

Global classrooms, rural benefits: creative outreach through computing in education.

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Abstract: The last decade in education has included what in the past I have termed an *e-learning goldrush*: a period that not only witnessed some great leaps forward in the acceptance of online learning and teaching as a viable and effective addition to more traditional face-to-face methods of education, but also a time that saw some serious derailments. In my experience, such hindrances were more often caused by issues of institutional economics, and the adoption of poorly conceived learning technologies.

Throughout the same ten year period, I undertook extensive practical research to design and produce a series of online creative global classrooms, or studios, that sought to investigate the viability of collaborative art and design projects between people who would most probably never meet. With a focus away from the technologies they involve and emphasis on the online collaborative creative process that takes place, some fascinating outcomes resulted. After several years, and having proved the methods were at least viable, I deemed it more important to concentrate on who the results could benefit, rather than solely the process or activity itself. In essence, I became far more interested in addressing *why* we were undertaking such online global classrooms as opposed to issues of *who* participated or *what* technologies worked better than others.

This paper address will initially overview the process of forming and conducting a series of online global creative classrooms that included hundreds of students and teachers worldwide, before concentrating in detail on showing the social impact the projects achieved and how they aided remote and disadvantaged rural communities in countries such as: Kenya, Uganda and the Philippines.

Collaborative, creative and computerised classrooms

Collaboration is increasingly recognised and respected within visual arts and design as an effective method for enhancing creative processes in contemporary professional, educational, and social environments (Scrivener et al, 2000). Such a paradigm not only challenges the traditional notion of *creativity* as an individual endeavour, but also raises questions about creative ownership, new forms of production, and how to curate and exhibit collaboratively produced art and design outcomes (Bollier, 2001). In addition, rapid development of personal computers and information communication technologies (ICT's) that are increasingly available at affordable prices has opened an area of potential growth for innovative approaches to creative practice.

It was only fairly recently, in the latter half of the 1980s, that American graphic design guru and writer, the late Paul Rand, described the process of designing as a predominantly personal endeavour. The idea of sharing a creative process with others was deemed to be detrimental and denied an individual a sense of personal accomplishment:

Designing is a personal activity and springs from the creative impulse of an individual - collaboration is more likely to hinder than enhance an individual designer's thought process (Rand, 1993).

However, less than a decade later, John Warwicker, co-founder of the highly acclaimed UK-based creative collective *Tomato*, was already arguing the opposite. According to Warwicker, society had begun to operate in a more globalised and plural context:

Politics, economies and society have changed ... We are now in a new period of connectivity, relativity and pluralism ... there is a changed sense of the individual, with increased ease in interaction and the value of individuality is now seen within a collaborative context (Warwicker, 1999).

I argue that both viewpoints were relevant and accurate within their relative contexts at the time. Their apparent polarity illustrates the extent and accelerated rate of change in methodologies used by visual artists and designers

during a period that was symptomatic of the widespread introduction of personal computer and Internet technologies between the late 1980s and start of the 21st century. The opposing viewpoints of Rand and Warwicker provide differing foundations upon which to build explanations for the difference in creative processes within two important contexts in recent times: within modern professional creative industries *and* art and design education institutions. I have been closely involved with both over the last two decades and have witnessed significant changes.

For example, within the creative industries throughout the late 1990s and early 2000s it was fascinating to observe the ways that staff within a new breed of digital media companies adopted the latest computing and web technologies in order to work with collective ease across national and international boundaries. Equipped with these new resources, working files could be passed between numerous people who each contributed to, and ultimately produced, final collaborative outcomes.

In understanding the relationship between new computer technologies and changing creative practices, Warwicker emphasises that 'new technology is not about replacement but addition' and attributes this phenomenon to an 'increasing complexity' in the many things we do in our lives (Warwicker, 1999). This view reinforced my belief that a methodology that involved *online collaborative creativity* was worth exploring for the benefit of both educational and professional creative settings: however, not at the expense of traditional methods or approaches to either field. Any new methods that exploit the potentials of computer and web-based technologies should not dismiss or replace traditional face-to-face practices, but instead complement them.

Recent literature reiterates the difference in views between Rand and Warwicker and confirms that the creative process has undergone a significant transformation over the last decade, from a predominantly singular activity to one that more recently encourages a notion of *the collective* (Hargadon & Bechky, 2006) and collaborative working processes (Jones, 1992). However, within education such a notion remains difficult to achieve, when collaboration is required to take place between multiple and geographically distanced partners (Kvan, 2000).

Identifying early perceptions surrounding online learning and teaching

From an education perspective, and in regard to shifting working practices amongst creative professionals, I observed changes in the way many educators worldwide (in a range of disciplines) increasingly were choosing to adopt the use of computer technologies concurrent with, and in some cases instead of, more traditional approaches to education. Subsequent tensions between traditional and new pedagogical approaches resulted in new sets of challenges and complexities facing both blended learning (Bonk, 2006) and fully online education (Watson, McIntyre, et al., 2009)

However, I argue that visual arts and design (higher) education, did not adapt to the availability of new computer technologies with the comparative ease and speed of professional creative industries. There are a number of possible factors that caused this situation, such as: an older demographic of educators compared to characteristically young staff in professional creative companies; the costs involved in equipping large educational institutions with the latest technologies; instances where universities and colleges adopted technology solutions that were later seen as being inappropriate for learning and teaching purposes; and a stubbornness on behalf of many educators in not supporting technology-based learning and teaching as a viable and sustainable, pedagogical vision for the future.

Globally, the majority of early responses to growing requests for online learning and teaching tended to often embrace and implement new technologies with little thought to *why* they should be used in the first place, or what it might mean to work with them in such a way. In many instances, it seemed that reasons of it being 'modern', or 'cool', or because other people were starting to adopt educational technologies were some of the driving forces to join the trend. Sadly, from an institutional perspective, the main drivers for adopting educational technologies often appears to have been on economic grounds, with a misguided perception that it would provide a time-saving and cheaper model for teaching, and that additional numbers of students could be enrolled in courses and programs. It was observed at the time that 'many commentators and analysts are making dramatic claims about the growth in the markets for online learning, though it is hard to find such claims being made by people who do not have a vested economic interest' (Goodyear, Salmon, et al. 2001).

In terms of time and cost savings, the benefits of new technologies are somewhat questionable and need to be viewed in the context of the quality assurance (QA) of universities and their learning and teaching activities. In *Effectiveness and Cost-Effectiveness of Online Education: A Review of the Literature* (Jung & Rha, 2000), its authors undertook a major study based on a wide review of the literature and case-studies that investigated the effectiveness and cost-effectiveness of online education. It identified three major variables that contribute to success in online learning: instructional design, social matters, and students' personal factors. During late 1990s, a period of initial interest in e-

learning, it is suggested that these important considerations were more often overlooked (Biggs, 2001). In addition, it is argued that for online learning to become part of mainstream practice, it needs to sit comfortably with teachers and students and therefore be easy to use and maintain. Teacher expertise and student readiness must be supported by an adequate technology infrastructure for a successful online learning environment to exist (Oliver, 2001).

During what I have previously termed the *e-learning goldrush* (Bennett & McIntyre, 2004), it was apparent that simply using an abundance of available technology within teaching was not enough to help students and teachers adapt to their new online surroundings. Technology needed to be integrated into curricula by considering purpose, aesthetic, usability, theory, sociology and ergonomics to help the transition. As a result, many early flexible delivery programs failed to recognise these considerations and were ineffective, unpopular, and in turn very costly.

In the 2004 paper I wrote with my colleague, we stated our belief that *two* main influences were largely responsible for the poor start and reputation of online or e-learning. When examining the ‘lay of the land’ worldwide regarding online education at the beginning of 2001, it was not difficult to observe two key drivers which led to a rapid growth of activity: economics and technology. Under-funded education institutions and proprietary software companies had metaphorically ‘flattened the pedagogical landscape’ in a scramble to quickly establish their online presence. What resulted were often hastily planned, low quality online courses and programs. Unfortunately, this reinforced a common belief that online education was a poor substitute for face-to-face learning and teaching (Conlon, 1997).

Fortunately more recently, credible education institutions and educators have realised that achieving quality in terms of content delivery and the student and teacher experience must be the key component and driver of any online education agenda. It became apparent that to achieve purposeful online subjects/courses, institutions and educators needed to look past an immediate return and view more long-term solutions (Oliver, 2001).

Before discussing specific issues that encourage *quality* using online delivery, let alone those in art and design disciplines, one should first seriously question online pedagogical intentions within today’s educational context:

1. Is there any real need for engaging in online education?

“Changes in both the levels of funding and the profiles of students have led to an increasing emphasis on the use of flexible methods of course delivery in higher education and as part of that trend there is increasing interest in the use of communication and information technologies.” (Curtis & Lawson, 2001)

2. If such a need exists, what can ultimately be achieved or gained?

“Among the benefits of online education include the permanence of online text, the availability of online mentors, and the fostering of student idea generation.” (Roberts, 2004)

Having previously cited misguided economic beliefs and poor choices of technology as factors that have caused problems for online education in the past, it is now clear that there are other more important issues to consider when planning online education initiatives. It is necessary, for example, to first acquire an understanding of the Internet as it is the context that we expect students to learn within? Do we need to better appreciate and understand the nature of interaction that they encounter? Far too often it seems, design for the Internet, especially in education, is based on face-to-face scenarios. An online classroom is *not* the same as an on-campus classroom. Online teaching and learning is a different practice to what students and teachers experience in more traditional classrooms (Legutko, 2007).

If *differences* between face-to-face and online settings are acknowledged as potential advantages, rather than obstacles, exciting and valuable learning experiences can take place. It is my observation that the first decade of online education (the e-learning goldrush) did not adequately, if at all, consider these differences. It is for these reasons online education was often considered a lesser option compared to face-to-face teaching and learning (Conlon, 1997). It is also important to acknowledge that online education offers additional options and it should not be seen as a replacement of, or in competition with, traditional face-to-face approaches. This point very much echoes and reinforces Warwicker’s claims when stating ‘*new technology is not about replacement but addition*’ (Warwicker, 1999). For example, technology now offers opportunities for more collaborative forms of learning and teaching; it reduces travel time/costs for students; and it supports both synchronous and asynchronous learning in multiple formats ranging from text and images, to audio and video communications. As Anderson argues, technology is not inherently good or bad for teaching – it is the way it is used that matters (Anderson, 2003).

Realising online potential and possibilities for collaborative art and design practice

The massive global impact of the Internet has been described as the *third revolution* in mass communication (Crum, 1998), following the development of the Roman alphabet during the second and third centuries AD and the invention

by Johannes Gutenberg of the first printing press in 1440. Within the specific context of creative disciplines, the information technology revolution created the potential for distanced individuals to collaborate and share working processes that allow them to form creative alliances with people they may not normally meet. Such potential resides within the Internet's capacity to remove physical, spatial, time and cultural boundaries.

By observing distinct shifts in approaches to creative practice over the last two decades, emphasised by the diverse viewpoints of Rand and Warwicker, it is clear that *working collaboratively* is an important new dimension and consideration for today's artists and designers. In terms of new and collaborative methodologies that professional creative industries were increasingly adopting, in contrast to traditional and individual approaches to learning and teaching that visual arts and design education still embraced, it was clear after the late 1990's that a divide had formed between professional practice and education. If education wished to re-align with professional practice, then strategies and technical issues needed to be researched to help bridge the divide.

The remainder of this paper gives some examples of collaborative learning and teaching projects in art and design that I produced, between 1999 and 2010, to reflect new collaborative working processes emerging in the professional creative industries. The projects initially aimed to examine the viability, effectiveness and potential of the Internet to facilitate creative collaborations between artists and designers. Through a reiterative process they also reflected on communication techniques and creative methods generated as a result of collaborating online, and how these could be reflected more broadly in decisions facing educational bodies when revising curricula to include online components.

I describe a series of collaborative and global online classrooms (or studios) that were formed through a research initiative I conceived, in 1998, titled *Omnium*. *Omnium's* projects were initially intended to be a response to my own concern that a dislocation had formed between professional creative practice and education in the visual arts and design. Following formal research questionnaires, extensive participant evaluations, literature reviews, and examination through case-studies over the last decade, *Omnium's* projects, and the impact of their outcomes, aim to prove that there *is* a strong demand for online collaborative creativity. In addition, the *Omnium* research, since 1998, has enabled the provision of proposed solutions in response to my original research hypothesis:

Through Omnium's research activities, it is proposed that provision of a creative-process model and a tailor-made software application for online collaborative creativity, for use within education settings and the broader professional art and design community, are both feasible and worthwhile. In addition, it is suggested that they are not only feasible and worthwhile, but also needed and increasingly demanded from stakeholders within both communities.

Researching online collaborative creativity

From surveys I conducted in 1998 with design students in Sydney, collaborative approaches to designing that were proving to be effective, appropriate and necessary ways of working for professional artists and designers appeared to echo the way the students wished to study.

In his discussion of design methods, prominent Welsh writer and designer, John Chris Jones, identified 'creative collaboration' as the main challenge since the introduction of computerisation in the design process, and that collaboration and joint decision-making processes can provide the main strength in new design methods. He defined designing collaboratively as 'the interaction of what everyone is noticing with what everyone is doing.' (Jones, 1991)

The progression of designing, from an individual activity described by Rand, to a far more collaborative process, described by Warwicker, particularly in disciplines of new media, visual communication and graphic design, created a 'notable market demand for online technical systems to support such interaction.' (Laiserin, 2000) Despite widespread implementation and promotion of a variety of online tools for generic interactive communication, no software had previously been available to conduct online collaboration specifically for visual arts practice.

In response, *Omnium's* research into *online collaborative creativity* was originally formed to investigate existing examples, propose new strategies, and evaluate the effectiveness of two central issues:

- An *online creative process model* that focused on exploring the generation of visual ideas and concepts - collaboratively, digitally and across distance via the Internet;
- A *web-based technical platform* that reflected the *online creative working process model*: providing an online user-interface with features that assist users in undertaking collaborative and creative work using the Internet as their classrooms or studios.

In the late 1990's, several leading professional new media design studios and collectives that promoted collaborative working approaches, such as *Antiform*,¹ *Futurefarmers*,² *AustralianINfront*,³ and in particular *Tomato*,⁴ were extremely influential, both practically and philosophically, in the original formation and structure of *Omnium*. I have always regarded an awareness of, and contact with, trends in both visual arts and design education and creative professional practice to be vital to the role of an educator, and also crucial in any attempt to narrow the dislocation I believed was apparent between the two contexts. As artist, designer and educator, I wished to help maintain a 'cycle of support' between the two interdependent domains (Bryce, 1996).

Despite numerous isolated examples of innovative and practical pedagogical projects that have taken place worldwide throughout the last decade, it is still difficult to find proposed working models or online technical platforms that are specifically aimed at assisting visual practitioners to work collaboratively through creative processes using the Internet. This deficiency hinders artists and designers who chose to work together and use information communication technologies to assist their collaboration when they do not physically reside in the same location or have the same time availabilities. *Omnium's* research since 1998 has attempted to address such a deficiency by proposing its own creative process (Figure 1) and software platform (Figure 2) as part of its overall research framework for online collaborative creativity. Both have been amended each time a project has been completed following formal evaluations and informal discussions about what is most needed and perceived to be useful. *Omnium's creative process model*, used within its projects that aim to promote online collaborative creativity, include five distinct stages: *Socialising/Orientation, Gathering, Identifying, Distilling/Abstracting, and Resolving/Reflection*.

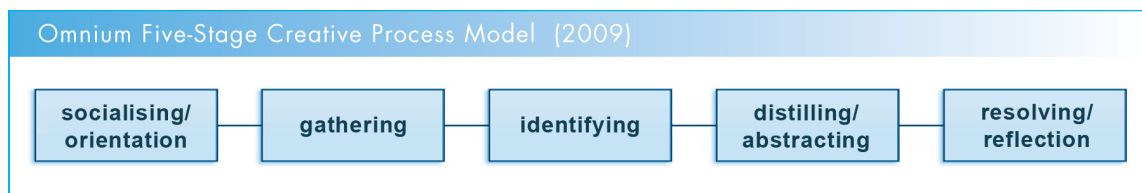


Figure 1 - Omnium's most recent five-stage creative process model for online collaborative creativity

Between 1999 and 2003, a series of developments of *Omnium's* technical platform also took place, although during this period they existed only as one-off instances built specifically for individual projects. It was not until 2004 that *Omnium* began developing a replicable and scalable technical code-base that now forms the foundation of its current 2011 software package - designed as a free download for educational or professional online collaborative creativity.

Since 2004, *Omnium* has produced three completely revised software versions each technically defined and differentiated by their underlying code-bases, as well as their visual appearance. In addition, various functional features within the software have been added, withdrawn, or revised. The reason for the ongoing redevelopment of *Omnium's* software over recent years was necessitated by increased availability and rapid changes in web-based technologies, and changes in the way people were increasingly becoming accustomed to online communities and social networks in other areas of their lives.

In 2007, *Omnium's* software platform was granted an Australian trademark and officially registered as a web-based software application for forming online social networks (especially for visual artists and designers) in educational and professional contexts. The *Omnium Software* operates as a powerful e-learning tool that not only facilitates online

¹ *Antiform* were an innovative collective of interactive new media designers in the UK between 1994 and 1998 who explored new ways of forming interactive content and presenting visual narrative for web and CDROM media. Co founder, Andy Polaine, was one of four professional special guests to join the first *Omnium* project in 1999.

² *FutureFarmers* are a group of graphic, interactive designers and programmers based in San Francisco. Their founder, Amy Franceschini, became a leading female design identity in the late 1990s and the collective of designers that she led began a movement of design concerned with environmental and ecological issues.

³ *AustralianINfront* were one of the first online social communities in 1997 of artists and designers and introduced a unique series of online interactions that saw designers work on each others digital files to produce collaborative graphic works in a series called 'Design Wars.'

⁴ *Tomato* formed in the early 1990s in London as an arts collective of video artists, furniture makers, musicians, graphic designers, and writers. Their work was of a conceptual nature and formed the basis of much graphic and typographical work worldwide throughout the late 1990s and into the new century.

interaction, discussion, collaboration and assessment, but also allows students and teachers to communicate with ease and transparency. In terms of its structure, *Omnium Software* is intuitive, simple to use and easy to navigate. Its features are divided into four main categories: *communal-features*, *individual-user features*, *team-features*, and *live-features*, with the majority (communal) accessible from any page of the user-interface. The secondary level features are accessed either through the user-lists (*Students* and *Teaching Staff*) or the *Team* areas where *Team Talk and Feedback*, *Team Notices*, *Team Pin-Up Walls* and *File Sharing* options can be selected. A full interactive tour of the software, including its user-interface and all features are accessible from the *Omnium Software* website.⁵

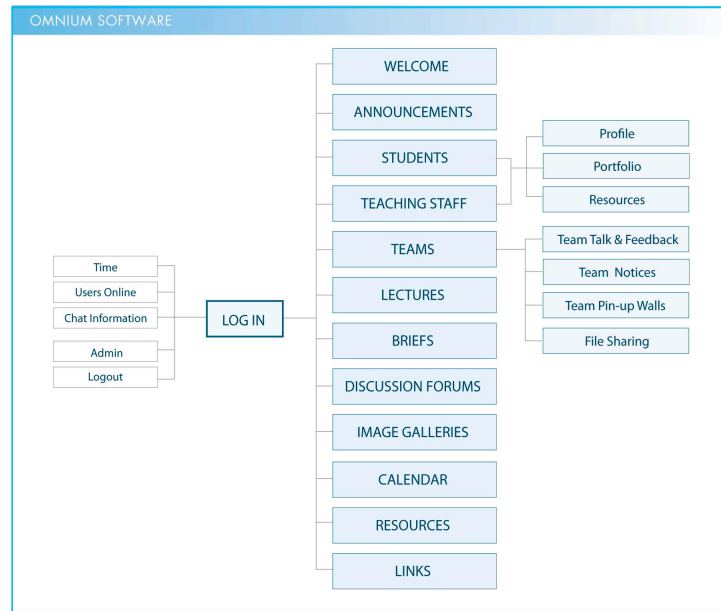


Figure 2 – Omnium Software structural site map showing ‘communal’, ‘individual user’, ‘team’, and ‘live’ features.

1999: *Om’nium virtual design studio [vds] ’99: a process dialogue*

In 1999, *Omnium’s* first global online art and design classroom/studio treated online collaboration in visual design practice, first and foremost, as a social interaction to explore future possibilities for studio education made possible by technological advances in Internet communication. The project aimed to provide a new methodology for online collaboration in graphic and visual communication, ultimately, aiming to be radical, alternative and innovative, and to promote a revised understanding of the design studio as an educational setting.

The *Om’nium: virtual design studio [vds]’99* project was one of the first and largest fully international, interactive and collaborative online global classrooms; especially within the visual arts (Bennett, 2000). The project involved 50 students from geographically distanced university art and design faculties who worked collaboratively for six weeks through a creative process to produce creative solutions using the Internet as their only communication tool.

The qualities that the Internet offered and would enhance the project included: the anonymous nature of its use, a fast and efficient method of communication, and an up-to-date and exciting place to explore new media. I believed that using the Internet to host the project would break down existing boundaries and restrictions that faced student designers - technically, socially, culturally and physically.

At the time, in 1999, design education was predominantly based on Bauhaus principles and methodologies. Much of the success of the Bauhaus’ workshops was due to collaboration between master craftsman and teacher. The *Om’nium: [vds] ’99* project adopted similar roles between academic staff, computer technicians/programmers, professional designers and students in which all four groups were vital players. There was no hierarchy between them.

Om’nium: [vds] ’99 not only challenged an online creative process but also tried to identify the kind of online learning environment that would best suit contemporary students, whilst at the same time drawing together elements of online collaborative creative practice that would best equip design students for future professional practice. The entire

⁵ *Omnium Software* website: <http://omnium.net.au/software/education>

Om'nium: [vds] '99 project focused on dialogue between participants within small working teams and the collective participants as a whole. As an investigation into developing a creative process for distanced individuals working collaboratively and solely online, some relevant considerations were recognised.

The following considerations were important as core aims of the *Om'nium: [vds] '99* project:

- to be purposely un-prescribed and un-predetermined
- to involve strong dialogue and interactive components
- to contain a cross-disciplinary approach to designing
- to encourage collaboration rather than individual competitiveness
- to be internationally, geographically and culturally diverse
- to include a blend between design education and professional practice

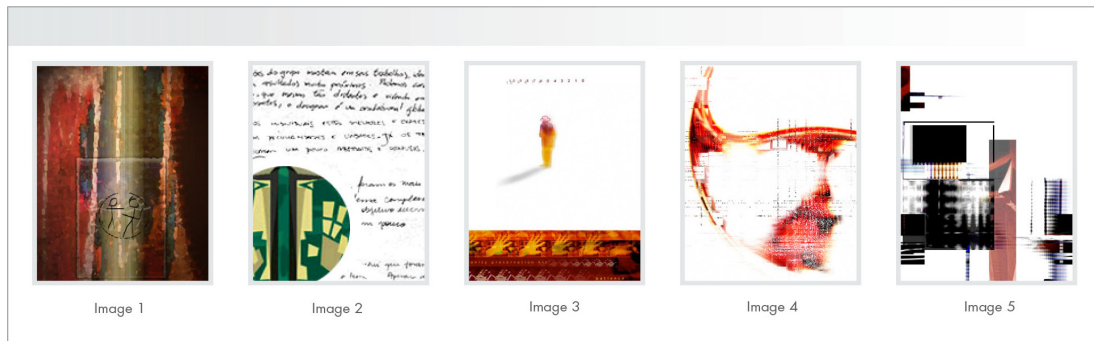


Table 1: Final artworks produced by files being exchanged between distanced individuals in small teams of five.

The results of the first *Omnium* global classroom/studio proved that more adventurous ways of educating students were possible and that it was certainly worthwhile to consider introducing aspects of the overall project experience into new ways of delivering visual arts and design courses and programs. Nevertheless, I understood that what had been achieved was only a pilot study. For instance, the project offered little course content in terms of associated readings or lectures, and the technical platform was custom built to only accommodate one small group of students. It was clear that far more research in this area needed to take place before educators could seriously offer such courses online as an accredited part of a degree or diploma program. Educators needed to further identify how students use the Internet as a communication tool and observe over an extended period of time their behavioral tendencies while collaborating with others in an online creative process. It was also apparent that educators should not simply import into an online context what was traditionally understood in terms of face-to-face methods of creative education.

As one student participant eloquently stated in written feedback following the project:

Omnium was the rock thrown into a stagnant pool. It was not just the rock that was important, but the ripples that continued after the project was completed.

2000 - 2005: *Omnium's* ongoing online global classrooms and studios

Following its first global design studio in 1999, *Omnium* produced a further series of fully online art and design studios over the next five years that progressed development of its online creative process model and technical platform. Each of the individual projects had specific content focus that would contribute to a better understanding of how best to offer global classrooms to hundreds of students, teachers and invited special guests worldwide.

2002 - *Graphics and Contemporary Society (GCS)*

The first Graphic and Contemporary Society project involved 32 undergraduate students, professional designers, marketing managers and educators who examined the role of graphic design in the production and consumption of social knowledge. The project was a free design course and attracted participants from South Africa, Hong Kong, Singapore, Germany, Venezuela, Canada, Puerto Rico and Australia. What was significant about this project in terms of development for *Omnium's* online studios was it was the first project to include specifically written course material to suit the online context and that 'unfolded' as the project progressed through its five-stage creative process.

Graphics and Contemporary Society (GCS) - 2002



2003 - Graphics and Contemporary Society (GCS)

As a progression from the first Graphic and Contemporary Society project, two more subsequent GCS projects took place in 2003 including adapted course that allowed them to become the first fully-online accredited art and design courses offered by the College of Fine Arts (COFA), UNSW. Online activities for students included individual as well as collaborative participation in discussion forums, individual and group feedback, and individual and group project submissions. Assessment tasks included individual and team-work to encourage group dialogue and collaborative development of ideas and concepts.

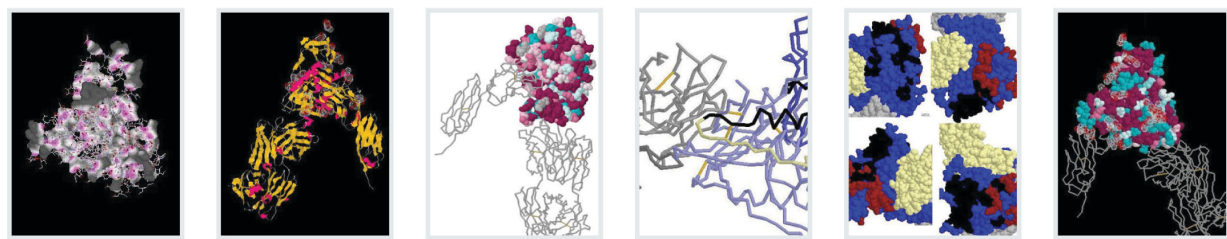
Graphics and Contemporary Society (GCS) - 2003



2003 - Visualising the Science of Genomics (VSG)

Also in 2003, *Omnium* was invited to 'host' a project called Visualising the Science of Genomics which saw international collaboration between students and professors from 24 Universities in 11 Countries. VSG was the first *Omnium* project to take place outside the field of art and design - in this case in scientific research. Teams of 5 undergraduate students, worked on a project to visualise HIV genomic sequence information. To date, most HIV genomics research had consisted of data patterns comprising numerals and letters that resembled computer code. However, technological advances in science fields had introduced software programs that would visualised the code patterns into three-dimensional images allowing identification of genomic sequences far easier. As *Omnium's* own technical platform was designed with a focus on communicating through images, the scientists ask to host their project using our technical platform. In addition, they sought advice on how best to structure a global research network to maximise the communication potential. A significant benefit from the project was that scientists were able to collaborate between research labs, in various locations worldwide, throughout the scientific process, as opposed to merely sharing knowledge after experimentation had finalised and was only shared through reports and conferences.

Visualising the Science of Genomics (VSG) - 2003



2005 - *Creative Waves: 0 Three > 0 Four > 0 Five*

In 2005, *Omnium* designed, produced and hosted *Creative Waves: 0 Three > 0 Four > 0 Five*, a major online collaboration produced on behalf of the International Council of Graphic Design Associations (Icograda) for their worldwide education network (IEN). *Creative Waves* was the first in a series of Icograda online design projects for students located anywhere in the world, studying or interested in graphic design, photomedia and visual communication. Over a seven-week period throughout March and April 2005 (03/04/05), *Creative Waves* formed the largest multi-cultural community of student designers ever to work together in a totally online context. Again, participants were organized into small working teams (where no two team members were located in the same city or country) and they progressed from initially taking photographic images, through to using the images they had taken to develop into interesting conceptual graphic designs. The project included special guests (renown photographers and graphic designers) to help the students in their teams, as well as educators and professionals who acted as mentors.



2006 - 2010: *Omnium's* online global outreach projects aiding less fortunate creative communities

In 2002, I was invited to chair a final-day discussion session between keynote speakers at the third and final *IdN Fresh Conference* in Singapore.⁶ My ongoing involvement within the professional new media industry meant I was well connected to some of the leading designers and design companies worldwide. I had been chosen to chair the session because of my knowledge of the industry. The timing of the conference was important, as it coincided with significant global events such as: the worldwide dot.com share crash in 2000; computer technologies and software programs associated with the Internet becoming more mainstream and widely available and used; and humanitarian disasters such as the 9/11 attacks on the World Trade Centre and Pentagon in 2001. The Singapore event was fascinating in that the tone, nature and content of the presenters had changed from the previous two conferences.

The most notable change was that several speakers were seriously questioning the role of contemporary designers, and in particular a talk presented by renown English graphic designer, Neville Brody, led me to personally challenge the way I viewed my own creative practice and research through *Omnium*. Brody acknowledged the rapid growth in computing technologies and skills, yet raised the question of *who* we should be designing for and *why*?

"... This is actually quite a difficult time in design ... There are a lot of highly-skilled, highly professional designers out there. But, so many people are caught up with the 'what' or 'how' of what they're doing ... not many are asking 'why'?" (Brody, 2002)

I was particularly reminded of Brody's questions having finished the *Creative Waves* project in 2005. The project had been widely publicised and reported through written papers and conference presentations (Bennett & Dziekan, 2005) and received highly favourable feedback and recognition. However, despite the creative process and visual outcomes being exciting and provocative, particularly as they had been collaboratively produced between distanced individuals worldwide, I was concerned personally that the outcomes had little purpose beyond being interestingly produced graphic artworks.

In addition, I was concerned that within education projects in art and design schools worldwide, often students were asked to spend large amounts of time producing hypothetical projects that, apart from being available for coursework assessment, often had no real purpose or impact on real-life scenarios. It occurred to me that this was a somewhat

⁶ *IdN Fresh Conferences* - Over a period of eighteen months between, 2001 and 2002, three *Fresh Conferences* were produced and hosted by *IdN Magazine* (International designers Network) in Hong Kong, Sydney and Singapore. Each attracted a predominantly young student and professional audience of over 3000 people.

waste of effort and time on behalf of both students and educators and perhaps the amount of time given by both to such projects could be directed to more worthwhile causes.

In 2006, I established a new arm of *Omnium's* research called *Omnium Outreach Projects*.⁷ The aim of the new area was to begin running global online projects between artists and designers who wanted to contribute their time to work on sustainable creative projects that could help less fortunate communities in a variety of countries. *Omnium's* creative outreach projects are funded from profits of commercial design projects created in the *Omnium Design Studio* and from sales of *Omnium Software* licenses.

Ongoing outreach projects would benefit from adopting the same working process and participant structure that had been modified following each of *Omnium's* earlier global online studios, as well as using the technical framework that by this stage was a flexible and scalable software package. The remaining pages of this paper describe some of the *Omnium Outreach Projects* that have taken place as online collaborative creative projects since 2007.

2007 - *Creative Waves: Visualising Issues in Pharmacy (Kenya)*

Omnium's second international *Creative Waves* venture, subtitled: *Visualising Issues in Pharmacy (VIP)* was designed as a creative outreach project to further explore online collaborative creativity by implementing *Omnium's* two-part research framework (online creative process and online technical system). It progressed the first *Creative Waves* project in three ways:

1. The online studio was of a much larger scale in terms of both participant numbers and the timeframe of activities (14 weeks).
2. The project focused the work of its participants on a real-life brief that sought to aid a rural, very low-income community/village called Winam in Kenya, Africa.
3. The project was a cross-disciplinary venture divided into two distinct phases: Pharmacy (health science research) and Art and Design (creativity).

The venture was a three-month international project, hosted during March, April and May, 2007. In total, it linked over 200 students, educators, teachers, special (VIP) guests from 30 countries⁸, as well as local community representatives from Kenya, in a completely online learning environment that focused on the research and design of visual public awareness campaigns addressing six critical health concerns to help rural villagers in Winam, Kenya.⁹

The aims of the project were to:

- Examine the *VIP* curriculum design, which used collaborative learning to engage participants in the voluntary project.
- Analyse how an interactive communication technology (*Omnium® Software*) facilitated sustained research, dialogue, negotiation and visual collaboration through a variety of interactive features, including both synchronous and asynchronous discussions.
- Assess the significance of teamwork and collaboration within and across disciplines.
- Evaluate the design outcomes of the *VIP* project and gauge the value of the lessons learnt from this multidisciplinary online learning initiative.
- Document the results of student questionnaires and their qualitative feedback throughout the project.
- Assess limitations of online learning environments innovations to transcend boundaries of time, language, culture and disciplines and encourage new approaches to higher education.

The three-month *Creative Waves: VIP* project was structured in two distinct phases:

⁷ *Omnium Outreach Projects* website: <http://www.omnium.net.au/oop>

⁸ Countries represented by participants in the *VIP* project were: Brazil, Finland, Italy, USA, China, Philippines, Bosnia, Russia, India, USA, Kenya, Australia, New Zealand, Ethiopia, Pakistan, Sweden, England, Iran, Indonesia, Singapore, Uganda, South Africa, Peru, Canada, Germany, Mexico, Greece, Scotland, Taiwan, Hong Kong.

⁹ The *Creative Waves VIP* project was produced and convened by *Omnium* in collaboration with Dr Nataly Martini, a full-time Senior Lecturer from the University of Auckland, New Zealand. The project was a joint research venture between the UoA's School of Pharmacy and the *Omnium Research Group* based at the College of Fine Arts (COFA) at the University of New South Wales (UNSW).

Phase One (research): International pharmacy students divided into small research teams of five people to collaborate over a seven-week period to investigate their team's *assigned health issue* (AHI) and develop a detailed research report about one of the six health issue topics.

Phase Two (design): International design students also divided into small creative teams to develop the research reports produced in phase one (acting as design briefs) into a series of visual public awareness campaigns relating to the six health issues.

The two phases overlapped by two weeks allowing students to interact with each other to discuss the final research reports (produced by the pharmacy students) and to clarify relevant issues that were deemed necessary to know before proceeding to the design phase (design students).

By the conclusion of the entire project, students presented three impressive solutions to the project brief; *soccer uniforms* that promoted awareness of the dangers of HIV, *information stickers* with messages about adherence to medication and helping family members who were ill, etc, and an *educational game* that aimed to help children better understand aspects of malaria and prevention of the illness.

Following final design submissions from the student teams, working files were downloaded and prepared for production at *Omnium's* Sydney studio. It soon became clear that there was still a great deal of work to be done to take the final designs to a state where they were ready for production techniques. The final designs submitted through the *VIP* project were reworked in discussion with manufacturers and as a result, in 2008, the three design projects were finally completed, produced, and sent to aid workers for distribution in the village of Winam, Kenya.

Creative Waves 2007: Visualising Issues in Pharmacy [VIP]



2008 – [re]frame Manila (Philippines)

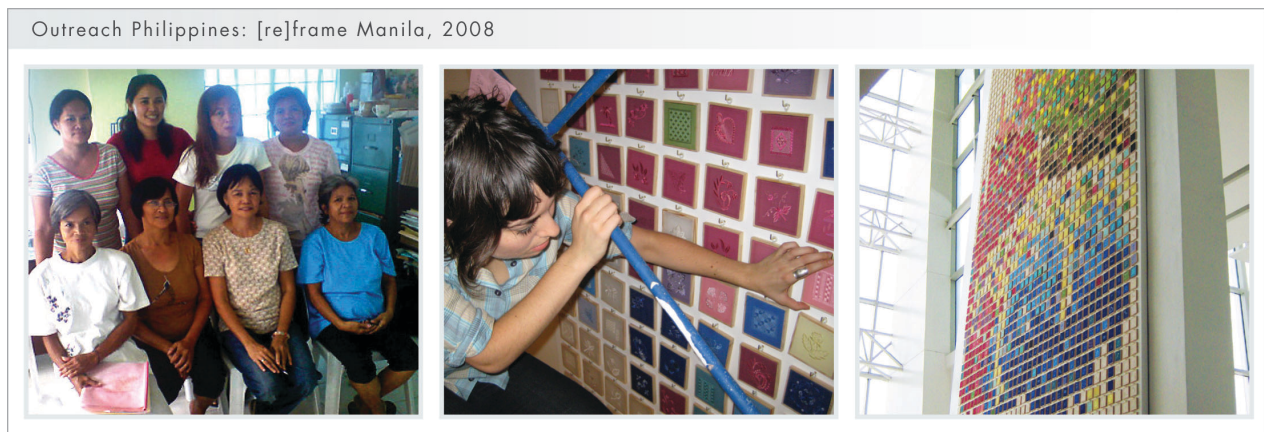
In 2008, *Omnium* began looking for a project to assist a less fortunate community in the Philippines and formed a collaboration with the De La Salle - College of Saint Benilde in central Manila. The university college includes a School of Design and Arts which itself houses a Social Action Office. One of the aims of the of the SAO is to integrate the School's curricula with communities in need which they do through art and design projects, as well as micro-financing ventures. Through DLS-CSB University, I was introduced to a group of women embroiderers from the province of Laguna (about 4 hours drive south-east of metro-Manila). After meeting the women and their families, and touring the area where they lived and worked, I formed a partnership to conceive and work on an outreach project between the university, the women embroiderers from Laguna, and the *Omnium* research group in Sydney.

In terms of an online collaborative education initiative, project participation was more localised than the previous *Creative Waves* projects. Groups of students from the College of Fine Arts (COFA), in Sydney, connected via the Internet with students from DLS-CSB School of Design and Arts, in Manila, and representatives from the women's embroidery group in Laguna province. Compared to earlier *Omnium* projects, the *[re]frame Manila* initiative involved a substantial face-to-face component. *Omnium* staff made trips to work with the women in a series of workshops to produce the final work, as well as help with business strategies to make the group more sustainable.

While specifically aiming to assist the local collective of women embroiderers, the *[re]frame Manila* project also hoped to help open up new commercial opportunities and sustainable business practice for the local artisans, while staying true to their traditions, culture and heritage. The final design for the project focused on the detail and intricate nature of traditional and cultural Filipino embroidery techniques, by framing off small sections of the work and placing them in an entirely new contemporary context.

It was important that, on the one hand, the women's group were offered a new project that they would feel both comfortable to embrace in terms of a willingness to change and feel the project was worthwhile to them, whilst on the other, they were not asked to change the traditional ways they worked or make changes to the way they produced their unique embroidery skills. It was soon apparent that whilst having amazing talents for embroidery, they were not designers, which made the face-to-face workshop components of the project essential.

The outcome of the *[re]frame Manila* project was a large wall installation (4.8 m x 11 m) comprising over 2500 individually framed embroidery pieces that was installed as a permanent artwork in the foyer of DLS-CSB's university in Manila. The project was a large-scale collaboration and provided many months of employment for over 60 embroiderers and woodworkers in the province, at a time when work was scarce and difficult to attract.



When undertaking real-life outreach projects, the added complexity compared to a hypothetical educational project is the fact that you are dealing with real people who have real expectations and hopes. Of course, there are financial hopes that the recipients will aspire to, however, what was most evident, and subsequently learnt from undertaking and completing the *[re]frame Manila* project was the 'respect' value that they gained from the efforts of their work. The Filipino women embroiderers most definitely found the broader recognition of their talents to be the most significant aspect of taking part in the collaboration and made the entire venture significantly worthwhile. They were no longer faceless individuals who worked so hard to produce products to be sold overseas with no recognition to them as individuals or a community.

2009 – *Creative Waves: Triune* (Uganda)

The third *Creative Waves* project - *Triune* - was designed to raise public awareness of three health-related concerns identified as debilitating public health in rural villages in Uganda: waterborne diseases/diarrhoea, malaria, and HIV/AIDS. The problem often faced by health workers in these areas was a disagreement between suggested treatments and approaches to raising awareness of the concerns from traditional healers, medical practitioners, and church leaders.

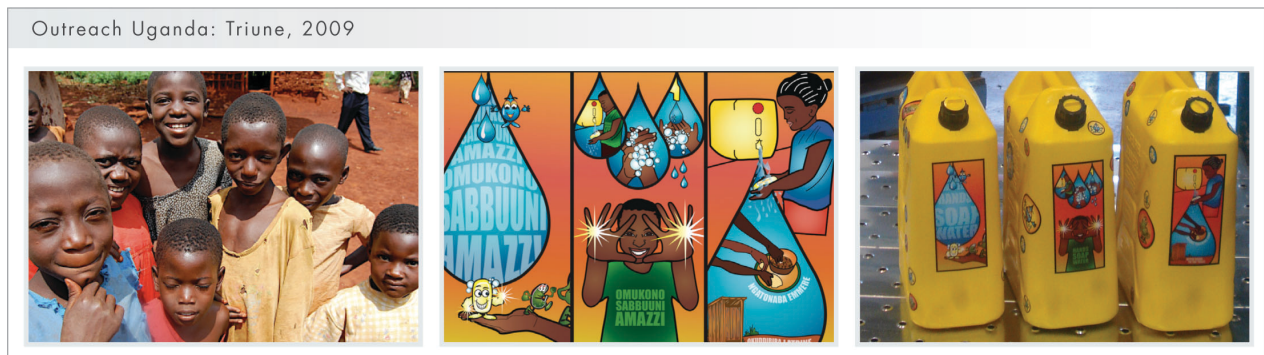
The project aimed to emphasise the importance of collaboration amongst allied health disciplines for the health and welfare of social communities in the developing world. This unique and innovative approach to collaborative education, research and ethical debate also aimed to promote increased social awareness and proactive involvement worldwide amongst students, teachers, health professionals, professional bodies and education institutions.

Triune was the first international fully online education initiative designed to link students, teachers and professionals from health science disciplines globally with rural village communities in Uganda. The project challenged a diverse, international body of students, educators and professionals - from the fields of medicine, nursing, pharmacy, sociology and anthropology - to address important global health issues through the production of written reports and creation of subsequent visual health messages for people from rural villages in Uganda.

The online project took place over a seven-week period, in April and May, 2009, linking approximately 50 students with teachers and health professionals around the world. Using *Omnium's* online studio software interface, participants interacted in small working teams of six (all students in each team from different locations and disciplines) to respond to commonly identified problems. By offering the *Triune* project to students and staff of universities across the world, the project realised the World Health Organisation's (WHO) global initiatives for 'Working Together for Health'.

The prospect of producing, coordinating and facilitating such a project not only allowed health science students and professionals from around the world to find resourceful ways to assist communities in need, but also to develop an association between other disciplines and methods of treatment. To date, no other initiative has taken place over distance and added to the complexity and interest of this venture. The *Triune* project created an opportunity that could not have been achieved operating independently, or through traditional alliances, and added to the philosophical aims for collaboration between education institutions.

Through the establishment of a collaborative learning community, Triune addressed: internationalisation of student and staff experiences, written communication through the cultural exchange of ideas and concepts, the notion of individual versus collaborative learning processes, a cross-disciplinary approach to express shared visions, the online classroom as a viable and effective model for collaborative participation, and global health initiatives of various non-governmental organisations (NGOs) and the aim to raise the profile of these organisations in developing countries.



The final graphic works derived from the reports produced by student groups throughout the *Triune* project encompassed the collaborative efforts of diverse cultures and origins across time, distance and disciplines in a highly cross-disciplinary manner. Participants formed valuable connections with colleagues in distant parts of the world, receiving regular feedback and support from peers, teachers and established professionals, using the Internet as their sole communication tool.

2010 – *Dasmanila* (Philippines)

In 2010, Omnium Outreach Projects returned to the Philippines to begin a new creative venture, again in collaboration with the School of Design and Arts (DLS-CSB) in Manila, and also with a second Filipino college, De La Salle University – Dasmariñas.

Dasmariñas (known locally as Dasma) is an area approximately two hours drive south of metro Manila in the province of Cavite. It is home to a group of women artisans who hand-weave a variety of bags and purses made from recycled food packaging that has been discarded as rubbish. The context and situation of the ‘Dasma’ women is very similar to the women embroiderers from Laguna province who worked for over a year on the *[re]frame Manila* project in 2008. The women live locally to each other and share their time outside their household and family duties to try and earn a little extra income to support their husbands and children. Despite their woven bags being moderately well known in the Philippines, they receive barely enough money to cover the costs of production and orders are often so limited that they do not provide much income for them to exist as a viable working group.

Omnium was keen to establish a creative outreach project to assist the welfare of the Dasma women and began forming some ideas to use their skills in hand-weaving recycled rubbish to form another large art installation within the city of Manila. The *Dasmanila* project became an extension of the first Filipino outreach project through its structure of online collaborations between students in Australia and the Philippines, in combination with face to face production workshops with the women weavers from Dasmariñas.

Despite the previous *[re]frame Manila* project achieving most of its goals and being received exceptionally well, my own feeling was that it failed on one important level. For such a wonderful art installation, it seemed a shame that it was situated *inside* a building, and therefore only viewable by a small and select audience. I wanted to design and help produce something of similar scale that was available to the broader Filipino public. Therefore the drive behind the *Dasmanila* project was to produce an art installation that would be high profile in terms of its audience, and in turn give greater exposure and recognition to the women weavers of Dasmariñas.

It was students working in collaboration that came up with the concept for the project; raising awareness of the issues of pollution, recycling and restoring heritage. The project questioned the naming of the city of Manila by asking its audience if they knew how Manila originally acquired its name? Manila derives from two Tagalog (national Filipino language) words - 'may-nila' - a translation meaning 'there are (nilad) flowers'. The city was named after the Nilad plant, a beautiful white flowering mangrove that originally adorned the city's waterways. The concept behind the *Dasmanila* project was to have the Dasma women weave hundreds of symbolic white flowers using the very rubbish that today pollutes the city and its waterways. In essence the installation aimed to bring the flowers back to the city.

Outreach Philippines: Dasmanila, 2010



The final art installation, comprising over 700 woven flowers produced by the weavers from Dasmariñas, was exhibited for 2 months in one of the most prestigious public areas in Makati, the business district of Manila. Thousands of people have seen and interacted with the installation outside the Ayala Museum and had their awareness raised about issues of local conservation, heritage, pollution and environmental concerns. The exhibition gained so much attention that in 2011 the installation has been invited to appear in Australia as a central exhibit in the 'Autumn of Arts Festival' at the Royal Botanic Gardens Sydney. Such large-scale public access to the project has in turn raised the profile of the women and helped sales of their more traditional woven bags and purses, also made from discarded packaging rubbish.

Concluding remarks

This paper has intended to illustrate the potential strength of collaboration within education; collaboration that is made increasingly possible and exciting through appropriate and innovative uses of computing technologies. In the examples offered, I have used collaboration in visual arts and design education as an approach to emulate successful new working practices apparent in professional creative industries. The online projects described used collaboration through technology, not to save time, but to make time more effective and worthwhile. The fact that collaborative learning is argued by many as being too difficult to assess is not a good enough reason not to explore its potential and construct innovative and effective ways of identifying individual contributions that are made within a group.

Importantly, the project examples seek to propose models and methodologies that help interaction between teacher, learner and technology. As Warwicker described, technology adds a complexity to more traditional methods of doing things, however, such complexity should not be viewed negatively, but it creates a situation that needs understanding and navigation to achieve added value. This point is reinforced in *Toothpicks & Logos*, a book that offers a wonderful account of the creative process. Its author states 'rapid development in computers and information technology are not only creating exciting new possibilities in interactive design, but also transforming the ways in which products and services are conceived and produced, in ways that supplement, rather than replace, the old (Heskett, 2002).

In terms of international education through collaboration, questions that Brody asked us to ponder are perhaps more akin to Warwicker's views than those of Rand, however, his were made before the introduction of personal computers and the Internet. I suggest that the embroiderers and weavers in the Philippines, the health workers in Uganda, and the school children in Kenya would be encouraging us to find even more innovative ways to use computers for collaboration and teach in ways that can impact positively on local communities that exist way beyond the walls of our own schools and colleges.

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