

Lim, R., Novo de Azevedo, L. and Cooper, J. (2016) 'Embracing the conceptual shift on new ways of experiencing the city and learning urban design: Pedagogical methods and digital technologies', *Journal of Urban Design*, 21 (5), pp. 638-660.

DOI: <https://doi.org/10.1080/13574809.2015.1071651>

This document is the authors' Accepted Manuscript.

License: <https://creativecommons.org/licenses/by-nc-nd/4.0>

Available from RADAR: <https://radar.brookes.ac.uk/radar/items/55851ed9-18f5-4e75-bd97-9da7461833bb/1/>

Copyright © and Moral Rights are retained by the author(s) and/ or other copyright owners unless otherwise waved in a license stated or linked to above. A copy can be downloaded for personal non-commercial research or study, without prior permission or charge. This item cannot be reproduced or quoted extensively from without first obtaining permission in writing from the copyright holder(s). The content must not be changed in any way or sold commercially in any format or medium without the formal permission of the copyright holders.

ABSTRACT

Embracing the conceptual shift on new ways of experiencing the city and learning urban design: Pedagogical methods and digital technologies

The innovations of the 21st C. in digital technology and media have had major influences in the way young urbanites and future city designers think as well as experience places. In embracing this conceptual shift of how new communication technologies are changing people's perceptions, experiences and ways of knowing the city, Oxford Brookes University continues to develop pedagogical methods which use new media in the teaching, learning and production of contemporary urban design.

These methods are examined in this paper in the context of three 'Undergraduate' modules:

- Taking the UD learning experience out of the classroom and into the field using mobile lectures;
- Using digital media in research and engaging with oral, visual and sensory experiences;
- Developing design communication skills using video, animation, 'Interactive' PDFs and web site design;
- Bringing new perspectives to classic theoretical concepts by engaging with different media: Cullen's Townscape from serial experiences in drawing to animated photographs and videos

These pedagogical innovations in experiencing, researching, designing and analysing cityscapes have had a dramatic effect on the ability for students to transform themselves into design-aware and creative emerging practitioners. These are assessed for understanding 'the way students learn and the relevance of these skills for future practice.'

**Dr Regina Mapua Lim <rlim@brookes.ac.uk>
Oxford Brookes University**

**Dr Laura Novo de Azevedo <lnovo@brookes.ac.uk>
Oxford Brookes University**

**Dr Jon Cooper <jcooper@brookes.ac.uk>
Oxford Brookes University**

Embracing the conceptual shift on new ways of experiencing the city and learning urban design: Pedagogical methods and digital technologies

̂

Introduction

̂

̂ *The only thing that is constant is change.
All things... are in flux like a river*

Heraclitus of Ephesus

̂

If change is inevitable, how do we manage change creatively to enhance pedagogy? Within the culture of human evolution, learning and the production of knowledge continue to hold supreme value. Academia as an institution contributing to this value must constantly manage change in the variety of dimensions it comes in: historical, social, cultural, scientific and technological, environmental and economic. These waves of change must be ridden in order to maximise the learning and production of knowledge in order for these processes to remain responsive to the needs of human evolution.

The focus of change in this paper relates to both a historical and extremely current concern: cities and the new ways of experiencing these places. It specifically examines emerging pedagogical methods closely linked to current digital media technologies and the impact these are having on urban actors, those that produce and consume urban experiences and the physical forms they take.

Media, learning, the processing of information, its dissemination and its influence on philosophical thought are intricately linked as discussed in the field of media studies, anthropology and history. It would be timely to bring in this dialogue into the arena of pedagogy because of the significant change digital technologies have had within the context of contemporary life. These technologies have changed the way we learn and experience life. It is not just the content that media delivers but the ways it has brought changes into our lives that matter. The relevant question to be addressed is whether pedagogical methods are coping in the best possible ways with how our lives have changed.

Pedagogical myopia and the resistance to change

The speed of change that digital technology has undergone has had an impact on pedagogy in several ways. The fact that its development, its use and impact has had different effects on the range of age groups matters a lot to the teacher – student generational gap and age groups. The younger generation have embraced the use of these digital technologies in ways to suit their lives: as entertainment, information gathering, social networking, status and other ways with greater ease than many senior academics. The generation gap between the classic relationship of teachers and learners growing up in different technological environments and media has created a gap wherein conceptual shifts in learning, communication and knowledge production can be exploited. It is understandable that the generation

that has become accustomed to text based literacy as the predominant form of knowledge creation and transfer would be resistant to introducing new ways of learning when an earlier form had sufficed. The attitude of, 'This is as good as it gets' is difficult to argue with because the system of text based literacy has had a longer track record on academic concerns such as systems of regulation, security, assessment, publication, authorship, and ownership that new digital technologies are still grappling with.

Aside from the speed of change there is also the amount and variety of technological developments that can pose a resistance to change. The variety of hardware, programmes, and forms of social networking and information access is not only overwhelming, it poses questions on trustworthy and academically acceptable regulation. Which information is reliable? Who regulates what is secure and reliable information and data in the current digital learning culture? What is the right hardware? What is the appropriate programme? The learning curve for adapting the pedagogical system to frequently changing media technologies would have to be taken into account over and above delivering the 'content' of what must be learned.

Why riding the wave of change is necessary

The argument for inevitably riding the wave of change on digital technology is not new. Back in 1964 Marshall McLuhan's media analysis of 'the medium is the message' already introduced the idea that technology and media is not only about the content it delivers but how it changes the context of our lives: the way we are, the way we live. These current developments in digital technology have changed the way we learn, the way we perceive our environment, the way we process information, the way we believe what is true, the way we produce knowledge as well as the speed and range that this is disseminated. It is for this context that the pedagogical shift must take place so as to remain responsive to the future needs of the coming generations of urbanites. The 'content' of learning must be delivered in the proper 'context' of contemporary and future lives.

Conceptual shifts in media, pedagogy and urban design

This paper is organised into five sections. The first section provides a historical context analysis covering visual, oral, aural media developments using a timeline analysis (Fig. 1) in order to provide the key points for understanding how this conceptual shift occurs. The next section covers the conceptual shifts in ways of experiencing our lived environment and information processing and what this means to the way we learn. This framework for analysing the conceptual shift in media technology and ways of learning will then be applied to current pedagogical methods developed for urban design modules in Oxford Brookes University. The fourth section brings forward the discussion on the impact of these pedagogical changes by assessing both the student and teacher experience. Finally, we conclude with the applicability of this approach on riding the wave of technological

change and how to engage in creative pedagogy for developing responsive ways of experiencing cities and learning urban design.

1.0 Historical context analysis of media development: The visual, oral and aural

The current position in which we engage with media using multisensory human intelligence is not new and has evolved and built up over time. The media development timeline (Fig 1) demonstrates both the dominance of each of the senses depending on the media, at specific points of historical development, as well as the simultaneous engagement of multiple sensory intelligences. The way we currently engage with digital media technologies wherein sound and sight seem to no longer be distinguishable and separate senses is intricately linked to the technical and scientific development of media. This co-relation is important because the ways in which we engage with media using different sensory intelligence is relevant to the ways we learn, process information, produce knowledge and communicate.

Illuminated manuscripts produced in the 13th C placed the power of interpretation on leading the good life in the hands of priests and literate scholars acting as teacher, educator and transmitter of the doctrine because they could read text.

A fundamental shift in the accessibility of information came when mechanised typesetting permitted the mass production of books. This together with the increase in literacy brought about the democratisation of knowledge. Social theorists (McLuhan, 1962; Anderson, 1991;) relate movements such as the rise of nationalism to the accessibility of text-based media (See Fig. 1 from years 1436 – 1600). The Industrial Revolution and the invention of the rotary press allowed for the mass distribution of newspapers, which could print both text and images.

Almost a hundred years after the invention of light sensitive film, silent movies (ca. 1914) were used initially for mass media entertainment. The aural transmission of information was made popular with the technological advancement of broadcasting in the 1920s. The political dimensions of World War Two put pressure on the film industry now using Talkies to produce propaganda material. Hollywood began its ascendancy as a powerful cultural and commercial system influencing visions of the good life in an international scale through the production of movies. Germany's political agenda were promoted in Leni Riefenstahl's movies, *Triumph of the Will* (1938), and *Olympia* (1938). Although the producers and controllers of knowledge and information had shifted from the religious text based clerics to influential political and secular institutions, media was still being used to shape public opinion.

By the 1950s and 60s television had become the dominant form of home entertainment capable of delivering live broadcasts. The dimension of time that live radio and television broadcasting provide give additional value to the medium that magazines and still photography do not have.

Video recording devices together with affordable home computers and the shift from analogue to digital technologies eased the cost of reproduction and opened the doors towards a wider base of knowledge authorship and dissemination of information. Propaganda material with anti-establishment or counter culture agendas could now be disseminated from locally produced videotapes for distribution without having to be publicly broadcast on radio or television.

By the late 1980s commercial internet service providers and personal computers created a milestone conceptual shift in media by powerfully democratising both the access and production of shared information and knowledge through digital innovations commonly used in the 1990s such as the www, email, instant messaging, and two-way interactive video calls. It laid the path for digital public discussion forums, blogs, social networking and online shopping allowing information and knowledge to cross over geographical and spatial limitations.

The smart phone with computing abilities was the device that made the concept of 'citizen journalism' possible. Each smart phone owner now had the capacity to access, produce and disseminate information with limited institutional control. The information produced had global reach.

Digital technological developments from the 1990s and their impact on the context of our lives are perhaps the most influential in shaping the way young urbanites experience cities and have changed the way students learn and teachers teach. However, the culture of learning is a historical creation and the current adaptation to media technology and its relevance to pedagogy have evolved over time.

To conclude this section we provide 4 key points teased out from the evolution of media development that bear upon conceptual shifts in the way we process and manage knowledge

- Clearly the engagement with multiple sensory intelligence has occurred in earlier periods with different media;
- This timeline analysis demonstrates that technological developments in media have a direct impact on the production and transmission of knowledge;
- Earlier historical / technological developments are carried on to build in improvements and innovations on knowledge production. Conceptual shifts are cyclical;
- Media technology can be used for any agenda. Regulating the quality and validity of the information will always be a concern for all media.

2.0 Pedagogical relevance of media and technological development to conceptual shifts in the way we process and manage knowledge

The timeline analysis on the evolution of media and technological developments provide the context for raising these five key points that mark relevant conceptual shifts with implications on pedagogy:

- From institutional production of knowledge to social learning

- From locally produced and locally relevant knowledge and media systems to global networks and a more democratic production and consumption of knowledge
- From institutions and authorities regulating the flow of information to a more open, minimally regulated, free flow of information
- From being multisensory using earlier media technologies to being still multisensory but using current digital technologies
- From a linear processing of information to a multi-level and simultaneous access system using hyperlinks /hypertext

From institutional production of knowledge to social learning

Technological developments in media have a direct impact on the shift from authority driven production and transmission of knowledge to one that enables social learning. This institutional control of knowledge dominated by the medieval clergy began to shift when printing technologies in the Renaissance made the publishing of books affordable to the literate elites outside of the Church to include philosophers, scientists and writers. If we fast-forward to the 21st century, this phenomenon of the increasing democratisation of knowledge is replicated as technological developments allow for the audio visual and experiential aspects of information gathering due to media development. The cost, availability of digital hardware and the ease of use delivered by creative programming are all factors which have made it possible for a more sociable and democratic way of producing, accessing and communicating knowledge. Blog sites, discussion forums, and open access information sites available through the internet have opened up the production of knowledge. This in turn has changed the way we learn shifting from a direct transmission of information from teacher or institutional authority to the learner having a choice of information from a range of contributing authors whose points of view can be publicly moderated.

From local to global

The world's connectedness and the speed at which information travels have shifted dramatically within the media timeline development period. The range of information access, distribution and immediacy would change with public broadcasting first with radio then with television. Today we currently have multiple choices for watching global events, in real time or pre-recorded and streamed to a receiving device of our choice. Locally occurring events are now possible to consume by a global audience. This phenomenon is not limited to entertainment but extend to knowledge based media such as digital libraries covering text manuscripts, video lectures and other audio and visual material which can easily be produced on an institutional or individual level and capable of reaching a global audience, instantaneously.

The implications of such change are important to consider when devising pedagogical methods. Having globally accessible knowledge has changed a learner limited to local access information. The technology has made the modern student

adept as accessing, selecting and making new knowledge in this context using affordable, state of the art hardware.

From regulated to free flow of information

The democratisation of knowledge, the speed it can be disseminated, and the ease that it can be produced has severe implications to academia in its quest for information validation, authorship, ownership and responsibility. Peer reviewed text based academic journals with sound regulatory measures for its published papers take longer to get the information out in a medium that is less popular among the current generation of university undergraduates who would prefer to trawl the internet for alternative multimedia information sources. Learners from across an age range are inspired by TED talks and other videos available online, many of which are self-produced without undergoing peer reviews or acceptable regulation by acknowledged 'experts'. Text based material available on the web poses yet another feat for the concept of responsible authorship. With the advent of digital media, plagiarism in essays has been redefined as 'cut and paste' writing without appropriate authorship acknowledgement. Given the ease, which this computer command provides, and the plagiarism problems it creates, new forms of tracing sources and regulating plagiarised work are being developed (Turnitin).

The free flow of information promoted by current media technology and the problems it raises is not limited to text but extend to images as well as language differences and ethical censorship, which have cultural differences. Authorship, ownership, information validity and what is ethically acceptable are contested issues and a work in progress on ways to devise globally acceptable mediation for managing the free flow of information in the WWW.

The amount of information available and the unregulated quality of these that are available to university teachers and students certainly have pedagogical implications requiring innovative ways to produce trustworthy material and methods.

Shift in multisensory approaches due to technology

Using multi-sensory intelligence in the production and consumption of knowledge is certainly not new. It is the way we do this using different media and how different media required the use of different sensory intelligences. Text, though visual required, literacy skills in order to access the information from written books. This same information had an oral / aural tradition and could be read to a non-literate audience for transmission. The imagery of the information from text was left to the receiver's imagination, another visual response. Radio broadcasting likewise prompted the listener to create visual imagery out of aural information. As media technology developed, visual and aural material became possible to deliver simultaneously with mood enhancing techniques such as music, sound effects, and lighting with less dependence on text for delivering the experience.

The alphabet monopoly can be said to be losing ground to new communication media and this will have an impact on the way students learn, absorb information, perceive and experience the world. It is for this reason that pedagogical methods must be tuned in and sensitive to the way multisensory intelligence has evolved because of the context it is being used in.

The different use of multisensory intelligence related to current media has produced interesting changes and opportunities in the culture of research and learning. Non text based media such as video allows for the participation of knowledge experts without requiring the ability to read and write and to make authoritative contributions to knowledge (Lim, 2012) using oral and visual data recordings. Video recordings can be more immediate, mobile, accessible and democratic. How students learn to research with new media technology will change the content of the research, shift the balance of knowledge sources and expertise from literary material to experiential and observational data, and require new ways of validating the information.

Our ability to use multi-sensory intelligence to tease out information from media is historical.

Linear to multi-level and simultaneous (hyperlinks and multimedia)

Books, magazines, radio programmes and television shows have a common quality of relying on a linear 'storyline' to deliver information. Information comes in a linear sequence.

The concept of hyperlinks has brought in two other dimensions that previous media did not have. Hyperlinks made it possible to connect text or image to another field using a different media to relate, argue, elaborate or enhance on the mainline of information. This gives one the option to jump to another site moving from what is described in the text to a video elaboration on the subject or to a opposite perspective written about on a blog site. We are therefore able to move from a linear or mainline of information towards different directions and other lines of thinking. The second dimension is the freedom it permits the producer or consumer of information to build up their information base because of the options or routes ones follows.

At this point of the technological development of media we are therefore able to make multiple links to other sites moving from a linear progression of thinking to one with multiple routes delivered in a variety of media: audio, visual, text, aural. This ability to process information in multiple levels and routes using multi-media is the context in which we live and experience our lives and are therefore intrinsic to pedagogical futures.

The five discussion points covered above on conceptual shifts in media development will be used to assess the pedagogical innovations used in the teaching of urban design in the next section.

3.0 Case analysis on the conceptual shift in media technology and ways of learning applied to current pedagogical methods:

The teaching context for these pedagogical innovations were three urban design oriented modules offered in sequence by the Department of Planning at Oxford Brookes University for undergraduates. First year undergraduate students were exposed to the mobile lectures, oral and visual research methods, communicating design using interactive PDFs and multimedia resources in the City, Design and Skills module. Having developed these skills, second year students were expected to apply these for the module on Designing the City where analytical and design processes were enlarged in scale and scope. The video essay as a medium for investigating theoretical concepts in real time experience is likewise applied in this module. By the final module Urban Design and Development, all the previous skills using digital technologies for the consumption and production of knowledge can be freely applied by the students for the assessed work including communicating their project's analysis and design ideas contained in a website designed by them. The pedagogical methods and the processes, which took place, will be analysed according the five point conceptual shift covered in the previous section:

Mobile lectures: Taking the urban design learning experience out of the classroom and into the field - multi-sensory, experiential learning

The mobile lectures approach was developed in 2010 as part of the project "The Power of Experience" (Azevedo, 2011), funded by an Innovation in Learning and Teaching grant from the Higher Education Academy Centre for Education in the Built Environment. The project focused on using the portability and versatility of mobile technology to complement traditional teaching resources to create a series of mobile lectures that students could download to their phones and take 'to the field'. The aim of the mobile lectures was to allow students to learn outside the insulated environment of the classroom. The expectation was that the mobile lectures would facilitate an understanding of the urban environment through experience. This, in turn, would help learning to move from 'recipient' approach to a 'critical thinking' approach to learning in disciplines of the built environment could be facilitated if students were given the opportunity to appraise urban design principles through a flexible situated experience where they are active participants rather than inactive recipients in the knowledge building process (Azevedo, 2011).

A website presence was created for The Power of Experience: A mobile learning approach to the teaching and learning of urban design (Fig. 2) < <http://www.urbandesignexperience.com/ude/Welcome.html>> which brought together the mobile lectures, international contributions on urban experiences, related links as well as instructions on how other interest groups could make contributions and participate in the discussion.

The mobile lectures (Fig. 3) <

http://www.urbandesignexperience.com/ude/Mobile_Lectures/Mobile_Lectures.html> were short videos produced by lecturers from Oxford Brookes University that undergraduates in the City Design and Skills module were expected to view as learning and experiential material for understanding basic urban design principles. These mobile lectures could be downloaded onto their mobile phones and taken with them as they walked the city sites which in this case was Oxford in the process of observing, analyzing, experiencing and learning the urban design principles discussed in the video lecture. After taking in the mobile lecture and experiencing the walk, students were asked to respond to focused questions on their urban experience. A site was provided wherein their oral or video responses could be sent in. The response could be immediate, in time with the experience because mobile technologies now permitted this.

In totality, The Power of Experience project covers the range of conceptual shifts raised in the previous section. Social learning is promoted by encouraging contributions of experiences from across the globe (Fig. 4) <
http://www.urbandesignexperience.com/ude/International_Experiences.html>. Students are given access to these video productions and are therefore able to learn urban qualities in different international locations. The learning is reciprocal for those contributors who produce videos of their own experiences and explain their urban qualities. This process extends a localized interpretation of urban qualities, in this case based on the mobile lectures situated in Oxford and extends this to a global realm and discussion arena.

In terms of regulating the flow of information in order to protect the validity of the teaching content and global discussion, guidelines for discussing and exemplifying urban design principles and qualities are provided for those wanting to contribute with all material to be peer reviewed before being made accessible to the public.

With the mobile lectures bringing the learning out of the classroom and into the realm of actual experience, multisensory intelligence aided by current digital technologies were now being tested. The oral, aural, visual, olfactory and tactile senses were engaged in the process learning and experiencing the content of the taught course. The possibility of receiving and giving information simultaneously by listening and viewing the lectures while one walked the streets observing and experiencing the lessons in real time did provide mixed results not all of them positive. The amount of information, which could be absorbed and experienced given the power of the media, could be overwhelming and have a negative impact on the experience of the place.

Video for research: Engaging with oral, visual and sensory experiences

The city as a lived experience is a major consideration for delivering good urban design. How people feel and use public spaces in the city, their feelings of safety and enjoyment as well as their bearings on where they are all matter when designing better places. Much of this is better understood by observation, engaging with a range of users, as well as site analysis of natural and physical features of the

built environment. It also requires experiencing the place as well as collecting evidence on people's attitudes and behavior on the use of public space. Using video for research encourages the students to capture visual and oral information regarding social behavior and opinions from the users of urban space. A lecture and seminar session introduces them to the principles of field observation and interviews, which are then supported by visual evidence captured either as still images or as video. Appropriate research behavior is discussed as a way of regulating acceptable ethical academic standards. These research principles form part of the skills and the second part requires them to understand how the script, production materials, and editing come together to create convincing arguments which enforce the validity of their research. This process allows the student to use multiple layers of evidence to include the traditional site analysis using maps, plans, and text; field observations in the form of still images and video; narrated experiences and oral interviews. The process of collecting this data provides them with a more intimate experience of the design site and the potential for creating better places through design, which accommodates the inputs of local users.

This method of producing the content of the site analysis using video as research simultaneously allows them to understand the site in the context of the users. It is very much a social learning process, which engages other people and conversations into the design process. The analytical process is less teacher driven and more student involved and experiential. Because the students have to work together in the process of video recording, interviewing and experiencing the site, they too engage with each other in the critical analysis and sharing learning outputs.

Video and digital cameras as smart phone options means every student with a phone has the hardware to do this type of research when given the training and opportunity to use it in the assessment. The medium for capturing the data is ready in terms of quality and cost. Programmes for processing the data to include annotated maps and photographs, animating a sequence of still images, sound and video editing are available both as industry standards or as free trial versions. The technology for engaging in multisensory data for urban site analysis and peoples' experiences is ready. However, the quality of the data is dependent on the research student's training as well as their engagement with the method.

The technical learning curve of having to engage with multiple programmes to include image processing (Photoshop), video editing (FinalCut or Premiere), digital modeling (Sketch-up) and others are steep yet the students enthusiastically self-learn these using available online tutorials. This is certainly an instance when hyperlinks have aided the learning and training process.

Communicating design: Interactive PDFs and website design

Using interactive PDFs (Portable Document Format) supported the process of transitioning from traditional design media to new digital technologies. As a format it accommodated text and print formats, still images such as maps, plans,

and annotated photographs, videos and hyperlinks. If the students were encouraged to use multiple media formats in the research process, then these skills could be further utilized in the design process. They were encouraged to animate the results of the map analysis and annotated photographs and use sound to add the next layer of explanation. The animation process gave them a different dimension of time in terms of explaining an analysis using oral and visual methods.

Digital modeling was the next stage of giving shape to the urban built form. For this Sketch-up was used as the 3D modeling programme for the urban design interventions they created. An aspect of this programme is the animated walk through which is a digital rendering of moving through the model and experiencing the space. This process is very much related to the mobile lectures, which encourage the student to understand urban design principles in an experiential manner. The thought process, which makes the connection from experience to design intervention, is imagined and ideally recreated on the 3D model, which departs from the realm of a sequence of buildings and spaces to being a sequence of spatial experiences. Because this 3D modeling experience can be recorded as a motion, as the experience of walking through the site in a video format, it can therefore be presented layered with sound and disseminated through digital network systems. A sample of this process is demonstrated on page 8 of this interactive PDF (Fig. 5) < <http://pub.lucidpress.com/mikeswoodfarm/>>

However, the students are required to work within the standard report format of a printable document clearly presenting the analytical process and results as well as their design interventions <

https://docs.google.com/a/brookes.ac.uk/file/d/0B0k_ysOf1p6hSjNMYzVkT1dkVzQ/edit>. It would be a serious shortfall of expectation if this final required format missed out on all the training in the use of new media approaches. The technological development of accommodating print and other material becomes possible with the concept of hyperlinks, which connects buttons in the form of text or images to a related site in multiple formats. One click will lead to a video, a sound bite, an animated explanation of layered still images, or to another webpage and more.

In this method the skills of multimedia and multi-level information access are developed in communicating urban design concepts whilst learning to use the standard practice of graphically laying out a printed document and explaining the thought process and final design in a clearly created print document.

We mention website design because this is the logical skill progression from the interactive PDF whose final product is an A3 paper printed report for communicating urban design. It would be a format that would lend itself to disseminating the analytical data assembled using digital methods and the 3D modeled design intervention. The practice of creating a website meant instilling the skills within the students to broaden the discussion and reach of information from the classroom into the WWW; of launching their knowledge contributions from a local classroom level to a global website level; of giving easy and immediate

access to the information and knowledge they have created via the internet.

In the second semester of 2014 the use of website design was trialled in the third year undergraduate module 'Urban Design and Development' (Fig. 6) which focuses on the development of an urban design code for a city site. The idea of developing websites as an alternative to the usual printed report was in line with the approach to increase the use of multimedia for communicating urban design. The work published in the websites <http://lnovoa1.wix.com/brookesudd> shows that students confidently use the multimedia skills developed in the previous two urban design based modules to illustrate their designs and communicate ideas (Fig.7) <http://11077686.wix.com/designcodeianosovs>. The site provides contact addresses so the student may be reached should there be a reviewer interested in conducting further discussions with them. This creates the possibilities of opening up the classroom discussion of student work to other viewers entering the site.

The video essay: Bringing new perspectives to classic theoretical concepts by engaging with different media

Gordon Cullen's (1961) Townscape approach to urban understanding and design is often discounted as simply being about reproducing pastiche pseudo-historical environments that stifle contemporary design. The townscape approach, particularly through the concept of serial vision, helps to understand the dynamic nature of the urban experience and helps students and professionals to think more clearly about the art of urban design at the neighbourhood, street and block scale.

However, the way it has been communicated in the past has contributed to the misunderstanding of its usefulness. Essentially the townscape approach is about dynamism, movement and kinaesthetic experience, yet it has tended to be learnt and presented in a static medium: still drawings and text. The medium didn't match the message.

In 2011 the use of video as the medium for learning, communicating and analysing the townscape approach was introduced in to the module "Designing the City". Backed up by interactive lectures on Townscape and workshops on video production, undergraduate students were invited to choose a route that took around 20 minutes to walk and to produce a 5-minute annotated and narrated video that illustrated the Townscape qualities of the route using the concepts and language of the Townscape approach (Fig. 8) <https://www.youtube.com/watch?v=yb8KRiias0w>. On completion they were invited to outline how they would use their learning in the urban design of a project site.

Rather than receiving a second hand experience of Townscape communicated through a passive and static medium controlled by access to the library, the use of video as the means of both surveying the place and then communicating findings puts the student directly in to a dynamic social learning situation. They interact with each other to support their video production and they directly experience

their own and other people's reactions to the subject place both at the time of video capture and on later viewing and editing the material. The students directly experienced the social reaction to the townscape around them. Townscape was live and real life <https://www.youtube.com/watch?v=sJQMnjBCnrk>

Using video also moves both learning and communication from a local and location specific experience – sitting at the desk absorbing or producing a written text – to a global interactive experience in two ways: first, students have to upload their video to YouTube to allow easy access for Tutors to view and this material is then readily viewable by others across the globe and second; each year group can easily access the material produced by the previous year group which acts to “raise the bar” each year, allowing students to refine the techniques used previously. They experience the concepts of townscape through the online videos and become familiar with the reality of the concepts before undertaking their own site visits and using mobile media they can view the material whilst on site and check video with reality.

In terms of the flow of information the use of video and the YouTube distribution method hugely affects the flow of information both geographically and specifically in relation to the student experience, between years. “Sharing” is the underlying concept that both drives and supports the use of video as a medium. It is allowing the students to showcase their work and directly relates to how they live their online lives.

Understanding the urban environment in terms of movement, dynamism and an appreciation of the kinaesthetic nature of the Townscape approach are directly supported by using video. Video records soundtrack. Background and ambient noise are present whilst the material is being recorded and edited and can be used to enhance the presentation of the experience of place. Essentially video acts to ensure that students experience the reality of the concept in a multisensory manner https://www.youtube.com/watch?v=XveXct_pyo

Although the key medium for this Townscape project is video, as medium this demands multi-media input. Students must use voice over to highlight what they want the viewer to note, they must use graphic symbols to identify key characteristics embedded in their moving and still images, they must annotate the video with key words to illustrate where and when a specific Townscape concept is present. Effectively the production of the 5-minute video demands a multimedia input from the students, adding to their skill base and allowing them to play to their own strengths and interests.

4.0 Impact of pedagogical innovations: An assessment of student and teacher experience

Mobile lectures

Students considered the mobile lectures as a helpful instrument to ‘situate’ theory.

They also felt better able to make more informed decisions in their design projects as they had experienced the consequences of the application of certain principles when walking in the streets (Azevedo & Fett, 2012). The following quote exemplifies students' perceptions of the usefulness of mobile lectures through experiential learning

I think [the mobile lectures] have helped me to understand the principles of urban design, because I am experiencing a 'first hand' look at the different buildings, streets, people, areas and what their relationships are with one another...you can understand and associate better with the different urban design principles such as perimeter blocks, land form, permeability, retrofitting and open and public spaces. You can do this because you get a feel for the different areas and neighborhoods. You can smell and hear what's going on. You see how roads, cars, people and nature all interact with each other. I have really enjoyed this learning tool, as you cannot actually grasp this way of learning through lectures or seminars. The impact on you is greater than seeing still images and text, because you can experience it in its physical form in the present (wiki post in Azevedo, 2011).

The approach opened up the critical awareness of lived-in places, noticing both negative and positive aspects of place making.

"I am constantly analysing everywhere I go. Made me more aware of the urban design principles and qualities" (end of the semester interview).

"You cannot take anything for granted (for example sounds) because you become more aware of everything around you" (end of the semester interview).

"You realise the relationship between things" (end of the semester interview).

From a teaching perspective the mobile lectures approach seemed to have increased the levels of student engagement with the subject. It also showed an increased understanding of the students' awareness of applied urban design principles and their consequences.

The encouragement for students to experience the urban environment guided by a short structured lecture was useful for the teaching process as it allowed the lecturer to refer to students' experiences when discussing topics that were in the content of the mobile lectures. This was especially constructive when discussing students' design decisions in studio design sessions (Azevedo, 2011).

Apart from the benefits of experiential learning the mobile lectures approach helped to address the need to create a variety of teaching possibilities to meet students learning styles. One student mentioned that mobile lectures were 'good for slow learners' as they could be watched several times.

In the student interviews, technology was never identified as a barrier for learning. However, students have highlighted that the use of videos whilst walking can impact negatively on the experience of the place (Azevedo & Fett, 2012). Varying levels of digital literacy amongst staff may pose problems for the development of similar projects (Azevedo, 2011). This issue can be resolved by co-teaching modules with technically able lecturers matched with module leaders who have developed the content of the taught programme.

The continued improvement on the quality of mobile lectures must become an ongoing project requiring resources and production time as well as creating a variety of topics.

Video for research and interactive PDFs

Students producing a 30 second video autobiography was the project which signified that the module for City Design and Skills was going to be a fun class. Moving from the realm of video for entertainment to video for research became evident from the lively student participation and active engagement with this exercise. The humorous results removed the fear of experimentation and created openness to innovation. By viewing each other's 30-second videos class participants became socially engaged giving expression to their identities and personalities using pictures, text, music, animation, and editing. From the amount of laughter and teasing there is evidence that they enjoyed the process of developing their video production skills. By giving constructive comments on these unmarked video biographies the students learned from each other and knew who were more advanced and asked each other for tips on production techniques. It broke the ice on social learning as a necessity for the sharing of skills. The students had gained confidence on the use of mobile technologies including smart phones for creating informative biographies. This technical confidence would be essential for the field research stage, which encouraged the use of oral and visual data.

The interim tutorials on field research findings indicated an interest among students to work in pairs or groups possibly because video requires more than one person to conduct interviews and shoot the visuals. Learning to work in groups is a valuable asset most modules fail to instill resulting in fragile shared learning environments. The necessity to share skills in using video for research resulted in positive bonding among students. Because the lecturers encouraged self-learning of detailed problems students encountered with programmes or hardware, survival meant sharing information and helping one another.

From the end of year student experience survey and interviews, the students expressed enthusiasm for the skills they gained and the opportunities made available for using these in the final assessed work, despite the workload and steep learning curve. The disproportionately long hours spent by students on the final project for this module raised concerns of having less time for other course commitments.

The introduction of interactive PDFs was well appreciated as a medium that could

hold together and accommodate the different forms of media they had learned to use in research, analysis and design. However, the focus on communication graphics and use of media was questioned for tipping the balance between look vs. content.

Engaging with new media means working alongside technological development, which is constantly in a process of resolving problematic issues. Interactive PDFs capable of holding multi-media resources generated large file sizes, which became cumbersome to handle when transferring this to publicly accessible sites. This problem and possible solutions would not have been uncovered had the effort to embark on this pedagogical innovation not been attempted. The effort to resolve these issues forms a partnership among students and lecturers becoming co-teachers and co-learners in the process.

Townscape through video

The process of using a different medium for investigating Cullen's theory of townscape has enhanced student understanding and experience as expressed in their own words:

Producing a video encouraged me to source actual examples of Townscape theory occurring within a city. Collating evidence of occurrences enabled an understanding of theory and how the theory is experienced. The use of a video enabled an easier clarification of depth, lighting, sounds, texture and personal experience, which can get lost in a traditional essay or report.

Evidence from their reflective summaries on the exercise demonstrated that theoretical explorations using video as a medium had an impact on their design process:

Studying Gordon Cullen's townscape concepts and using them to analyse a route through Oxford has given me a new perspective in how to design a place. Ideas derived from this methodology will be applied to my final design for the Grandpont site. It has got me to think about how we experience an urban environment from ground level, rather than basing plans entirely from an aerial view, which should influence the approach I take in designing Grandpont.

This process has taught me to appreciate the purpose behind design actions, encourage me to form opinions about my immediate surroundings and how they relate to the rest of an area. I can take into account the scale of buildings, their prominence and how they are angled in order to provoke a certain response. It has given me a sense of how to design as if travelling through space and the experiences along the way, instead of regarding spaces as separate, unattached environments. Making these connections will help

develop ... a sense of place for the Grandpont site.

The value of developing new skills both for understanding concepts and communicating ideas was a transferrable asset for future educational and professional use:

I thought the assignment for the townscape video was great because I actually discovered the City of Oxford. Before the project I had minimal and basic skills with the editing programmes. [T]he skills that I developed will benefit my future career. It's an assignment that I'll always remember... a hands on and innovative assignment that I hadn't done before at University. I have absorbed the context of 'Townscape' thoroughly and I doubt that I would have if it was just another ordinary essay or written report.

The resulting Townscape videos produced by students were tested by urban design lecturers as an alternative way of explaining Cullen's theory. Was it possible to use these videos as teaching material? Did the medium make it easier for international students to grasp the concept? Did their understanding of the theory change when presented as text in book form and when experienced in a video? A response from an international postgraduate student provided useful insights for the lecturers:

Yes, it is quite useful to present the design theory by using those videos. I found it easier for me to understand what is townscape and how to design the city by using those theories.

Because I learnt about the townscape theory before watching the video I was really confused by the theory. [E]ach point of the theory seemed unconnected. The examples illustrating the different points of the theory were not from the same place. I was wondering how the townscape would look like when all the theories are applied to one city area. The video helped me to discover the (townscape) of Oxford. By wearing a pair of "townscape glasses" (provided by the video) I could find all the theories, which I learnt before and I could feel how magic townscape is and how it works in one urban area. The video helped me to better understand the theory and also give me a vision of how to learn and discover the streets, buildings and a city.

Website design

The website design presents very little technical difficulty and does not seem to be a barrier for the development of the coursework neither does it seem to distract the students from focusing on the urban design content.

The initiative is now being evaluated but a few comments from students when evaluating the module at the end of the semester shows that the use of a website had.

This was one of the most interesting modules at the university. The idea of a website was just great and I think you need to restrict everyone to do a website rather than allow to choose between the report and the website (Urban Design and Development module evaluation 2014).

Having the chance to create a website, which I have never done before. (Urban Design and Development module evaluation 2014).

5.0 Riding the wave of change: The pedagogical applicability of this approach

In reflection, using digital technologies and engaging in conceptual shifts created by new media have provided a strong rationale for promoting pedagogical innovations. The direct impact this has had on the student / teacher experience in the context of urban design has been explicitly covered above where pedagogical innovations were introduced and tested in urban design teaching modules. We offer these key points, which are a result of an urban experience but may be applicable to other contexts of learning and teaching:

- It brings the content of learning into the context of contemporary living by promoting social learning, participation, the use of multi-sensory intelligence and multimedia which have changed the way we live our lives
- Offering multimedia options evens out assessment by accommodating a variety of skills and ways of learning
- It effectively enables learning amongst international students with varying language and text literacy skills by promoting the use of multi-sensory intelligence: oral, visual and aural
- The technological divide between generations can be bridged because students and lecturers become co-teachers and co-learners in the process of developing these new approaches

The pedagogical approaches reviewed in this paper were developed specifically for the planning and urban design programme. However, the benefits of these innovations are applicable across many disciplines with a sincere desire to enhance and enable the contemporary culture of learning.

References

- Alasuutari, P (1995) *Researching Culture: Qualitative Methods and Cultural Studies*, London: Sage
- Anderson, B (1991) *Imagined Communities*. 2nd ed. London: Verso
- Askew, K & Wilk, R eds (2002) *The Anthropology of Media*, Oxford: Blackwell Publishers Ltd
- Athique, A (2013) *Digital Media and Society*, Cambridge: Polity Press

- Azevedo, L (2011) The Power of Experience: implementing and evaluating the use of a mobile approach for enhancing student's learning in urban design *CEBE Transactions*. Volume 8, Issue 2
- Azevedo, L and Fett, T (2012) Evaluating the use of a mobile approach for enhancing learning in urban design. (short article) *Brookes e Journal of Learning and Teaching online*, January, 2012, Vol. 4, Issue 1. Available from: http://bejlt.brookes.ac.uk/article/the_power_of_experience/
- Banks, M (2001) *Visual Methods in Social Research*, London: Sage
- Buckingham, D ed (2008) *Youth, Identity and Digital Media*, Cambridge, MA: The MIT Press
- Collier, J and Collier M (1986) *Visual Anthropology: Photography as a Research Method*. Albuquerque: University of New Mexico Press
- Cullen, G (1961) *The Concise Townscape*, Oxford: Elsevier Ltd.
- Denzin, N and Lincoln, Y eds (1998) *Collecting and Interpreting Qualitative Materials*, London: Sage Publications Ltd.
- Edwards, E (2001) *Raw Histories: Photographs, Anthropology and Museums*, Oxford: Berg
- Edwards, E ed (1992) *Anthropology and Photography 1860 – 1920*, London and New Haven: Yale University Press & London: The Royal Anthropological Institute
- Finnegan, R (1992) *Oral Traditions and the Verbal Arts: A guide to research practices*, London: Routledge
- Jukes, I et al (2010) *Understanding the Digital Generation: Teaching and Learning in the New Digital Landscape*, Canada: 21st Century Fluency Project
- Lim, R (2012) Culture and the Built Environment: Involving Anthropology and Indigenous/Native Studies for Creating Better Places. In: Hendry, J and Fitznor, L. (eds.) *Anthropologists, Indigenous Scholars and the Research Endeavour: Seeking bridges towards mutual respect*. Oxford: Routledge
- Loveless, A and Williamson, B (2013) *Learning Identities in a Digital Age: Rethinking Creativity, Education and Technology*, London: Routledge
- McCracken, G (1988) *The Long Interview*, London: Sage
- McLuhan, M (1962) *The Gutenberg Galaxy: The Making of Typographic Man*, Toronto: University of Toronto Press
- McLuhan, M (1964) *Understanding Media: The Extensions of Man*, New York: McGraw-Hill
- McLuhan, M (2002) The Medium is the Message. In: Askew, K & Wilk, R eds (2002) *The Anthropology of Media*, Oxford: Blackwell Publishers Ltd
- Miller, S and McVee, M eds (2012) *Multimodal Composing in Classrooms: Learning and Teaching for the Digital World*, London: Routledge
- Pink, S (2001) *Doing Visual Ethnography*, London: Sage Publications Ltd.
- Sillitoe P et al eds (2002) *Participating in Development: Approaches to Indigenous Knowledge*, London: Routledge
- Silvermann, D (1993) *Interpreting Qualitative Data: Methods for Analysing Talk, Text and Interaction*, London: Sage Publications Ltd.
- Slim H and Thompson P (1993) *Listening for a Change: Oral Testimony and Development*, London: Panos Publications Ltd.

- Stern, S (2008) Producing Sites, Exploring Identities: Youth Online Authorship, In:
Buckingham, D ed (2008) *Youth, Identity and Digital Media*, Cambridge, MA:
The MIT Press
- Vansina, J (1985). *Oral Tradition as History*. Oxford: James Currey Ltd.
- Williams, R (2002) The Technology and Society. In: Askew, K & Wilk, R eds (2002)
The Anthropology of Media, Oxford: Blackwell Publishers Ltd

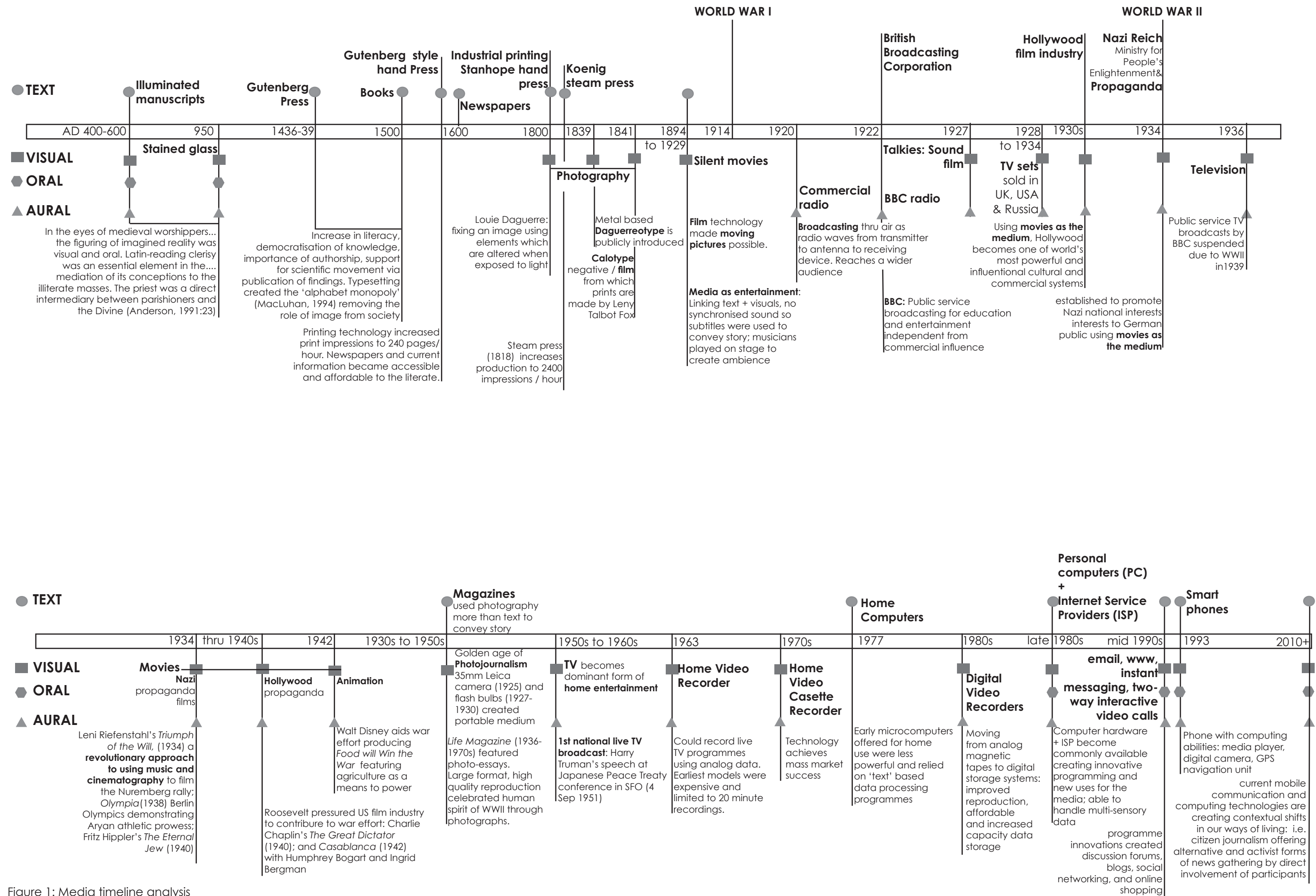


Figure 1: Media timeline analysis

URBAN DESIGN EXPERIENCE

WELCOME
LINKS

MOBILE LECTURES

INTERNATIONAL EXPERIENCES

CONTRIBUTE

PEOPLE

the power of experience: a mobile learning approach to teaching and learning urban design

Although urban design principles aim to improve the sensory experience of the urban environment, its teaching and learning mostly takes place indoors, fully insulated from the city environment. Lectures typically use a variety of visual material such as photographs and graphics to exemplify current design approaches that are assumed to provide a high quality experience of the urban environment. However, by being situated out of context in an indoor environment, these lectures run the risk of imparting only a limited understanding of the complexity generated by the interaction between all forms of life and the built form.

Although most learners are capable of applying taught urban design principles to the design of urban areas, this project postulates that this may simply be a result of a direct transference of 'accepted wisdom' imparted during lectures rather than a critical reflection and deeper understanding of the spatial and social consequences of applied urban design principles.

This project proposes that the move from a 'recipient' approach to a 'critical thinking' approach to learning in disciplines of the built environment can be facilitated if learners are given the opportunity to appraise urban design principles through a flexible situated experience where they are active participants rather than inactive recipients in the knowledge building process.

This experience can be enabled by the adoption of a mobile learning approach. Such an approach makes use of the portability and versatility of mobile technology (mobile phones, ipods, etc) to promote 'a pedagogical shift from didactic teacher-centred to participatory student-centred learning (Looi, C. et al., 2010). Actively participating in developing knowledge can encourage students to develop a critical understanding of their discipline resulting in an improved learning experience.

This website is designed to help you to understand urban design principles and qualities through structured experiences of places.

You will find videos and maps that will help you to learn by experiencing places around the world.

The best way to understand the project is exploring and interacting with the site. Have fun!

SHARE



MA Urban Design

City Design and Development



module WIKI

OXFORD
BROOKES
UNIVERSITY



This project has been developed with the support of the Higher Education Academy Centre for Education in the Built Environment.

Figure 2: The Power of Experience

MOBILE LECTURES

[WELCOME](#) [MOBILE LECTURES](#) [INTERNATIONAL EXPERIENCES](#) [CONTRIBUTE](#) [PEOPLE](#)
[LINKS](#)



[GO TO ARCHIVE](#)

 [SHARE](#)   



Subscribe to
the Video
Podcasts in
iTunes

Oxford Collection

The mobile lectures posted in this section were all shot in the city of Oxford, UK and were planned to provide a

The lectures are posted periodically and you are encouraged to subscribe to this page to get informed of any update. You are also encouraged to subscribe to the video podcasts on iTunes following the link on the left to be updated about all new Mlectures.

[Ghost Forest](#)

3 March 2011

Synopsis:

Ian takes us on a tour through Oxford City centre towards the Pitt Rivers Museum where the exhibition Ghost Forest is in display until 31st of July 2011. Ian discusses the importance of...

[More...](#)



[Retrofitting Streets](#)

3 February 2011

Synopsis:

A video through a residential street - Ferry Road, Oxford - discussing attempts to accommodate residential car parking.

[More...](#)



[the exterior of a perimeter block](#)

1 February 2011

Synopsis:

the video is a footage of a walk around a typical perimeter block discussing how to arrange plots and buildings to generate a a livelier and safer neighbourhood.

[More...](#)



[the interior of a perimeter block](#)

1 December 2010

Synopsis:

the video is a footage of the internal part of a perimeter block with a discussion of how arranging the backs of plots and buildings to face each other can result in positive urban design...

[More...](#)









Figure 3: Mobile lectures


MY PODCAST

[WELCOME](#)
[MOBILE LECTURES](#)
[INTERNATIONAL EXPERIENCES](#)
[CONTRIBUTE](#)
[PEOPLE](#)
[LINKS](#)

[GO TO ARCHIVE](#)


[Subscribe](#)



[SHARE](#)







Coimbra Chapter 4 The University

Monday, 27 June 2011

[More...](#)




Coimbra Chapter 3 The Upper City

Monday, 27 June 2011

The Upper City is the most important and representative place of Coimbra with its old strong academic traditions. It is in this place that the University of Coimbra was established. Almost all the...

[More...](#)




Coimbra Chapter 2 The Old City

Monday, 27 June 2011

The old city area start after crossing through the main gate called Almedina Gate. After crossing it we find one of the most interesting urban spaces of Coimbra: the Quebra Costas street or stairs,...

[More...](#)



Coimbra Chapter 1 The Low City

Monday, 27 June 2011

Coimbra is the city chosen for this work. It is called a cidade dos estudantes (The city of the students), mainly because it is the site of the oldest university in Portugal. The route of this video...

[More...](#)

Figure 4: Podcast of Portugal

DA-1: This will add permeability to the site as pedestrians will be able to access the shops quickly from Forester Towers or the courtyard houses to the north of the site. This adds variety as users have the choice of how they will access certain facilities in the site. The central walkway will also highlight that Wood Farm can act as the central facility for surrounding estates.



DA-11: Forester Tower's will be kept as there is a lot of residents that will need to be relocated. The Tower will be renovated to rid of the eye sore and will house a mixed community - affordable housing along the bottom floors and private higher up due to the views and status they could relieve.

DA-10: An extra row of housing will encourage communal living and clarify the fronts and backs of houses. The grass to the very north of the site (adjacent to Bonar Road) has been removed to allow for parking for the new courtyard residents, which in turn will remove a large majority of the on road parking.



DA-2: Access point to the central path can connect residents and shoppers from the south of the site to the north quickly, and vice versa.

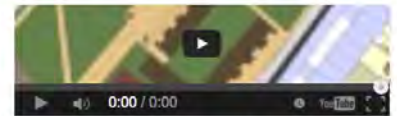


DA-3: Following on, there are separate walkways dispersing from the central one, making the site much more accessible. For example, a pedestrian could now easily walk from the south west of the site to the east quicker than before, but still with choice.



DA-9: Areas that are coloured sand with wave like walkways through show the areas that are designated for shared space and Homezones.

DA-8: The open, developed area to the south of the site has been removed to leave one flat area. To replace what is currently in place, small grass patches have been added to add to the sustainability and vitality of the area. The patches of grass have pathways that have been designed to add variety and permeability for ease of access. Trees and a fountain can be added to increase the attractiveness of the shopping promenade and to indicate how the it can be the new central area in which to stay rather than just walk through.



DA-4: Additional houses to address a housing shortage in the UK, however not by much. A few of the houses on the corners will be demolished and the residents will be relocated to the new houses on site. This way, the perimeter block becomes much more permeable as the paths will be open to pedestrians which offers variety and ease of accessibility on the site.

DA-5: One small change to the site is the removal of the barrier between two houses which adds complete access from the south of the site to the north of the site.

DA-6: Open area parking will allow for more cars to be parked on site. This will remove the issues of on street parking and first come, first serve parking within the garages. The removal of the walls (from the garages) will also increase the amount of parking within that area as well.



DA-7: Another change to Wood Farm is the second retail/ shopping building which uses the same road as the existing shops for rubbish disposal and access for deliveries. This way, backs are still facing backs, and site and access will be restricted by gates both sides of the road. This will in turn will remove the eye sore that is currently existing behind the shops. The second shop would act as an anchor tenant to bring publicity and popularity.



DESIGN ACTIONS

Figure 5: Interactive pdf

Urban Design & Development

Module U37771 - 2013/2014
Department of Planning - Oxford Brookes University

[HOME](#) | [AREA 1](#) | [AREA 2](#) | [AREA 3](#) | [CONTACT](#)

AREA

3

Designed by Shannon O'Shea
(as part of the MA in Urban Design, Oxford Brookes University)

Module Coursework by student:



Jazz Machen

Lucy Prismall

Pablo Newberry

Mathew
Sunderland

Raj Jadhav (PG)

Figure 6: Website design

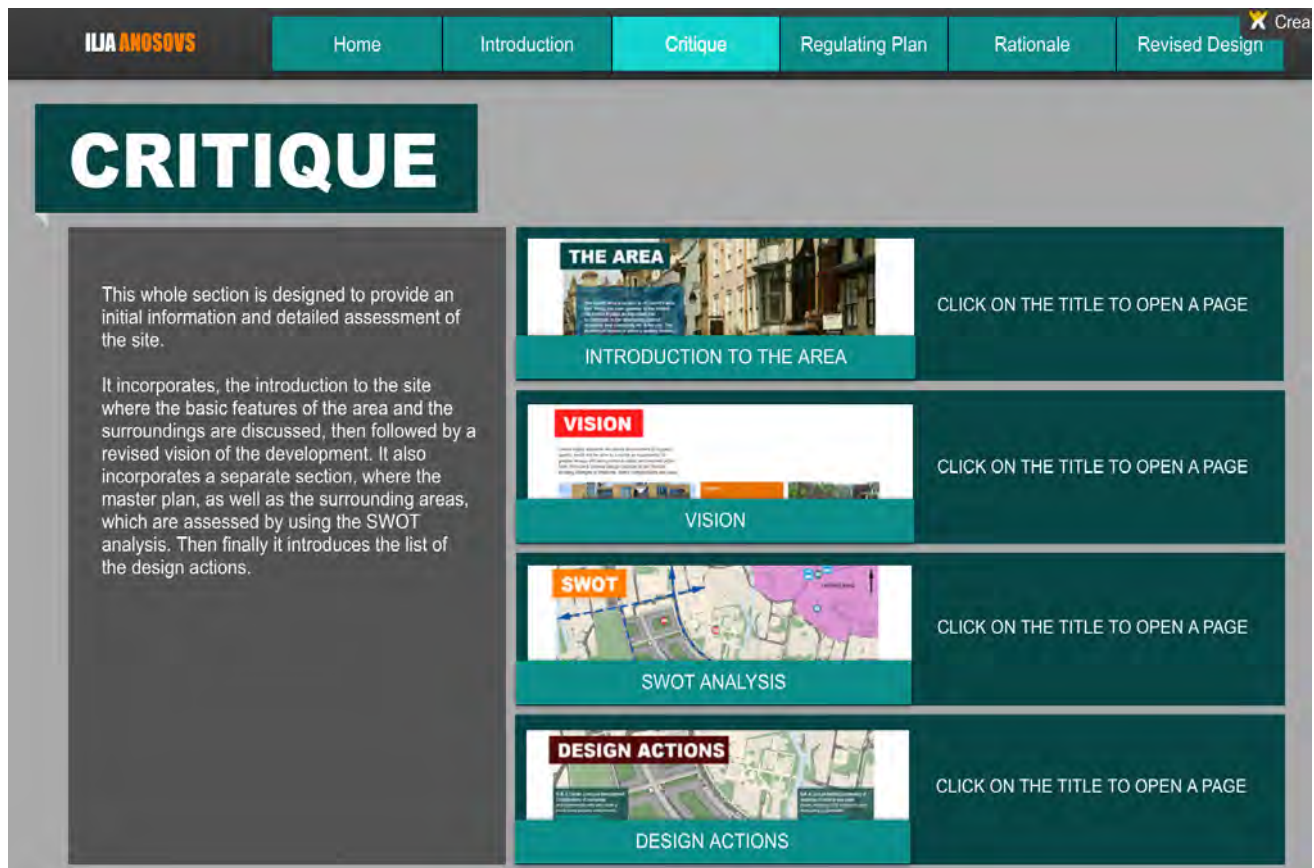


Figure 7: Design code



Oxford Townscape Analysis



Bima Purnama



Subscribe

2

596 views

Figure 8: Townscape and grand vistas