounter of these processes, at the interstices of our cities, bears fundamental value, as it is here that intercultural, intersubjective and collective experiences take place, as suggested by the studies of Setha Low, Denise Lawrence-Zunigais, and Homi Bhabha.

The usage of mobile devices and ubiquitous technologies alters our understanding of place.

As Morley observed, these devices and technologies allow us to traverse urban spaces – with their cognitive, aesthetic and moral significance – and to benefit from the use of a critical tool in the management of our space and time, in the construction of boundaries around ourselves, and in the creation of sites of fantasy and memory.

This modality represent a direct, personalized intervention into the design of space, in both its form and function, creating a definite shift in the definition of (urban) landscape: from a purely administrative one to one which is multiplied according to all individuals which experience that location; a lossless sum of their perceptions; a stratification of interpretations and activities which forms our cognition of space and time, in ways which are very similar to the ones suggested in the theories of John Eberhard and Almo Farina.

De Kerckhove in 2001 discussed the augmentation of architecture, to include the concepts created for the World Wide Web and, thus, expanding our possibilities for awareness and consciousness through the wide and ubiquitous availability of multiple sources of information which are hyperlinked to the physical elements of our reality.

Operating in this direction, it is possible to imagine and design a form of disseminated intelligence which can be coagulated in multiple ways by actors traversing cities and using mobile devices and ubiquitous technologies to enact novel forms of reading and writing of spaces, symbols and configurations, moving fluidly across digital and physical domains.

The ConnectiCity project aims at confronting with this scenario by establishing methodologies, technologies and practices which can be used to observe cities in real-time, and to propose novel scenarios of the domains Urban Planning, City Governance and Community Development, enacting innovative forms of citizenship in which the citizen is more active and aware, and is included in the participation to peer-to-peer processes which involve fellow citizens, administrations and organizations.

The paper will present the technologies and methodologies designed and developed in the research process, and the ways in which they have been used in learning projects to design and develop, together with students and researchers, multiple significative use case scenarios leveraging the opportunities described in the theoretical and methodological sections.

BioDigital Design & Architecture e-Learning

Dennis Dollens

Universitat Internacional de Catalunya

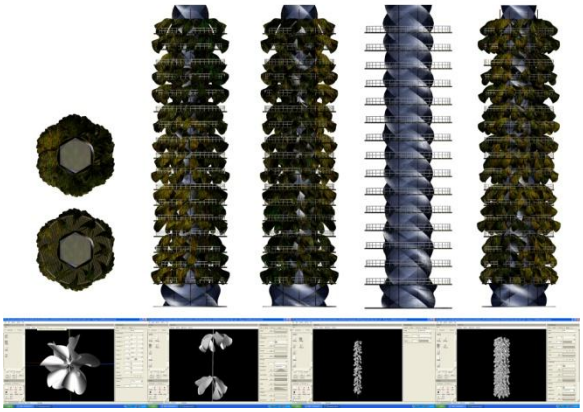
This paper discusses aesthetic transformations and generative emergence for design e-learning involving biological, environmental, and urban sources when researched for morphological data. Its primary focus is design and architecture but much here may be applied to art, sculpture, and poetry. When visualized scientifically, for example with microscopes, scanning electron microscopes, or supplementary research, and considered theoretically via complexity theory — analog and digital data support experimental aesthetic, structural, biological, and bio-robotic systems as environmental co-intelligences, structures, components, and actuators for deployment in, and aesthetic expression of, tall buildings, environmental shelters, and product design.

Resulting theoretical and practical design and buildings (see attached illustration) are, in this paper, illustrated by a series of stereolithographic (STL) components, models, and renderings as proof-of-concept used in teaching studios for biodigital design based in natural and digital systems. This experimental program is being developed at the Universitat Internacional de Catalunya, (Barcelona) for the Máster Universitario en Arquitectura Biodigital, and as PhD research in the Moray House School of Education, University of Edinburgh. Systems and aesthetics are oriented in terms of autopoiesis, cognitive extension, biomimetic design, and systems theory as they underpin academic programs considering generative design systems as paradigms of nature, and digital systems as cognitive extensions of humans. Systems are briefly tied into the discussion of technology as a cognitive bridge between designers, nature, and e- and m-learning, where various AI systems (including smartphones and apps) are understood as prosthetic and neocybernetic design partners — and, projected as collaborative with student research.

Prototype models, animations, and renderings are simulated first as software plants or trees in L-systems, Xfrog, Generative Components, ParaCloud, or sometimes from student's physical, sculptural models made of leaves, sticks, shells, bones, etc. Projects are drawn in hand and digital sketches, CAD systems, and rendered/animated in various programs. The paper has a theoretical point-of-view regarding biological autopoiesis, systems, environment, and aesthetic generation in the sense of cognition-to-digital symbiosis. But to clarity, this is a theoretical and teaching/learning discussion through which students approach biomimetic design using smartphones and apps while exposed to design emergence aided by AI, bio-robotics, mobile technologies, and emergent nature for extrapolating inspiration, materials, forms, and systems. In this light the teaching is recursive between student + technology + environment. The images included below give a sampling of the aesthetics and natural structures developed by the author as program illustrations; they include cellular and morphological hybridization and they are paired with illustrations of student work.

Research for this project involves assembling iOS and Andriod apps as well as social media sites and apps appropriate for classes conducted remotely in urban and/or natural settings. The presentation will illustrate how apps are interrelated and structured as studio extensions for in-field design e-learning and how they relate back to class discussion, student communication, desktop CAD systems, and advanced fabrication machines. In addition to noting specific free apps such as Adobe's SketchBook, the use of mobile mapping and GPS tracking involving Google Earth, Google Maps, OpenStreetMaps, MapMyRide, and TweetDeck's GPS photo and location abilities, will be reviewed. They are considered in a long trajectory as related to design in urban contexts, situated research, sustainability, infrastructure, landscapes, phenomena such as graffiti and squats, understanding the city, and the idea that urban cartographies are, in themselves, design generative. And further, that mobile e-learning may be viewed as handed down to current

generations through theories of urban occupation and observations from Benjamin's flânier to Debord's Situationist dérive.



The use of technology for teaching and learning in CAAD

Authors; Pedro Neto, Andrea Vieira, Bruno Moreira, and Lígia Ribeiro

Faculdade de Arquitectura da Universidade do Porto

This paper is the result of a research project that began in 2007 – 2008 in the Faculty of Architecture of Porto University (FAUP), which had as aim to adopt a blended learning approach integrating the Centre for Spatial Communication and Representation (CCRE) (http://web.ccre.arq.up.pt) for teaching CAAD to students of Architecture Graduation course in the the 3rd year. The objective is first to evaluate critically how the use of the collaborative platform CCRE worked as a catalyst for engaging the students with their own learning process and for approaching the students and teachers.

Second, to understand how this technology has helped to create a new teacher/student interaction, making communication much easier and giving to the students a more active role in the learning process. The paper begins with a short introduction of the program and pedagogical strategy in CAAD and then describes the strategy and model applied in the case study for teaching, referring also the type of digital material and learning tools that were used. Finally, the most significant results for each case study are discussed and a set of conclusions will be drawn in the light of last case study.

The results , besides other things, highlight how the learning process that rises from the creative use of an open collaborative platform as CCRE and facebook with a blended learning approach strengthens the teacher's capacity to work as a team and helps to open the university to its city and people. Finally, these results are used to inform the first stage of I&DT project Digital Architectural Representation and Communication (DARC) that aims to create a software platform capable of fulfilling the needs of identified market areas directed to the creative industries, design communication and architecture. The focus here is to the diverse interactive computer visualization possibilities and interactive collaborative work for the E-Learning industries for Arts, Design and Architecture.

REFERENCES

Broadfoot, O. B., Rick (2003). Comparing traditional face-to-face Design Studio education with modern internet-based design studios. Apple University Consortium Academic and Developers Conference.

Engeli, M., Ed. (2001). Bits and spaces. Basel, Birkhauser.

Gomez, P. P., L. (1997). Architectural Representation and the Perspective Hinge. Cambridge, The MIT Press.

Landry, C. (2000). The Creative City. London, Earthscan Publications Ltd.

Langa, E. A. (2006) Los blogs: perspectivas individuales en el espacio público. Global Media Journal Volume, 1-13 DOI:

Neuckermans, H. G., B., Ed. (1999). Computers in design studio teaching. Leuven, K.U. Leuven Dept. of Architecture.

Penttilä, H. (2003). Survey of Architectural-ICT in the Educational Curriculumns of Europe. Digital Design [21th eCAADe Conference Proceedings, Graz.

Rodrigues, C. (2006). "Blogs e a fragmentação do espaço público." from http://www.labcom.ubi.pt/livroslabcom/pdfs/rodrigues-catarina-blogs-fragmentacao-espaco-publico.pdf.

Rudd, T. G., Carolyn; Morrison, Jo; Facer, Keri. (2006). "What if... Re-imagining learning spaces." Opening Education, from http://www.futurelab.org.uk/research/opening_education/learning_networks_01.htm.

Salman, H. L., R.; Connif, A. (2008). "The Changing Role of CAAD in the Architectural Design Studio." The Built & Human Environment Review 1: 25 - 39.

Schon, D. A. (1988). Educating the Reflective Practitioner. London, Jossey-Bass Publishers.

Shao, Y.-J. D., Linda; Vaughan, Laurene (1997). The Design Studio Approach: Learning Design in Architecture Education. Design Education Workshop, Atlanta.