Wholearth Media

Behind the shadow play: Ten years on but what has changed?

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Abstract

This paper is reflective of the decline in specialist (Art/Design) teacher education and the lack of initiative in developing a digital rationale within the UK Art and Design curriculum. According to the range of sampling afforded by the authors evolving roles [1] little appears to have changed in art and design since the reported findings shared with the World Congress in 2002. [2] New online tools have emerged in accessible forms and provide participatory and collaborative gateways. While the related research in this field indicates that there has been a paradigm shift to the 'social dimension', ('Social Networks', 'Learning Platforms', 'Timebased Media') few art teachers translate these resources in an educational context. The views and opinions expressed in this article are personal, but they reflect a genuine concern for a lack of vision in art education (UK), as it continues to follow, rather than lead on creative initiatives.

Introduction

Ten years ago Pete Worrall (UK), Jukka Orava (Finland), Lucia Pimentel (Brazil) and Tom Davies (UK) presented personal and shared views on the emerging tidal wave of change driven by new technology. We tried to indicate innovative ways of exploring visual and conceptual ideas through 'on-line' tools. The potential for sharing content, storage, retrieval and the exploration of the inter-cultural dimension were sampled through a live link to a website designed for this particular conference. This 'live link' presented particular challenges for the organisers as the access requirements were unusual at such events. Ten years on, this form of presentation is no longer new, as improved broadband access has impacted on educational institutions. In addition, investment in education has secured many outcomes in terms of hardware enabling new teaching and learning opportunities. We followed the changes in ground breaking technology over this time and attempted to find evidence of its use in art education. Maintaining contact with various societies and associations we were confident that, on a modest scale, we were able to monitor relative change.

Our research interests ranged across three broad headings;

I. How best can we establish a virtual art environment?

II. What type of research initiatives would best support this?

III. And most importantly - Is art education in the UK up to the challenge?

Approaching the tenth year anniversary of our contribution to the invited seminars programme it seemed appropriate to ask, what has changed in art education over the intervening period and does our vision have any connection with the reality of teaching and learning in art education in the UK? [3] What we presented and discussed were the benefits and questions that flowed from a global collaborations. What, we asked, were the common assumptions made about value/purpose and how may they be supported by the current and

emerging electronic tools? We knew at the time that these technologies facilitated discourse, and the sharing of educational intentions and outcomes. What we envisaged was 'action research' that would proliferate, empower and broaden practice in art education albeit in a climate of reductionism and fragmentation. Over this period there has been a general demise of the support systems that nurtured policies of innovation and challenge within the subject area. It is worth noting that the National Society for Education in Art and Design (NSEAD) has more recently expressed concern related to this decline in support and the presidential address in 2011 was particularly cogent. [4] Over the past ten years the researchers' role in the process of change has broadened and contributed greatly to the critical framework, but what has really changed for the majority of pupils/students undertaking study in art education?

Figure 1: Wholearthmediamatrix Website New York 2002

Overarching, it would appear that despite increased research activity little seems to have trickled through to change practices and much of so-called 'school art' remains disappointingly static and predictable in aspiration and appearance due to the interpretation of the national curriculum, its culture and exemplars. Few in educational decision making refer to the past as a foundation for the development of future strategies and research can often seem theoretically detached from the pragmatic solutions that determine strategies and outcomes in classroom studios (Art/Design Curriculum 11-18 years). In some aspects of curriculum development, we are simply not learning from the past in terms of the subject's contribution to self expression, expressive intent, design sensibilities, memory, reflection and realities.

In teacher education the particular history of the discipline, its philosophy, sociology and pedagogical rationales have almost disappeared in favour of more generic competence and 'league table' driven statistical evidence. [5] Once, it may be argued, teaching had some grounding in the distinctive features of the particular subject knowledge as a possible catalyst for inspirational teaching and learning. While accepting generic principles, the professional perception of the subject discipline was that it contributed something inherently different, complementary and challengingly beneficial for pupils learning. In this current climate Art and Design teaching appears to have lost its momentum. Current

government policy often seems bereft of theoretical reflection and reduces the role of teaching still further into the procedures of 'doing' rather than questioning assumptions, orthodoxies and making creative links between bodies of knowledge and experience, which are unashamedly different.

Establishing the Virtual Art Environment

Tom Davies and Pete Worrall developed the use of ICT in Art and Design from 1992, however our contextual background to integrating the 'virtual dimension' in an art education context began in 1997 with the 'Electric Studio' programme for Postgraduate Teacher Training at the University of Central England (now Birmingham City University-BCU). These particular 'curriculum workshops' related to planned school practice from 1997 until 2004. The core content of the workshops included technological histories, Art and Information and Communications Technology (ICT) practice, exploring the interface between old and new media and the contribution of ICT to visual conceptual development in the arts. Curriculum development models and teacher trainees' proposals for the structure of the Art and Design curriculum incorporating the use of ICT were translated into schemes of work specifically related the 11-18 age groups. [6]

In 2000 trainees contributed curriculum workshop coursework, produced in the Electric Studio workshop, for the international online project 'Culture Box' using the European Schoolnet Virtual School Art department portal. [7] One year later the Behind the Screen project used a custom built website designed in the UK and Finland to showcase coursework produced by students from Bela Artes in Brazil, UIAH in Finland and UCE in UK. [8] The final Electric Studio programmes explored design briefs relating to 3D Structures and Identity 2002, Museums and Art, 2003 and Science and Technology, 2004. [9] The 8 year research programme 1997-2004 comprises of 15,314 data files including video, animations and presentations produced by 743 postgraduate trainee Art and Design students.

The authors understanding of virtual learning was further enhanced through membership of the European Schoolnet Virtual School Art Department coordinated by Jukka Orava between 1999 until 2005. During this time a key strategy was to develop collaborative new pedagogical models, through inter-cultural projects using online tools and environments. Projects included Culture Box, Art Inspiration, Visible and Invisible in Contemporary Art, Art and War and the Olympic Project. Members of Virtual School Art Department designed and managed the projects through NetMeeting (video conferencing) and European funding enabled web based training and evaluation meetings in Europe and UK. The final report Virtuaalikoulun taidekasvatuksen luokka, "Virtual School Art Department" 2006 focused on issues related to online pedagogy virtuality, inter-global collaboration and communication. [10]

One of the most pervasive changes in contemporary society is the development of mobile technologies and social networks. In the public and educational sphere Web 2.0 encapsulated a rethinking and reinvention of how the web may be used. Social networks incorporate video, image archives, 'rss feeds', 'instant messaging', 'podcasts and blogs' and user generated content. Here the emphasis is on participation and collaboration through interaction and some aspects of social networking has become a lifestyle (smartphones) and

the distant learning potential has great promise for professional requirements (journalist bloggers, curator bloggers, video bloggers) [11]

In November 2005 the Department for Education and Skills (DFES), announced a programme to introduce learning platforms to schools in England and the British Educational Communications and Technology Agency (Becta) was asked to provide the framework for procurement. The functional requirements of a learning platform included blogs, eportfolios, audio and video conferencing, messaging, email, knowledge construction tools (wikis), discussion forums, uploading content objects. [12] The school uptake in the UK began in 2006 and was supported through the Harnessing Technology Fund. [13] Learning Platform Companies were endorsed as providers to schools in England through Becta [14] and Pete Worrall was involved in the initial Local Education Authority (LEA) roll-out working for the company UniServity as educational support, to offer consultancy, professional development and project management. Learning Platforms evolved through regular upgrade releases that conformed to the DFES and Becta technical requirements (i.e. integration with Sims, parent's portal). A personal evaluation indicated that the most important component of the VLE was the 'pupil eportfolio' and this material may be sampled. [15]

Figure 2: Media Time-Frame

1999 Electric Studio **Publication** (Post Graduate Students)	2000 Cultural Identity, Digital Media and Art Education **Publication** Brazil, Finland and Portugal	2002 Towards the Development of Electronic Learning and Online Tools **Paper**
2002 International Conversations through Art – New York **Website**	2003 A Critical Context: Art and Design Education on the Edge **Publication**	2003 Media Literacy and Perceptions of Schools **Paper**
2006 Virtual School Art Department **Publication**	2007 The Online Learning Platform and Art Education **Paper**	2010 Creative Use of Media – Online Course - Europe **Paper**

A Learning Platform enables schools to inter-connect locally nationally and internationally and embed a range of audio, visual, multimedia Web 2.0 resources on web pages for collaborative knowledge construction. Thomas Tallis School, a specialist art college, has created a dynamic interactive social network of sites for their student community. They employ linked social media sites including Flickr (image gallery) Issuu (online publishing) and Tumblr (blog) to create a structured 'network of networks' from the school website and learning platform. They also include Creative Learning Web Resources [16] and a Creative Manifesto written by students that challenges current art education orthodoxies. More

recently they have designed an app for the iphone, ipod touch and android devices that provides a conduit to the latest feeds related to the school community and a blog including the 'creativetallis' photostream. [17]

The international papers, below, develop an evolving 'social' rationale' for the emerging technologies and new methodological approaches, designed to challenge current orthodoxies regarding traditional methods, new media and electronic communications practices.

Further works

1. Orava, J. / Worrall, P. (2005) The Digital Derive and Art Education, Seminar Paper, UIAH Helsinki.

2. Orava, J./ Worrall, P. (2005) ICT Futures – Personal Interfaces, Intermedia Practice and the Culture of Communication. Lifelong Elearning Bringing e-learning close to lifelong learning and working life: a new period of uptake. Eden Annual Conference Publication. www.eden-online.org

3. Worrall, P. (2005) Neothemi, ICT and Communicating Cultures, Edited by Claudia Saccone, Art Museums and ICT: The Future, University of Molise, Campobasso.

http://www.neothemi.net/publications/campobasso.pdf

4.Worrall, P (2009) The Online Learning Platform and Art Education, Insea, Heidelberg.

Publication - Horizonte Internationale Kunstpadagogic, Carl-Peter Buschule, Joachim Kettel Athena.

5. Czegledy, N. Reimann, D (2010) Topic: Towards a new concept of arts education. Key themes - Workshops / Intercultural Collaboration / Media Arts / Media Art Science and Technology – interdisciplinary approaches / hybrid methodology / Practice based / Media Labs. KMDI, University of Toronto, Concordia University, Montreal, Canada.

6. Orava, J. /Worrall, P (2010) Intermedia Dialogues - 3 Scripts for Imaginary Conversations on a Frozen Lake, Unpublished Paper, Insea, Lapland.

Supporting the quality of specialist teacher education

As the former Head of Art and Design Education in Birmingham and Course Director for specialist teacher education Tom Davies made a personal study of changes in specialist teacher education over a ten year period (1990- 2000) with this forming part of his PhD research. With his colleagues he systematically recorded the work of ten cohorts of postgraduate teacher trainees. The material was made interesting as this particular course was distinctive in that it was the only provision for specialist 11-18 teacher training located in a purpose built School of Art (not a department or faculty of education). It was the largest with a target intake of 91 trainees in each year and the range of schools in this large conurbation of the UK's second city gave the work some gravitas as patterns, if found, could be seen as having relevance beyond this particular course. Unfortunately this research was hampered by increasing responsibilities and staff reduction in those years so the publication of the major research was postponed. The work, however, had significance both in terms of mapping changing practice and charting appropriate ICT developments within the regional art departments. [18]

The School of Art, Margaret Street, Birmingham has been associated with changing forms of specialist teacher education since the 1970's. Indeed earlier models of teacher preparation can be identified at the School of Art from early in the century. [19] As one of the last providers based in a subject specific context (Undergraduate/Postgraduate Fine Art Practice) its unfortunate relocation occurred in 2004 when it was absorbed into the university's generic provision for teacher training and the notion of expanding subject knowledge through specialist workshops was reduced as a major focus. Here the drastic reduction in a 'subject focus' for specialist training was offset by a greater emphasis on the commonality of teaching methodology and the shared generic values. Arguably, teacher preparation for artists, designers and crafts workers wishing to train as teachers for secondary schools (11-18 age group) need more than just the pedagogical component as the subject knowledge secured through an initial degree course is insufficient for the task. In the context of Art and Design there are innumerable degree specialist courses with each becoming more narrowly specific over the usual period of a three year course. The rationale for earlier forms of specialist teacher training attempted to sensitively expand 'subject knowledge' through initiatives such as 'curriculum workshop practice', intercultural exchanges and European projects which provided a catalyst for new thinking. [20] The accompanying debate attempted to further broaden definitions of art practice and build the critical/contextual element as a prerequisite for understanding and shaping studio practice within secondary schools (11-18 years). The impracticality of simply using the BA specialism as the core subject knowledge required either a complete re-think (unlikely in Government lead priorities) or a re-focus on what constitutes knowing in art and design (subject teachers continuing professional development). Failure to do either would run the risk of perpetuating what already existed as content within the school (established teaching plans, materials experiences and reusable templates) or worst still, dismantling this specialist subject knowledge. Teaching, we have argued in many papers requires a passion and a personal rationale. Teaching is more than the sum of its parts.

In most of the changes over the last two decades there has been a general tendency to follow rather than lead. While it would be true to say that art and design is developing its research culture, albeit much later than other subject disciplines elements of the work, the interplay of theory and practice needs to be identified at school level to support and maintain genuine arts experiences over activities that are amenable to a testing culture. Advocacy and compliance have been reoccurring themes in Tom Davies's work and sample references include:

Further works

1. Davies, T (1992) Testing, Testing … A, B, C. A Critical Appraisal of GCSE Art and Design. Journal of Art and Design Education (JADE) Volume 11, Number 1, pages 61-75, National Society for Education in Art and Design (NSEAD) UK.

2. Davies, T and Hughes, A. (1993) Talking in Class. ARTicle Press, Birmingham Institute of Art and Design (BIAD). UK.

3. Davies, T (1995) Playing the System. Cascade Publications, BIAD, UK

4. Davies, T (1998) Competence and Creativity: The Politics of Art Education. Cascade Publications, BIAD, UK.

5. Davies, T (2000) Postgraduate Teacher Education: Wising Up or Dumbing Down? (JADE) Volume 13, Number 3, pages 332- 342, National Society for Education in Art and Design (NSEAD) UK.

6. Davies, T , Pimentel, L and Worrall, P (2000) Cultural Identity, Digital Media and Art, Cascade Publications, BIAD, UK

7. Davies,T (2002) Drawing on the Past: Reflecting on the Future. (JADE) Special Issue. Pages 284- 291, National Society for Education in Art and Design (NSEAD) UK.

8. Davies, T (2004) Changing Schools of Thought: Back to the Future. www.manchesteruniversitypress.co.uk?uploads/docs/710009.pdf

Since 1992 the development of ICT in Art and Design has been a major interest for the authors of this paper as it provided a means of promoting change in art education and addressing the shared concerns for linking the school experience to contemporary practice in the visual arts. This contribution is again well documented as part of joint research, as it remains relevant to teacher education. Additionally, Jukka Orava, Aalto University, Helsinki, has made a major contribution to the notion of 'International Virtual Teacher Training' and his related papers place emphasis on the 'Creative Use of Media', the emerging information society and epedagogy in the Arts. Here the issues related to online management are offset by the benefits and challenges of the cultural context. The following publications chart developments in this area but a more comprehensive listing is provided at the end of this paper. (See Appendix)

Further works

1. Davies, Pete Worrall, P (1997) IT Works in Schools. Cascade Publications, Birmingham, UK

2. Davies, Pete Worrall, P (1999) Electric Studio, New Practice in ICT Art and Design. Anglia Multimedia publications. Granada Learning, London.

3. Davies, Pete Worrall, P (2000) Cultural Identity Digital Media and Art Education. Cascade Publications.

4. Davies,T. Forrest, E. Worrall, P (2003) A Critical Context: Art and Design Education on the Edge. Cascade Publications

5. Worrall, P and Mathieson, K (2003) Art though IT. Folens Publications, London.
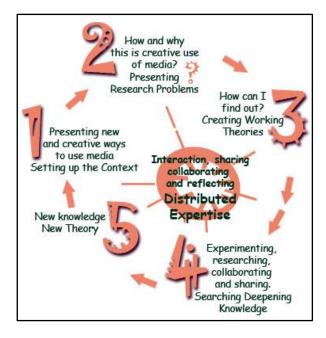
Rationales for intermedia practice have evolved during the decade through experimental workshop practice in the UK, international exchange projects in Holland, Portugal, Finland and Brazil and through conference papers.

'Digital media technologies reconfigure procedures and existing practices whilst creating

uniquely new art forms. Working methods include recording presenting, analysing, measuring, processing and screening audio/visual material. Intermedia practice defines the expanding and increasingly complex boundaries within the interface'. [21]

The intermedia rationale was conceived as a generic model relating to new media practice in the form of a research paper at the Eden Conference in Finland in 2005 [20] The dialogue was continued at rePLACE in Berlin in 2007 through an international forum considering the potential for interdisciplinary re-modelling of courses, digital literacy and contextual issues. [22] During the intervening period the emergence of Web 2.0 applications resulted in the development of a new social Internet, an interactive and personalised internet in which users can create content, publish and communicate freely. In response to these changes a set of intermedia social rationales evolved through our research and practice to assist art educators and students, by enabling them to identify and locate their position in relationship to the traditional art practice (hardscape) and the use of digital tools (softscape). Through this intermedia practice, personal, social and professional networks could be realised and communities of practice established. Essentially, this potential was dependant on the understanding of these new communication systems and the need to critically manage synchronous and asynchronous working methods in virtual environments spanning local, national and international communities. [23]

In more recent years we have examined, in a European context, the professional implications for teachers and managers in new and evolving forms of professional development using Web 2.0 tools. Here research findings were presented from the "Creative Networks of Practice" learning event developed through a European eTwinning Learning Lab initiative in spring 2009. [24] This event supported a series of initiatives celebrating the European Year of Creativity and Innovation and was coordinated by Jukka Orava. 'The key objective was to introduce a range of learning themes constructed around a phenomenon-based inquiry model.

Figure 3: Diagrammatic summary of the Phenomenon-based Progressive Inquiry Learning Model.

This in turn was supported by interdisciplinary approaches and collaborative online learning methodologies in order to stimulate new teaching and learning rationales. Digital Web 2.0 technology was used as an independent creative medium and as a powerful facilitating tool to enhance and blend the more traditional forms of visual, audiovisual and multimedia inquiry.' [24]

The 5 day course was co-designed and co-managed online between UK and Finland and involved 135 online teachers from 27 countries. An open source Liferay portal provided the central scaffolding and tools for coursework, discussion, evaluation, diagnostics, and communication, combined with assignments related to specific Web 2.0 tools. This international initiative provided an indication of future directions for art education, through collaborative virtual delivery and practice in an interdisciplinary context.

Research, practice and education

In general, educational researchers are encouraged to design their research to address significant issues or questions that may benefit students, teachers and the institutions involved in curriculum design and development. Methodologies are therefore selected to best match the requirements of the research problem using the established academic conventions. The resulting procedures, conduct and the monitoring process is broadly controlled within the chosen research paradigm. In such research models, all too often there appears to be little consideration given to the development of a strategy that will enhance the relevance and application of research outcomes prior to, during and after research. Despite **the diverse** research regarding digital technologies and education the authors remain most concerned for the possible lack of change and innovation in art education regarding these powerful digital tools. Certainly what was available in 2002 and presented to the World in New York (July 2002) was an optimistic focus. Unfortunately the potential developments described in these paper appears to have had limited take up in the subject (Art/Design: 11-18 curriculum) as it continues to regress into the generic fog of broadly uninspired pedagogy and an increasing emphasis on 'standards' and assessment outcomes. [25]

The title of this particular paper is "Behind the Shadow: Ten year on", but what has changed?" In the past this emphasis on 'change' has exercised the minds of many researchers and critics of the educational initiatives as it pivots on what we perceive to be an education in ART. See - Dewey, J. (1934); Taylor, R. (1986); Binch, N. (1991); Best, D. (1992); Thistlewood, D. (1993); Eisner, E.W. (1994); Prentice, R (Eds). (1995); Abbs, P. (1996); Hughes, A. (1997); Robinson, K. (1999); Swift, J. and Steers, J. (1999); Efland, A. D. (2002).

Messages related to the positive features of digital technology are communicated in order to challenge ambiguity and provide easily understood benefits. The perceived 'shadow play' communicates strongly the advantages of using new and developing tools but lacks significant innovative subject-based case study. The concern with regard to 'agents of change' lies in the fact that researchers have a tendency to become too narrowly focussed on the methodological rigour and academic thoroughness of their research, focussing mostly on the reactions and criticism of the academic community. This preoccupation with

the opinions of academic peers frequently works to the detriment of translation into practice. This is not to undervalue the importance of academic rigour or scholarship, but rather to do with the patchy follow through into curriculum change. It would be true to say that most of the commentators and critics cited above draw attention to the need for 'action research' that makes a difference. Those authors involved specifically in teacher training suggest that 'teachers as researchers' need to recognise that theory must extend beyond just the planning, conduct and reporting of research. Researchers need to follow up with activities aimed at assisting teachers to take up and apply the research findings within their particular educational contexts.

In general terms there appears to be consensus amongst the commentators that teachers of the subject need to be actively challenging assumptions and using research to support that action. The use of these digital tools is, in our opinion, essential to share and support developments and convince administrators and policy makers that there is value in ensuring that findings are known, appreciated and adopted. Given their various perspectives we believe we should not be asking the question "Does Digital Technology have a role in Art Education?" Instead, we believe that we must act positively to make sure that "Digital Technology is appropriately embedded across all aspects of 'investigating', 'creating' and 'recording' Art related enquiry! Some encouragement is derived however from the fact that new art and design examination courses now include 'Digital Art' as a discrete category, although digital literacy is not currently included in the curriculum.

In this paper, we have indicated the issues involved in making this particular aspect of educational research relevant to classroom practice. In particular we have proposed strategies in the referenced material that can be adopted by teachers to enhance the take up and implementation of curriculum developments. We looked at various approaches recommended by a number of commentators and academics regarding the dissemination of their research and we noted that the consistent theme was that teachers should pro-actively facilitate change. The research/academic community also argue that, if recommended outcomes are to be achieved in practice, then teachers need to take ownership of the curriculum and interrogate their practice as relevant in the 21st century.

In the concluding part of the paper, we briefly return to the broader communities of research engagement and reflect on the benefits of a more active involvement of practitioners in the development of an expanded intermedia art curriculum as administrators and policy makers rarely change practice and perceptions. Earlier we described the strategy that we followed in postgraduate research work within specialist teacher training in order to enhance the chances of 'grass roots' curriculum development and the application of research findings. Supportive work continues in the promotion of challenging interpretations of art education with one current aspect of this work being related to 'Work-Based'/ 'Student Negotiated' placements' for level 5 Fine Art degree students (See research section: www.wholearthmedia.com). The focus here is on the way in which workplace communities transfer learning to new situations and support is offered through on-line communication and guidance.

Through our various contributions the goal has been to generate a climate of trust and enthusiasm for the research. Active participation in the areas of enquiry has generally supported the possibility of it being interactively tailored to secure acceptability and

relevance in the promotion of worthy aims and outcomes. In each of these initiatives the authors have drawn upon the techniques and experience developed within postgraduate specialist teacher training and continuing professional development and tested them in the international art education community.

Conclusion

The general message is regrettably the reporting on the disappointing creative impact of digital technology on teacher education and professional development in art and design education. Having carefully monitored changes in policy and practice over the intervening years the authors feel a strong sense of lost argument in promoting the subjects value, opportunities and purpose. Specialist teacher preparation continues to decline with the current education minister further narrowing the scope for creative challenges. Michael Gove's letter to Stephen Hillier (Chief Executive, Teaching and Development Agency (TDA) in November 2011 announced the further reduction of specialist teachers for the subject by almost 60% over two years (26) . Knowledge of the history of the subject, its former aspirations and its role in personal, psychological, sociological development has largely disappeared from teacher training courses. In turn, theoretical positions on child development are generalised and consequently lose their relationship to a specialist curriculum contribution.

The history of Art and Design Education is well documented and the central role of the subject in distinctive forms of knowing have a respectable credibility in terms of the philosophy and operating rationales for its valuable contribution. [27] What is distinctive in the reading relates closely to the subject disciplines view that it is essentially different to other academic disciplines. While the subject has considerable significance in mapping the development of civilisation across time and cultural variations its place in the academic world is still under developed.

Within the Higher Education provision of the UK Art and Design has only four decades of degree status and the implications for research are significant. It follows that formal research in Art and Design is a relatively new phenomenon and in Higher Education the subject only became part of the 'Research Assessment Exercise' (RAE) in the early 1990's. [28] These funding arrangements have a tendency to drive initiatives so compliance for Art and Design meant that the subject needed to meet the same academic requirements as all other subjects and match their respective research traditions in order to be successful. This research culture provides models of appropriate contextual frameworks that have relevance and importance for others wishing to further the particular findings. Departures from expectations in terms of thoroughness (internal, external and self-monitoring) risk the view that it is not 'proper' research. While accepting the fact that researchers need some justification for their actions there are consequences for academic outputs as they may be perceived by the intended users (in this case -art teachers) as separating aspects of theory-practice-philosophy.

What remains true is that university research assessment is predominantly based on staff output. Vested interest and mixed motives clearly exist in the focus of the enquiry and the subsequent implementation of associated findings. Teaching and learning initiatives have generally followed previous models for successful RAE application and have strengthened the perception that little distinction exists between and across the subject disciplines.

In the context of the nation's school systems, art and design has always had a presence in

what has constituted a broad and balanced curriculum but this aspect of creative endeavour is clearly in decline and has lost its way in competing for resources and its rightful profile in educational development. Art and Design as a subject in schools is all too often regarded as a fringe activity, unrelated to the serious business of educating a future work force. Despite repeated pronouncements on the value of creativity, central Government policy rarely acknowledges the conditions that facilitate creative thought and practice – notionally 'unorthodox', 'unpredictable', 'experimental'.

Clearly, as indicated above, a number of issues impact on what children/students are offered as an educational experience. Higher education is a crucial component as it is here that the conceptual/theoretical position is nurtured and connections made. As teacher education moves further to a school-based training model we risk the disconnection between theory and practice and more vitally the challenge of a different point of view. Outside the constraints of Government control new social networks and communications technologies, including Facebook, Google, Cloud Computing, games, smartphones, tablets and apps provide discursive tools which enable users to engage in new contexts with the world – mobile, online, envisioned alone and together. It is clear that the personal use and application of new technologies has the potential to transfer into workplace contexts and we can optimistically see that within the next few years there may well be a realignment of art and design education as a major contributor to interdisciplinary courses, digital literacy and the global context. Art and Design educators need to make the connection between the Information Society and contemporary practice as social, archival and mobile. Software design, computer programming and the 4th dimension developments are blurring the boundaries of education, schooling and intergenerational learning and we look forward to monitoring these and other developments in the next ten years.

In conjunction with this paper the authors are introducing the Wholearthmedia website that will present past projects, showcase future technologies and include a blog to facilitate an intermedia dialogue with colleagues in art education and the creative industries.

The author's acknowledge the considerable contribution made by our globally linked community of art educators and their valuable commentary on the debate. Particular thanks and appreciation to Jukka Orava and Lucia Pimentel who formed the other half of the original seminar group in 2002 and they continue to make significant contribution to the paradigm shift to the social dimension.

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[2] International Conversations through Art, the 31st INSEA World Congress, August 2002, New York, USA.

[3] Wholearthmedia Website 2012, http://wholearthmedia.com/

[4] NSEAD. www.nsead.org/home/index – Search Andrew Mutter' president's address 2011

[5] Teaching and Development Agency. www.tda.gov.uk/get-into-teaching

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[11] Worrall, P (2005) Art Museums and ICT - The Future, University of Molise, Campobasso, Keynote presentation, Aracne http://www.neothemi.net/publications/campobasso.pdf 2005

[12] Learning Platform Functional Requirements, Version 1 Becta 2006

[13] Harnessing Technology, Transforming Learning and Children's Services Department for Education and Skills 2005

[14] Becta – discontinued advisory agency, https://en.wikipedia.org/wiki/Becta

[15] Worrall, P (2007), The Online Learning Platform and Art Education. International Art education, Insea Conference Heidelberg Publication, Athena.

[16] Thomas Tallis resources http://www.creativetallis.com/creativity-resources.html

[17] Thomas Tallis photostream http://www.flickr.com/photos/creativetallis/

[18] Research Area: Postgraduate Teacher Education (Art and Design) and the movement towards enhanced School-Based Training: an investigation into teachers' perceptions of theory and practice.

[19] History – School of Art, Margaret Street http://www.bcu.ac.uk/art/about-us/our-history

[20] Prentice, R. Eds. (1995) Teaching Art and Design, Addressing Issues and Identifying Directions, Cassell publications, see chapter 3, Buchanan, M. Making Art and Critical Literacy: A Reciprocal Relationship pp. 29-49.

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http://www.unesco.org/culture/en/artseducation/pdf/fpninaczegledydanielareimann203.pdf

[23] Orava, J. Worrall, P (2010) Intermedia Dialogues - 3 Scripts for Imaginary Conversations on a Frozen Lake, InSEA European Congress Rovaniemi, Lapland.

[24] Orava,J. Worrall, P, (2011) Re: Creative Networks of Practice Using Web 2.0 Tools-International Journal of Virtual and Personal Learning Environments, 2(1), 37-54, January-March). https://www.igi-global.com/article/creative-networks-practice-using-web/51626

Appendix—Research Items

Publications

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