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Developing a Research Procedures Programme for Artists & Designers

Carole Gray

in collaboration with

Anne Douglas, Irene Leake & Julian Malins

The Centre for Research in Art & Design,
Gray's School of Art, Faculty of Design,
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Scotland, UK.

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Abstract

¹ 'Research Procedures / Methodology for Artists & Designers', C. Gray & J. Malins, in: 'Principles and Definitions: Five Papers by the European Postgraduate Art & Design Group', Winchester School of Art, 1993.

² "Artistic" Research Procedure: Research at the Edge of Chaos?, in: 'Design Interfaces' Conference, Vol. 3, The European Academy of Design, University of Salford, 1995

This paper builds on our earlier research concerned with describing a contextual framework for the development of 'artistic research procedures'^{1, 2}, and attempts to move forward from this somewhat philosophical stage into more practical territory. Over the last year research personnel at the Centre for Research in Art & Design (CRiAD) at Gray's School of Art have been involved in developing a 'Research Procedures Programme' for Artists & Designers. Parts of this programme have already been piloted and evaluated as part of the Robert Gordon University's 'Research Methods Course' for doctoral students from all disciplines within the institution. There has been a good response from these research students, who are beginning to recognise the contribution to research methodologies that the visual arts can make.

A draft programme (currently under development) at CRiAD contains six phases, travelling from the general to the particular, from beginning research to achieving a higher degree. The programme contains seventeen sessions (or modules) and is a mixture of lectures, seminars, and participatory workshops, using video as a documentation and reinforcement learning tool, as well as various group learning techniques. The programme combines 'nitty gritty' common sense advice (pertinent to all research paradigms) as well as particular and distinctive techniques for Fine Artists and Designers operating in a postmodern context. A set of key references and a glossary of research terms (including visual exemplars) are also being developed as part of this programme.



Research Procedures Programme for Artists and Designers

Therefore, this paper, after a resumé of our earlier work, and some brief examples of methodologies and methods used in completed and ongoing research, sets out a suggested 'Research Procedures Programme' for Artists & Designers, which we intend to develop in a variety of formats.

Introduction and resume of previous research

This is the third paper so far in a projected series, which describes research aimed at developing first a contextual, theoretical and philosophical framework for more appropriate research procedures in Art & Design, and then a more practically-orientated set of 'guidelines', or elements of 'good practice', for a possible 'Research Procedures Programme' (in classic terms a 'Research Methods Course'). This research is collaborative (Gray, Douglas, Leake, Malins, Pirie, and others) and is expected to span a relatively long period of time.

Our first paper *Research Procedures / Methodology for Artists & Designers* attempted to put into context the issues which surround the endeavours of researchers working in the field of Art & Design, in particular the philosophy and context of research procedures. The introduction provided some definitions of 'methodology' and its importance in the general context of inquiry and research; characteristics of existing methodologies in Science (Newtonian and Quantum) and Social Sciences were examined; characteristics of 'artistic method' were elaborated, especially through an examination of Fine Art and Design methodologies in relation to practice; common factors linking creative, scientific and artistic procedures were identified; 'Postmodern Methodology' was briefly outlined, in relation to current 'paradigm shifts'; existing and new procedures and devices / tools were identified, and future developments proposed.

The paper also attempted to promote the use and development of Art & Design 'research terminology' in an attempt to establish a common language of research, vital for its identity and future progress. Thus, 'procedure' could replace 'methodology'; similarly, 'artistic procedure' is suggested as an inclusive term to complement the 'scientific method'.

The second paper "*Artistic" Research Procedure: Research at the Edge of Chaos?*" developed out of involvement with a multi-disciplinary, international working group at the ELIA* Conference, Berlin, 1994. This paper attempted to advance some of the ideas proposed in our initial paper, and brought together some of the most recent references and ideas in our continuing work on research procedures. Rather than provide answers or be prescriptive, we intended that it would function as a catalyst for debate. It was presented as a refereed contribution at the 'Design Interfaces' Conference (European Academy of Design, April, 1995) in a multi-media format*, in order to demonstrate some of the new media being used in the research process.

* European League of Institutes of the Arts

* The 'paper' was presented at the EAD conference in a multimedia format, which allowed a more appropriate demonstration of the visual and interactive research methods being developed. Obviously this paper cannot adequately convey the nature of this work, and so these examples cannot be illustrated properly here, but simply described in words with some relevant visuals.

The EAD paper again stressed the importance of procedure for research, examined the 'methodologies' used to date in formal Art & Design research in the UK, and outlined some of the recently completed and ongoing research for the award of Ph.D, especially making use of new technologies. The development of these 'artistic' procedures is taking place simultaneously with advances in other disciplines: as Social Science evaluates a number of alternative paradigms of inquiry, Scientific philosophy is moving away from a Newtonian position to embrace Complexity *. The paper concluded by suggesting that Constructivism in Social Science and Complexity in Science has implications for the development of modes of inquiry in Art & Design and the development of 'artistic' procedures which may be more appropriate to research in Art & Design than those that exist currently.

* WALDROP, M. M.,
*'Complexity: The Emerging
Science at the Edge of Order
and Chaos'*,
London: Penguin, 1994

An identified context for action

The proposed 'Research Procedures Programme' is therefore being developed within this contextual and philosophical framework. The 'felt need' to first suggest then outline this research context was pressing: we have argued that any proposals for the development of more appropriate research procedures in Art & Design must identify a framework (or frameworks) for inquiry (within a general postpositivistic paradigm) as well as acknowledge the current cultural context - predominantly technological and (post)postmodern.

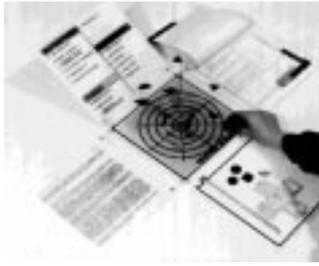
*GUBA, E. G. (ed.),
'The Paradigm Dialog',
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LINCOLN, Y. & GUBA, E.,
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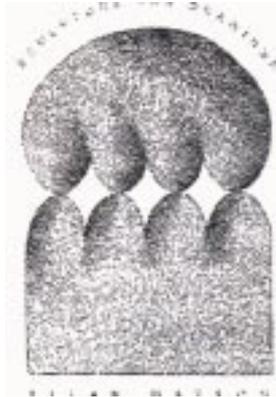
'New paradigm' researchers * (Guba, 1990; Lincoln & Guba, 1985; Reason & Rowan, 1981, etc), urge us to be 'methodological trailblazers' (Lincoln). On a practical level, recent and current researchers in Art & Design have found themselves exactly in that role: in the absence of really appropriate methodologies and methods they have taken it upon themselves to adapt and/or invent procedures and tools of inquiry. The following examples (from researchers based at CRiAD, Gray's School of Art) describe some of these innovative, visual, interactive, and multimedia methods.

Examples of various research methods (in completed Ph.D's and research in progress)



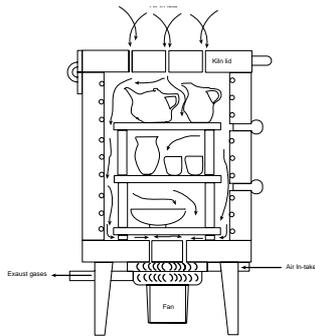
Carole Gray (Reader in Art & Design / Sculptor)

Although Gray's Ph.D research (University of Aberdeen, 1988) was essentially in education, drawing on social science methods, she made a conscious attempt to develop methodological procedures which were more qualitative, visual and interactive. Her submission for Ph.D comprised an illustrated written text, a 3D 'Teaching Style' model (a participatory 'game' - an invented methodological tool), and a video. Her current research attempts to make use of new media and extend orthodox media and methods for the development of more 'artistic' research procedures.



Allan Watson (Course Leader MA Art & Design / Sculptor)

Watson's practice-led research (Ph.D, The Robert Gordon University, Aberdeen, 1992) involved visual and interactive methods at all stages: drawing (orthodox and with electronic media); 'stream of consciousness' narrative / audio; public, student and 'expert' participation; flowcharts / concept mapping; experimental object making; video documentation, etc. His Ph.D submission comprised a substantially illustrated written text, an interactive 'choice / chance' multimedia relational database (in HyperCard), and an exhibition of 'choice / chance' generated sculpture.



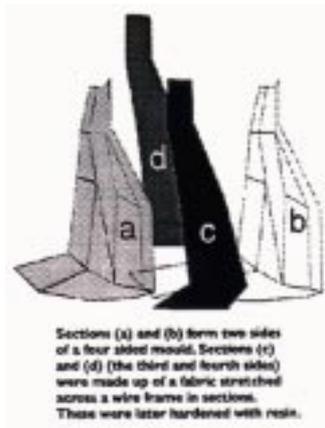
Julian Malins (Research Fellow - Design / Ceramicist)

Malins' research (Ph.D, The Robert Gordon University, Aberdeen, 1993) into environmentally safe firing systems which focussed on reduction lustre techniques. This led him to develop the use of video as the most appropriate method for documenting his research findings. Lustre glazes rely upon changing light conditions and movement to reveal their optical qualities, and are notoriously difficult to photograph. By using video and subsequently digitally post-processing the images, a series of single frames could be produced to document the full range of glaze qualities and colours. His Ph.D submission comprised a written text, ceramic artefacts and a video.



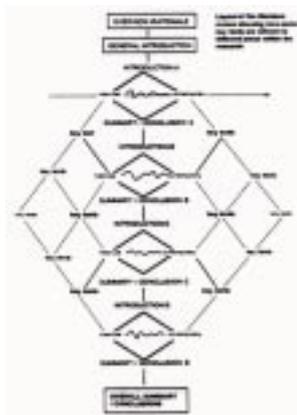
Irene Leake (Research Fellow - Fine Art / Sculptor)

Leake (Ph.D, University of Brighton, 1993) researched principally by means of Rapid Drawing (a key aspect of her sculpture practice). Visual information extracted from pencil drawings, together with video recordings of dance and of herself whilst notating dance, was computer animated (HyperCard), to further analyse drawing process and human gesture. She is continuing research into 'drawing for inquiry' primarily through a series of Drawing Events and experiments to direct her work towards: investigating interrelationships between gesture / drawing / sound; collaborative work; new forms of notation for the mobile observer



Anne Douglas (Research Fellow - Fine Art / Sculptor)

Douglas started using multimedia towards the end of her Ph.D (University of Sunderland, 1992), as she searched for the most appropriate methods to present her research. Her Ph.D submission comprised an illustrated written text, multimedia / animations, and a site-specific exhibition of sculpture. She is currently exploring the use of 'Build' software to produce interactive, non-linear 'diagrams' of her working methods and processes. This approach is being developed to both inform her own work and to examine the potential for making practice-led research more accessible to others.

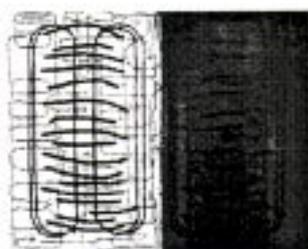


These researchers continue to evaluate and develop the use of new technologies and adapted methods as procedures for inquiry in their post-doctoral work. Currently Research Students and Research Assistants are building upon these advances:

Eleanor Wheeler (external Research Student / Ceramic Sculptor) *

Wheeler's research concerning the use of architectural ceramics in site specific artworks has involved the use of collaborative and participatory methods; the design and production of site-specific artworks as 'case studies'; extensive visual documentation. Her submission for Ph.D is expected to comprise actual site specific architectural ceramics, an exhibition of additional related artwork and documentation, supported by an illustrated written text.

* registered University of Northumbria, Newcastle, currently completing her Ph.D at CRiAD



Jon Pengelly (Research Student / Printmaker)

Pengelly's research is practice-led and has involved a range of visual and interactive methods: drawing, printmaking and photographic techniques, (orthodox and digital); personal narrative; public, student and 'expert' participation in studio workshops; morphological matrices; soft systems methodologies; 'expert' interviews; audio and video documentation, etc. His Ph.D submission is expected to comprise an exhibition (touring?) of 'environmentally sustainable' Fine Art printmaking, an interactive multimedia relational 'risk assessment' database, supported by an illustrated written text.

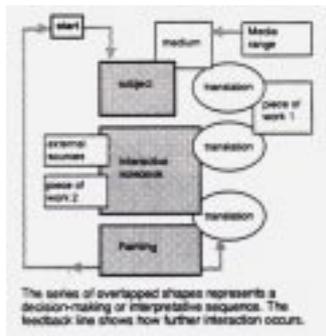


Heather Delday (Research Student / Graphic Designer)

Delday's research into bilingual graphic design has involved: the use of Macintosh software and peripherals in the design and production of a wide range of bilingual publications; collaborative and participatory techniques; soft systems analysis methods; qualitative and survey methods. Her M.Phil. submission is expected to comprise a typographically innovative written text and an exhibition of her design work, some of which may be Macintosh-based animated layouts.



Katie Bunnell (Research Assistant to Dr Julian Malins / Ceramicist)
Bunnell has continued Malin's use of video as a method to more accurately record lustre glaze qualities of ceramics, and is now in the process of building a series of databases, which will not only allow the documentation of visual qualities, but will also inform choice and decision making. Her Ph.D submission is expected to comprise a presentation of design work (as part of the evaluation process), a series of relational electronic databases, and a multimedia 'thesis'.



Iain Burt (Research Student / Graphic Designer)
Burt's work as a graphic designer examines the potential of hypermedia as a research tool in Art & Design. Consequently he is working towards a hypermedia Ph.D submission, including text, visuals, video, animation, sound, etc. He is currently developing an 'electronic sketchbook', which attempts to bring together data from a number of sources. The potential exists for recording atmosphere (movement, sound, 'emergent' qualities) and context, and a whole range of visual qualities, in addition to the artist's / designer's responses to it, in an integrated interactive 'sketchbook'.



Susannah Silver (Research Assistant / Installation Artist)
Silver's practice-led Ph.D research uses the metaphor of 'Taming Goliath' to explore the relational scale of the artist wishing to enhance the cultural environment of the city, through site-specific installation, time-based media and new forms of collaborative practice. Research methods include: participatory strategies with local administrative bodies, interviews, extensive documentation and analysis (audio, video, photographic), artworks (providing case study material). Her thesis will be in electronic format to enable a comprehensive multi-media argument to be made.

These examples described are some of the projects completed or currently registered for higher degrees by designated research personnel. Several of the teaching staff are also registered, extending the range of methodologies in use. Other interesting work using new media research procedures is ongoing but not registered. For details please contact CRiAD.

These researchers have helped to debate and shape the proposed 'Research Procedures Programme', and, as they all are practising artists and designers, they have provided the essential anchor to keep research methodologies firmly rooted in practice and absolutely relevant to practitioners. Also, members of this team are involved in the delivery of the Programme.

From the contextual and philosophical to the specific and practical: developing a useful research training programme

* to decide:

- what is knowable through research ?
- what is the researcher's relationship to the research material (objective, subjective, intersubjective, others) ? and from these
- derive a methodological position.

The programme acknowledges the individuality of researchers and projects, and encourages each student to consider their own research position (ontologically, epistemologically and methodologically *), and declare their basic assumptions about inquiry. It attempts to make students aware of the existing research paradigms, so that they are able to make sound judgments about the choice of general methodology, and within that, specific methods. This is not to suggest that one particular paradigm is better than another. Paradigmatic frameworks at best describe 'ideal' or stereotypical research positions and methodologies. As our previous papers claim the world (and research!) is not neat and easily characterised, but complex and chaotic. Complexity requires new solutions. Future researchers may find themselves moving through various paradigms at different stages of the research, or bridging paradigms and inventing 'hybrids'.

The programme offers a structure for research methods training, but tries not to be prescriptive. In the spirit of postmodernism it suggests that research positions must be debated and negotiated. In the role of 'methodological trailblazer' the researcher invents (if necessary) methods appropriate to their own project.

* refer to full scale diagram on page 8



The programme* moves from the general to the specific, through six phases - **examination of assumptions**, **synthesis** (bringing together structures and techniques to focus the research), **contextualisation** (situating the research and critically reviewing precedents), **data gathering**, **evaluation and analysis** towards **conclusions**. This sequence could be perceived as a linear progression, but it is open to interpretation as a cycle (or a helix), where issues and topics can be revisited according to different levels of experience and progress. The diagram links seventeen sessions (or modules) to these six phases. Individual students may need to reorder the sequence (and repeat sessions - easy if the programme is in a multimedia format, but more difficult as a 'live' programme.)

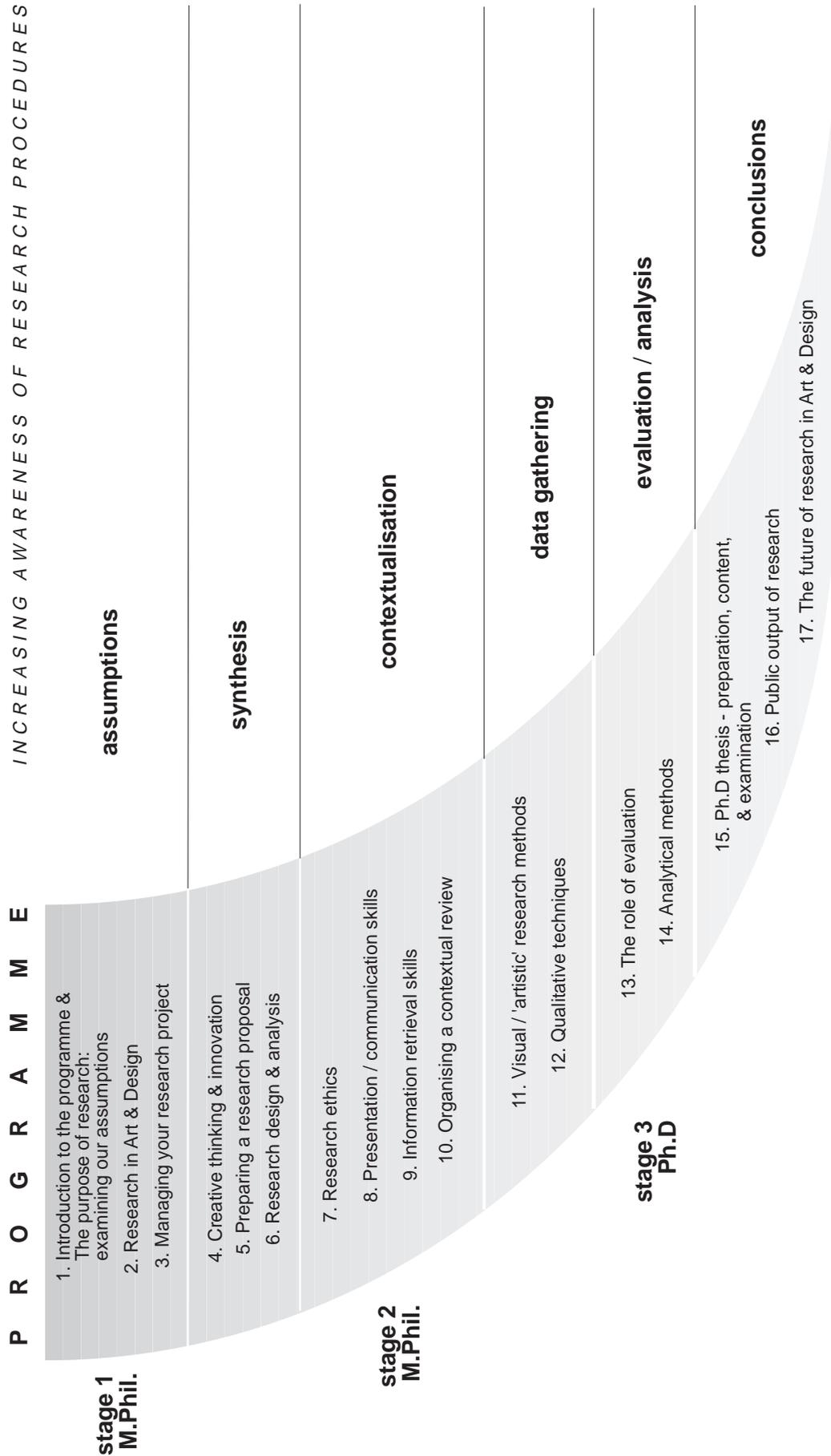
* ironic definition of research - a process whereby, at the beginning of the research the researcher declares s/he knows nothing about something (research topic), and then by research attempts to know everything there is to know about the topic, until s/he knows everything about nothing !

The programme also relates to the structure and content of a 'classic thesis' (although these are currently under debate), and the timescale for M.Phil. and Ph.D. The shape of the image might suggest that as the researcher progresses the scope of the work becomes narrower and narrower;* the focus of the work may become very specific, but the researcher's awareness, competence and mastery of the research process expands (see diagram).

Developing a Research Procedures Programme for *Artists & Designers*

The programme is offered as *a* model (one model, there could be many others). We would welcome any kind of feedback, preferably critical and constructive. This work on developing 'artistic' procedure must be by its nature collaborative and long term, and requires the assistance of the Art & Design community to maintain its relevance and usefulness.

A Research Procedures Programme for Artists & Designers



Research Procedures Programme for Artists & Designers

Introduction to Research

Session 1.

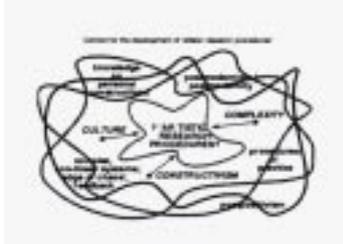
Introduction to the Programme

(outline, purpose, aims, objectives, outcomes)

and

The Purpose of Research: Examining our Assumptions

(why 'methodology' - research procedure - is important; alternative research paradigms; current context for research - post-positivistic, technological and postmodern; radical eclecticism / pluralism - multimethod; interdisciplinarity - awareness of other paradigms and cultures of inquiry, willingness to collaborate; ontology, epistemology, methodology; development of 'artistic' research procedure)



Session 2.

Research in Art & Design

(why Artists and Designers should do research; characteristics of 'artistic' research procedure; definition of 'practice-led' research, relationship between practice and research, the 'reflective practicum' - our phenomenology of practice - reflection in and on action; building in 'rigour' to a project, openness, accessibility and transparency; examples of practice-led research in Art & Design for Ph.D)

Methods of Planning & Preparation for Research

Session 3.

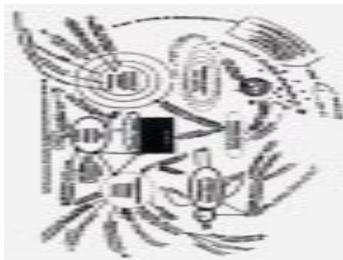
Managing your Research Project

(identifying your research position - ontology, epistemology, methodology; acknowledging complexity in developing a research strategy, project planning - negotiation, adaptivity, feedback; time management; funding; non-linear, dynamic, integrated procedure)

Session 4.

Creative Thinking and Innovation

(identifying thinking and learning styles; learning in the visual arts; mind mapping / concept mapping, synectics; examples of innovation, characteristics; relationship to Ph.D criteria)



Session 5.

Preparing a Research Proposal

('problem' identification / 'felt need'; developing a plan of work, building in 'rigour'; aspects of collaboration; interdisciplinarity; registration for higher degrees - M.Phil. / Ph.D; skills and styles of expression)

Session 6.

Research Design and Analysis

(reciprocity of theory and practice - practice should generate theory, and theory should inform practice; designing a simple 'experiment' - e.g. design and test a paper helicopter; considering variables; collecting data; analysis and visual display of data; multi-methodology)

Session 7.

Research Ethics

(research positions - objective, subjective, intersubjective?; considering ideologically oriented inquiry; conduct of the researcher; involvement of others, anonymity, confidentiality, etc; who is the research for? authorship, ownership)

Session 8.

Presentation / Communication Skills

(preparation and planning; dynamics of 'live' presentations, 'choreography', use of visuals/interactivity; clear speaking, eye contact, involving an audience, etc; presenting a credible case; generating debate)

Methods of Information Management

Session 9.

Information Retrieval Skills

(strategies for information gathering - 'trawling' and 'targeting'; 'tagging'; identification of sources of information, bibliographies, citations, search strategies, electronic / on-line networks, Internet, WWW, etc; referencing, accuracy, acknowledgement)



Session 10.

Organising a Contextual Review

(published literature and 'live' contextual information; conceptual / theoretical frameworks; 'grounded' theory; skills and styles of expression, critical stance; using databases and matrices as organisational tools; situating your research; identifying 'gaps' in the 'wall' of knowledge)

Session 11.

Visual / 'Artistic' Research Methods

(procedures of practice; power of the visual; observation, drawing, annotation, photography, video, 'visual diaries', mapping, graphic devices, electronic media applications, multimedia, integration; visual and textual glossaries [formative and generative]; advantages / disadvantages of traditional and new visual media)

Session 12.

Qualitative Techniques

(qualitative research design; 'rich' information; ethnomethodology; case study, participant-observation, personal construct theory, self-reflection / personal narrative, structured / focussed interviews, questionnaires, etc)

Methods of Evaluation and Analysis

Session 13.

The Role of Evaluation

(understanding and explaining; the Constructivist paradigm; acknowledgment of absurdity of complete objectivity, interaction of inquirer and subject of inquiry, intersubjectivity; uncertainty and contingency of knowledge, negotiated knowledge, interpretative, hermeneutical; importance of context and the world as personal construction; impact on evaluation; role of exhibition / presentation; new media in evaluation)

Session 14.

Analytical Methods

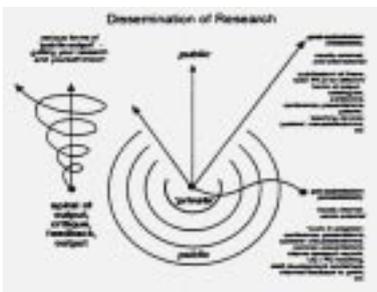
(critical and rigorous, analytic / deconstructive as well as synthetic / reconstructive; data into information; triangulation / corroboration; reduction / coding, visual displays (inc. matrices and networks), drawing conclusions; statistical techniques e.g. cluster analysis; aesthetic evaluation methods e.g. semantic differential, multiple sort; other techniques e.g. visual impact analysis, video, discourse analysis, etc)

Methods of Information Synthesis, Presentation and Communication

Session 15.

Ph.D Thesis - Preparation, Content and Examination

(synthesising a submission - textual, visual / artefacts; structuring an argument ['thesis'], using a visual map; new forms of submission - examples; exhibition, examination, viva; 'Congratulations Dr Who' ... becoming an expert!)



Session 16.

Public Output of Research

(dissemination of research, 'public output' for Artists and Designers; papers, exhibitions, catalogues, research presentations, etc; new forms of output - multimedia as a tool of synthesis, electronic 'posters'; responsiveness and interactivity; the digital world and intellectual property)

Session 17.

The Future of Research in Art & Design?

('artistic procedure' as a mode of inquiry, feedback - strengths and weaknesses, implications for progress of research in our discipline; research procedure as historically situated, dynamic and evolving, revised and adjusted through feedback; diversity and combination of methods - multi-methodology)

(This programme should incorporate regular evaluation sessions on structure, content, delivery, etc., and should seek to incorporate constructive feedback into its evolution.)

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Information on authors

- Dr Carole Gray**
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Gray's School of Art
- Carole Gray is the Reader in Art & Design. Prior to this post she developed and ran the MA course in Art & Design, having initially been a lecturer in Sculpture. She is a practising artist, currently engaged in a major public commission for a Scottish airport. In 1988 she completed a Ph.D on teaching styles in art colleges, initiating an enduring interest in teaching and learning. Her research now is in developing more appropriate research methodologies for artists and designers. She considers research, teaching and professional practice as three interdependent and mutually enriching facets of her creativity.
- Dr Anne Douglas**
Research Fellow - Fine Art
CRiAD
Gray's School of Art
- Anne Douglas is at present a postdoctoral Research Fellow at Gray's School of Art. She is a practising sculptor. In 1971 she completed a degree in Anthropology at Durham University. In 1976 she won the Rome Scholarship in Sculpture after completing her degree at Camberwell School of Art (1973-6). Rome was revisited in 1984 as Artist in Residence at the British School there. She has taught full and part time at a number of institutions in Britain as well as undertaking exhibitions and commissions, the most recent to date being the Per Cent for Art Scheme at Stakeford Bridge in Northumberland.
- Dr Irene Leake**
Research Fellow - Fine Art
CRiAD
Gray's School of Art
- Irene Leake trained as a sculptor, gaining BA(Hons) Fine Art and MFA degrees from the University of Newcastle upon Tyne. She completed a Ph.D in Art and Design at the University of Brighton. Her thesis is entitled: *Apprehending movement of the human figure through the medium of drawing, with comments on its possible relationship to computer mediated interaction*. In her current capacity as Research Fellow in Fine Art at Gray's School of Art, she will be producing a new body of visual art work. She will also be undertaking a Churchill Fellowship to the USA, to conduct research concerning the value of drawing skills with regard to the development of new technology.
- Dr Julian Malins**
Research Fellow - Design
CRiAD
Gray's School of Art
- Julian Malins is the Research Fellow for 3D Design. He completed his Ph.D in 1993, entitled *"The Monitoring and Control of Specialist Ceramic Kiln Atmospheres and Emissions"*. The research was an inter-faculty project involving the Faculty of Design and the School of Applied Sciences within The Robert Gordon University. He studied ceramics at Epsom School of Art (1973-76), Harrow College of Higher Education (1985-87) and Cardiff (1988-89), in addition he has a BA degree from the Open University completed in 1990. He ran his own pottery business for approximately eight years before returning to full-time education. Current research interests include the environmentally sympathetic design of specialist ceramic kilns and glazes, architectural ceramics, multimedia for the documentation of research in Art and Design, and appropriate research methods for designers.

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