

**Title: Art Education for a “tele-matic” future**

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**Abstract:**

Much ‘received knowledge’ about art in the late 20<sup>th</sup> Century arrived ‘tele-visually’ (vision-at-a-distance, via tv and video). In the 21<sup>st</sup> Century, students are increasingly experiencing art ‘tele-matically’ (digitised and data-banked at a distance). This paper will highlight the issues that arose during a research project investigating the data-basing of outcomes of artistic engagements for subsequent retrieval, reflection and feedback between students and teachers to enhance learning. The paper’s aim is to encourage critical debate about the preparation of education students to teach in and through the visual arts in an increasingly information-oriented and dominated socio-cultural environment.

**Introduction:**

As new art practice engages information and communication technologies and systems (ICTS), the form and conceptual basis of what might be considered to be ‘contemporary’ art is constantly evolving, and the range of critical theories through which art is discussed is growing wider (Nalder, 2002). When education and research are added to the mix, complexity grows. Tertiary educators are increasingly being required to data-bank course content and devise on-line learning activities that engage students in ‘chats’, discussions and forums. As teachers with a common interest in exploring digital technologies and ICTS in art and/or teaching practices in the

disciplines of dance, drama, music, media and visual arts, we were curious about whether, and how, ICTS could support and perhaps improve our pedagogy, particularly in regard to the assessment of student learning. Why assessment? We reasoned that assessment of student learning, by default, also engages us in reflection upon the success or otherwise of our teaching, over and above the feedback that our students provide. As we assess their submissions, we evaluate the ways in which our teaching may have facilitated (or inhibited) student achievement of the course learning objectives. Why ICTS? While there have been advances in incorporating digital technology into arts practice, its use for assessment of arts learning outcomes and related reporting procedures, and the kinds of protocols that should prevail in this context remains unexplored. What capturing, storing and representation means for artistic knowledge and assessment of that knowledge have not been critically examined. Theoretical constructs for the use of these technologies and systems in assessment have not yet evolved. We perceived the use of technology as a resource for assessment of, and feedback on artistic development to be underdeveloped and there was a lack in information that reported on how teachers engage with technology and how that technology affects what they do in arts learning. To support a study to address this problem, we applied for an Australian Research Council Discovery Grant for a three-year cross-discipline, cross-institution research project entitled "Constructing a new conceptual framework for using digital technologies in achieving better arts assessment."

### **The Research Premise:**

The contribution of Arts learning in education is often overlooked and undervalued because its emphasis on intuitive/creative (non-rational) ways of knowing is commonly perceived to be unable to

be adequately documented and/or measured. Whilst within the arts we have developed effective textual and numerical means of evaluating arts products and processes, these means are frequently criticised by arts educators because they fail to capture the essence of artistic knowledge or the ephemeral qualities of arts making. Innovations in digital recording and information management systems present the opportunity to capture, store and manage multiple forms of evidence about artistic product and processes. The meaningful aspects of artistic knowledge are often under-represented in assessment, because they are less measurable than the technical and analytical aspects of arts learning. The essence of arts knowledge is its intrinsic and expressive qualities and yet, because these aspects are not easily quantified or textualised without serious loss of artistic nature, the development of assessment procedures has been limited. Even if learners could demonstrate that they ‘know and can do’ in the arts, unless this demonstration of knowledge could be assessed rigorously and honestly both the students’ artistic growth and the curriculum itself would not be true to the nature of artistic knowledge, nor would the process provide authentic feedback to the learner. Our aim was to expand our understanding of how we assess student learning in art (and through art) through a process that focused on the qualities of artistic knowing, specifically:

- to identify the qualities of artistic knowing across arts disciplines;
- to identify gaps in the present approaches to the assessment and evaluation of arts learning and teaching; and,
- to discover ways that digital technologies might be used to improve the scope, depth, relevance and frequency of feedback.

The one-year of funding that was granted was applied to a smaller, technologically-based component of the original research project -the trial of a digital media assessment portfolio (DMAP) process with students in our respective courses in Visual Arts/Media Education

(Griffith); and in Music Education, Computer-mediated Music Composition, Drama and Dance Education (QUT), during 2002. The proposed outcomes of the DMAP component were:

- theoretical framework for a feedback system, and
- a model for the use of digital media in arts learning assessment

### **Research Methodology:**

At the outset we knew little about each other's philosophies of art and art education, the learning objectives of the various courses, or teaching strategies - including how student learning was assessed, and how each would conceptualise and implement the DMAP as an assessment process and tool. However we decided that this situation could actually advantage the project by providing a diversity of interpretations and outcomes for us to consider. The multi-disciplinary team provided access to distinct discipline knowledge, contexts and people, giving each arts discipline its own voice within the data whilst allowing the common aspects of arts knowing to be articulated and providing a forum to clearly describe the differences. A naturalistic, 'participant observation' approach (Jorgensen, 1989) was combined with a Multiple Perspective Analysis, Convergence (MA/C) model for arts education research (Ecker and Baker, 1984). This model held promise because it attended not only to the artistic and educational dimensions, but also the social, and psychological dimensions of a program. Although our project differed from the program for which Ecker and Baker devised their model, the strategies that they used to analyse the data were appropriate for our purposes. These were: engaging evaluators to work with researchers to record the perceptions of all participants in a non-hierarchical format; subjecting these to a cross-disciplinary analysis, with inter-subjective verification of perceptions achieved through independent reviews of audio and video recordings, interviews, observations,

and questionnaires. Converging and diverging perceptions were submitted to participants for their responses, and the results submitted to an external 'expert' panel, should impasses remain prior to publication of the final report. In our project, the latter phase took the form of workshopping our preliminary findings in a colloquium with 'critical friends' from a range of arts education sectors and contexts. An external workshop facilitator adopted a 'philosophical inquiry' approach that engaged the critical friends in responding to and synthesizing the data, which was reported back to them in the form of process checks throughout the work-shop. The research goal, as in the MP/C model, being "the ideal outcome (which is) is no less than ultimate agreement on what happened, how it happened, what succeeded and failed in the program, and its significance to the participants" (Ecker and Baker, 1984:248).

### **Arts courses and related portfolio media:**

The use of portfolios in arts assessment in Australia has been largely limited to senior arts syllabi and tertiary arts courses (Broughton, 1996; Gitomer, 1992; Lavender, 1996, Hausman, 1995). These portfolios, like those of the NY *Arts Propel* project use many kinds of data representations, such as artists' statements and reflections about process or product, video and audio recordings, peer, self and teacher critiques, numerical marks and textual descriptive statements based upon task-specific criteria (Gardner, 1996). The problem with this kind of data is that its collection, organisation and management is time consuming, and like *Arts Propel*, has an overly bureaucratic reporting procedure. As suggested above, digital technologies had the potential to assist in overcoming these problems. The increased data storage capacity of DVDs enabled the portfolio data from the four learning contexts to be archived while each researcher experimented with possible presentation modes. Thirteen students in Jude Smith's course (QUT,

KDB117: Dance in Education) generated data in the form of in on-line discussion forums, asynchronous (non real time) video streamed choreography teaching with year 9 students, synchronous video-conferencing footage, Powerpoint presentations for projection in performance; Digital video of face to face workshops and Workshop plans and reflections. Thirty-five students in Steve Dillon (QUT, KMP431 - Advanced Music Curriculum) were videotaped performing and presenting, and students generated .rtf text files, MIDI, Scorch (Sibelius), WAV and AIFF files for music. Six students in Andrew Brown's B.Mus. course (QUT, KMB660 Production Studies 4) used digital processes to express musical ideas in composition. One hundred students, in workshop groups of 25 in David Magarrity's BEd course (QUT, KTB 308 Performance 2) generated live performance and rehearsal videos, and text. Ten research participant students of the 90 students in my B.Ed. (Primary) course (2124VTA: Arts 2 - Visual Arts) generated .jpg scans, Quicktime .mov and text files.

### **DMAP Research Questions - Visual Arts/Media**

The process of drafting an ARC grant application helped me to identify the crucial questions I would need to address in this inquiry into the applicability of digital media to the assessment of student learning in the Visual Arts/Media Strands of the Arts Key Learning Area. These were:

- what are the grounds for recognition of an artwork, as such, in an educational context (whether a school, community or TAFE, university creative arts faculty, or a production studio)?
- what are the current assessment and evaluation practices (A&EP) in the Arts?

- what are the specificities of ICTS that could be advantageous to A&EP?

### **Visual Arts/Media Research Context:**

The research participants were volunteers from among the 100 second-year, generalist primary education students of the Visual Arts Education course 2124VTA at the Logan campus of Griffith University. The central purpose of this course is to equip the generalist primary teacher to teach the 1-10 Arts KLA syllabus, specifically the visual components. By completion of the course students should be able to

- critically reflect on visual culture
- engage in art-making in a range of media
- recognise the art-making trajectories of children
- design inclusive curriculum for learning in and through the visual arts that addresses the requirements of the 1-10 Arts Key Learning Area Syllabus (Queensland Studies Authority , 2002)
- maintain a healthy, safe and well-resourced art learning environment

In 2001 this practical course was undertaken in workshop groups of 25 students in three-hour weekly sessions over 12 weeks on campus, with an additional two weeks practice teaching in schools. Six weeks were devoted to studio experimentations, two weeks to guided studio practice to complete an artwork; and the remainder on inquiry into art education theory and curriculum and lesson design and trial. Students research, and critically analyse artworks and media images, and study the art-making trajectories of children. They explore concepts, receive technical instruction in art media and techniques, participating in interactive, guided, and shared learning in small groups to develop visual literacy by making and reflecting on art in terms of the objectives for each workshop. They study art education theory and design curriculum and plan

lessons for the 1-10 sector. Learning experiences are based on 'real world' contexts for art-making.

Course - assessment:

In the semester of the research project, assessment comprised:

- a portfolio of research and the experimental outcomes and reflections on achievements from a series of 6 studio workshops, with planning for a finished work building on a selected studio experiment (weighting 40%)
- a 'finished' artwork building on a studio experiment for the student exhibition, with reflective "wall" statement introducing the work to a general (weighting 15%)
- a group curriculum project that embedded learning in and through art in a unit overview that included another arts strand and another KLA (weighting 45%).

The portfolio, comprised student-selected evidence of research and planning, outcomes from and reflections on the outcomes from studio workshops. The studio workshop outcomes are described as "experimental" and are weighted at 40% of the course. The portfolio informs a 'finished' artwork that is developed from one or more of the studio experiments, according to the following criteria:

- Planning: awareness of historical, traditional and contemporary cultural contexts and related issues is evident in record of research and preliminary sketches etc.; statement of intent: clear articulation of proposed project
- Conceptual development: the original idea has been refined through further research and experimentation, and this is evident in your record of planning and development stages, and in the work as it evolves toward completion
- Creative development: experimentation leads to novelty in the resolution of the art work and in its presentation

- Visual Literacy: demonstrated ability to use visual symbolic language: selection of imagery effectively communicates concept; design elements and principles have been used to intensify the meaning of the work
- Technical skills: demonstrated competency in selected medium and technique
- Presentation and display: the integrity of the work is enhanced/preserved in its completion and display
- Self-evaluation: wall text for exhibition clearly explains the intention for the work, the processes followed and evaluates the success of the work in achieving the intention, to an open-day audience

### **Professional Context:**

On graduation the research subjects will teach an outcomes-based curriculum to students in years 1-10 that is organised around 8 Key Learning Areas. In the Visual Arts/Media strands of the Arts KLA they will assess the student's ability to demonstrate the learning outcomes that are set for the various levels (1-6) identified in the Queensland Studies Authority (QSA) syllabus. Currently overlaying this outcomes-based approach is the pilot for 2010: the *New Basics Framework (NBF)* for 1-10 curriculum based on the development of repertoires of practice that draw on clusters of discipline specific knowledge. The aim of the NBF is to minimize assessment, moving from the measurement of a plethora of outcomes toward the measurement of higher order outcomes. It aims to achieve quality student learning and prepare students for 'new times' through the provision of 'rich tasks' that encourage knowledge transfer to contexts beyond the classroom, by providing 'real world' ('authentic') learning experiences that relate to students' lives. This new framework was an outcome of the *Queensland Schools Reform Longitudinal Study (QSRLS, 1998-2000)* which examined and reported on the key educational issues of productive pedagogies; productive assessment; professional development; productive leadership; and system alignment and support. The QSRLS identified a practical misalignment between pedagogies and assessment tasks. It found that assessment tasks that

teachers set were often low in intellectual demand, disconnected to the world, and intellectually unchallenging. To address this problem, Education Queensland proposed a 'productive assessment' strategy where teachers in the middle years of schooling would engage in moderation meetings on setting and grading assessment tasks across and within schools, and reflective dialogue between the primary and secondary sectors on assessment would be encouraged.

In the professional context, the NBF rich tasks are described as outcomes that are transformational (enable students to function in real-life roles.) The KLA outcomes are used in planning to ensure that the full intent of the KLA is realised. The KLA learning outcomes are seen as traditional when they refer to the content and skills of a learning area as demonstrated in everyday classroom situations, and transitional when they refer to the higher-order competencies and performances in tasks at a (comparatively) macro level. Because these 1-10 frameworks are new, reporting devices and assessment practices are still evolving. The feedback and reports published during the pilot phase of the NBF rich tasks suggest that the social moderation of evidence of learning - which has been a key assessment strategy in the Visual Arts, and Film and Television in senior secondary education in Queensland for at least 20 years - may be the preferred strategy for the 1-10 sector. In Senior Art (11-12), matrices are used that describe the standard for each grade (A to E) for both making and appraising artworks. As well, many secondary educators would maintain that the tertiary arts education sector has much to learn from them in this regard. Having taught in both sectors, I would concur with this perception.

### **Adaptations for the DMAP Project:**

Anticipating the data-based approach of the 'informational mode' I revisited my assessment processes and procedures course, devising, in consultation with colleagues, a matrix (Table 1) to be uploaded to course website for student reference. As time and technology limitations precluded the emphasis that could be placed on computer-mediated art-making, I introduced the requirement for all students to scan their research images (related art from past, present and non-western contexts), and to resize them in using image editing software, for embedding in text documents that were written appraisals of the research images. The process was demonstrated and then peer taught, using the two computers in the studio (one Mac, one Windows). I chose this approach because I felt that, in a one-off subject, it was necessary to build up trust first before introducing my proposed project to the students, and because a climate of suspicion prevails, at the outset of the course, about assessment in art. Discussion about assessment of studio work always leads to one or more students commenting on their past adverse experiences with assessment of their endeavours in art-making that ultimately caused them to make other subject choices in high school. An advantage of a teacher-education context is that assessment must not only be transparent, but student engagement in, and contribution to the assessment process can be justified as integral to learning to teach. Students who subsequently volunteered to digitize the outcomes from their art-making experiments could be described as students feeling good about their own progress, interested in involvement in research, or keen to experiment with ICTS. (Education Queensland and the Board of Teacher Registration identify the essential skills and desirable qualities of professional teachers that include facility with new technologies.) All sectors - compulsory and post-compulsory - stipulate a student-centred approach to learning (whether outcomes, concept-, or issues-based). Thus the majority of the students were only able to take in the research peripherally.

An ethical consideration that underpinned the “add on” (or digital transposition approach) was that some technological processes (such as the use of video to capture student interactions during the learning process) are intrusive and may interrupt the flow of learning. Thus participants were given access to the technology to record anything they wished, including their own comments to a video camera that they set up for themselves in a private environment if they chose to reflect on their achievements in this way. This gave students control over their self-representations, including whether they wished to be present in the frame or whether they wished to provide reflective commentary whilst filming images or examples or other footage that recorded their artistic processes or outcomes.

Taking the next step - archiving the DMAP, either off- or on-line for subsequent retrieval, reflection and reporting meant that the conceptual framework that underpinned the learning needed to be configured in terms of the learner’s capacity to achieve the course objectives. These could be more effectively expressed in terms of the student’s ability *to identify, specify and apply the signifiers of meaning (the technical, generic, symbolic and aesthetic codes and conventions) in visual art-forms; to define and describe the qualities that allow the work of artists and students to be recognised as artworks in their particular contexts; and to interpret and apply models for the appraisal of artworks.* Feedback could be more efficiently organised through criterion-referenced assessment and evaluation in terms of the specified knowledge domains with standards descriptors that were provided in the matrix (Table 1), which was to ultimately become one the basis for the cross-art-form database that was the research outcome.

An important consideration in conceptualizing and designing e-portfolios that emerged during the database design phase is the recent shift toward the articulation of learning outcomes in terms of *graduating student attributes* which tie in with web-site mission statements. Jude Smith's dance students were keen to use their portfolios in a variety of professional contexts – *to communicate who they 'were' as artists, teachers, communicators, etc.* Many universities, including Griffith, are participating in the standardization of protocols – technical, procedural, and ethical – to accommodate the generation and consumption of intellectual property. (Iaenella, 2002). The "Griffith Graduate" project comprises a series of descriptions of the abilities and qualities of successful graduate who is well prepared for life beyond university, in terms of their abilities: *Self-management Skills; Analysis and Critical Evaluation; Problem Solving and Decision-making; Oral, Visual and Written Literacy; Communication and IT skills; and Leadership directed at the facilitation of learning.*

**Emergent themes and issues in initial data samples (participant review of DMAP trial):**

The data analysis from the first round of participant interviews identified emergent themes and issues and questions. Samples were excerpted from the data that would provide scenarios for discussion and debate at the critical friends colloquium. These were:

Access and Control: What kinds of control should different stakeholders have in the DMAP?

Sample : Student manipulates portfolio interface: ID photo is not of the student;  
background appropriated from another site; soft porn icons etc.

Ethics and rights management: Do the recall and review properties of DMAP increase the potential for intellectual property infringement?

Sample (a) A non-indigenous student appropriates and manipulates a contemporary indigenous artwork to illustrate a narrative about the inequities that evolved over time between her life chances and her indigenous friend's life chances.

Sample (b) In a videoed role-play for assessment, a student satirises an academic in a potentially slanderous manner.

Implementation: Is the technology implementation problem in video interviews insurmountable?

Sample: (A researcher) found trying to video evidence of classroom interactions problematical as he was nowhere near feeling comfortable with this process, and the focus on the video detracted from the quality of the student teacher interaction the student performance; the process of recording, collating, refining and managing the data was very time consuming for little apparent gain.

Representation and Recognition of Artistic Learning: How can this video extract of a rehearsal become evidence of the student's learning in the student portfolio?

Sample (a): How can this video extract of a rehearsal become evidence of the student's learning in the student portfolio?

Sample (b): A Quicktime movie of an art installation piece added sound and voiceover, and used editing and special effects, so that the 'non-virtual' art object was replaced by its digital representation.

**The outcomes from the critical friends colloquium:**

The colloquium moved us toward the attainment of the research goal, as it is expressed in the MP/C model: “the ideal outcome (which is) is no less than ultimate agreement on what happened, how it happened, what succeeded and failed in the program (project), and its significance to the participants” (Ecker and Baker, 1984:248).

The following questions and concerns were raised through the philosophic inquiry activities, and will form the basis of the final report:

- 1) Limitations of dmap need to be explored in more depth
- 2) How could the DMAP be used in the context of primary and secondary education
- 3) Representations of group performances remain problematic
- 4) What is the value of DMAP if it becomes another layer of assessment on artwork/performance not necessarily focus on the artwork but on peripheral issues of its representation?
- 5) Is there a risk of the DMAP becoming detached from the original work?
- 6) How can the DMAPS be differentiated from an artwork’s assessment?
- 7) Does the inclusion of a DMAP as an assessment opportunity negate/impinge on the dynamic classroom (informal) assessment opportunities?
- 8) Does the use of a DMAP compartmentalise assessment of aesthetic activities?
- 9) How can you provide “evidence” of cooperative working practices on DMAP ie, process rather than product?
- 10) How can you provide evidence of “safe” practice and “leadership”? (Physical limitations when not seeing in a “live” ritual)
- 11) How can you see that students have made the “most of what they have”?
- 12) The equity issue of competence in digital technology to undertake the task needs to be complemented with a semiotic understanding of the inherent qualities of particular art forms and the changes associated with the transformation from one art form to another (digitized) form
- 13) Clarifying the purposes of DMAP for different educational sectors and the principles that will guide its effective use.

14) What do the researchers perceive as the ‘most extensive use’ of DMAP for assessing student learning?

15) What are the relationships between the (back-end) database and the presentation frame? Which is the “driver”?

### **Conclusion:**

The benefit of driving the project in the ‘informational mode’ through the ICTS was that it provided actual instances that allowed key questions and issues to be formulated and raised within each discipline. The final stage of the technological encounter, which involved the development of a database (referred to earlier) might at first glance appear to be prioritizing the technological, by responding to the final question generated during the critical friends colloquium (15 - the relationship between the ‘back’ and ‘front’ ends of the database. ) At the outset of our project, the ‘front end’ was a stand-alone experiment in each context, where it was initially conceptualized as a ‘report to student’ (Music), or as a promotional portfolio or CV (Dance). However the efficacy of telematics is that the back-end, or database, allow it to sit behind any kind of ‘front end’ so that the data can be retrieved and presented for a variety of purposes. A database that would serve a cross-artform purpose required consensus to be reached through the process of identifying and standardising language. The danger of this process is that it is reductive. However a benefit is that it necessitated that each researcher identify the qualities of artistic knowing as they understood them within their own discipline context. The database model (Table 2), now on-line, provides a further research ‘sample’ for critical analysis by others.

The priorities now are the issues relating to ethics and IP, and equity (cf. No. 12 the equity issue of competence in digital technology to undertake the task, and the necessity for this to be

complemented with a semiotic understanding of the inherent qualities of particular art forms and the changes associated with the transformation from one art form to another digitized form). The specificities of the informational mode, such as the altruistic sociabilities that surround networked information generation that constitute self-organisation (eg., the www), have meant, also, that during the short life of the project, much more information and new strategies for its management on-line has become available to assist with the resolution of some of these issues.

The final phase of the project – reporting more widely and receiving feedback from arts educators is crucial to our ability to adapt the informational mode to the requirements of artistic learning (rather than the reverse.)

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TABLE 1: (See separate file NalderResTab1.doc)

TABLE 2: (See separate file NalderResTab2.doc)