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Professional capabilities for 21st century creative careers: Lessons from outstandingly successful Australian artists and designers

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Abstract

Artists and designers are positioned at the centre of the 21st century creative economy. In order to recognise and make the most of the opportunities afforded by this new era, artists and designers still require the creativity, disciplinary depth of knowledge, and technical skills traditionally possessed by professionals in these fields – skills which are a core strength of higher and further art and design education. However, they may also require a range of other, ‘21st century’ creative capabilities which are harder to define, teach for and assess, and are not the focus of traditional art and design pedagogies. This article draws upon the findings of nine in-depth interviews with award-winning Australian artists and designers about their careers and working practices, along with recent international research about the characteristics of the 21st century creative career, in order to highlight the importance of certain professional capabilities for art and design. It discusses the implications of these findings for art and design educators in universities, and curricular and pedagogic considerations associated with embedding these capabilities into undergraduate courses.

Keywords: creative industries, art and design careers, entrepreneurship, social networks, transdisciplinarity, case study

Introduction

This article asks what artists and designers need to know and be able to do in order to build vibrant, sustainable careers in the 21st century. It also asks how higher education can contribute to the development of these capabilities. While disciplinary expertise, technical skill, and creativity remain of paramount importance to the career success of artists and designers, changes in the economy and the world of work mean that the nature of creative work, and the opportunities associated with it, have changed, and also that artists and designers will often need to perform a range of other high level activities beyond their core creative functions in order to build sustainable careers. Art and design educators have recognised these shifts, and have made various attempts to embed them into programs (Rae 2004; Penaluna and Penaluna 2009). However, this has often proven a challenging task, given the nature of the capabilities involved, the importance of the existing curriculum, and the higher education context.

This article commences with a literature review relating to the unusual features of 21st century creative careers, and the career challenges faced by artists and designers. The article then outlines the methodology of a qualitative study designed to identify the capabilities required by artists and designers to engage in successful 21st century careers. The study comprises nine in-depth interviews with outstandingly successful Australian artists and designers. In the third section of this article, four types of important creative career capability emerging from the interview findings are presented and discussed, and augmented with quotes from the interview participants. The final section of the article considers how art and design educators might use the findings from this research to tackle the important task of preparing graduates to be successful creative, enterprising, socially responsible professionals throughout their working lives. Specific curricular and pedagogic considerations are offered, with the aim of inviting tertiary educators in art and design to consider whether and how they address the four career capabilities at present, and how they might do so in the future.

Literature review

Art and design in the 21st century

In the policy narratives of the 21st century, art and design have been propelled into the centre of economic activity. Creativity and innovation are now considered to be key determinants of growth and development in the economies of advanced nations (Department for Culture Media and Sport 2008; Cutler 2008). Wealth creation is dependent upon the capacity to continually invent new content, and at the heart of this capacity are the activities of a ‘super creative core’ (Florida 2003). This super creative core is comprised of knowledge workers who design and create new ideas, products and forms, amongst whom artists and designers are prominently featured.

In the United Kingdom, elsewhere in Europe, and also Australia, emphasis on the economic importance of the arts has led policy makers to cluster many disciplines where creativity is important into a collective entity known as the ‘creative industries.’ The creative industries are defined as those activities which have their origin in individual creativity, skill and talent, and have the potential to create wealth and jobs through the generation and exploitation of intellectual property (Department for Culture Media and Sport 2008, p.3). They encompass art and design, but also extend to include fields such as film, television, radio, advertising, games, publishing, and architecture. Collectively, over the last decade the creative industries

have grown much faster than other areas of the economy (Centre for International Economics 2009; Hutton et al. 2007).

Artists and designers working in the creative industries

In contrast with more traditionally configured industries such as manufacturing, the creative industries are dominated by networked clusters of small-to-medium enterprises, sole-traders and micro-businesses (Creigh-Tyte and Thomas 2001). These creative business networks constantly form and re-form value-chains to create new products and services. In fact, this continual combination and recombination of relationships, and the associated sparking of new ideas, has been the mechanism argued to drive much of the innovation which is the hallmark of the creative industries (Potts and Cunningham 2008). Creative professionals are therefore often likely to be self-employed, and/or employed on a short-term contractual ‘by project’ basis. Decisions regarding employment in these sectors are quite unlikely to rely on formal educational credentials or professional accreditation, but rather are often dependent on informal social contacts and evidence of competence provided by previous work outputs (Throsby and Zednik 2010).

Creative industries careers are largely individually navigated, often with minimal opportunity for stable employment or hierarchical progression within a firm (Author, 2005). If creative workers are employed in a large firm or on a longer term contract, they will often maintain their own businesses as well. Most creative workers engage, at least to some extent, in portfolio careers (Mallon 1999; Author 2005). The portfolio career pattern comprises a self-constructed and continually evolving patchwork of jobs and projects. In the arts, a portfolio of arts-related work may also be supplemented by additional concurrent work activities – the ‘day job’ – in order to maintain financial viability (Throsby and Zednik 2010). The day job is less common in design fields, but emerging designers may also hold day jobs as they seek entry into the design labour market (Ball, Pollard and Stanley 2010).

Hidden art and design careers

Until fairly recently, remarkably little has been known about the eventual employment destinations of graduate artists and designers (c.f. Ball, Pollard and Stanley 2010). However, analyses of census data from several countries including the United Kingdom and Australia (Cunningham and Higgs 2010; Higgs, Cunningham and Bakhshi 2008) suggest that there are many work opportunities for artists and designers beyond what is traditionally considered.

First, while the number of specialist analogue art and design opportunities within the sector remains stable (and for some occupations is decreasing), digital-based design and other creative digital specialist occupations (e.g., animation) are trending upward. Second, there are twice as many occupations responsible for managing, accounting for, and technically supporting creative activity than doing it, and this number may be increasing slightly. While artists and designers may not wish to pursue this creative-enabling work full-time, they may wish to include a strand of it in their career portfolios, particularly if they show aptitude in these areas and are already engaging in such activities e.g., through their own art or design businesses.

However, possibly the most interesting finding of the census analyses is that more people in art and design occupations are employed *outside* the creative sector than within it. That is, they are working as artists or designers, but are ‘embedded’ outside the arts sector in industries such as health or natural resources. An example of an embedded artist is a games artist for educational ‘serious game’ software – they work as an artist, but in the education sector. Embedded creative professionals routinely deal with employers, clients and other stakeholders from disciplinary backgrounds often quite dissimilar from their own.

Art / design careers in the 21st century can therefore be seen to possess characteristics which make them distinctive and unusual – in a nutshell, they comprise highly creative work undertaken within a portfolio career pattern, often in sectors and businesses outside art and design. There are a number of equally distinctive skill and professional capability requirements which flow from these characteristics, as will be exemplified through the findings of a qualitative study of the careers of outstanding Australian artists and designers.

Study Method

We used in-depth, semi-structured interviews and Grounded Theory analytic strategies (Strauss and Corbin 1998; Glaser and Strauss 1967) to explore the career-related experiences of the sample of nine outstanding artists and designers. The aim of Grounded Theory is to construct an emergent theory from data collected from participants relating to their experiences of the phenomena under study. The theory is constructed through an iterative process of data collection, data coding, and conceptualisation / theorisation. Emergent theoretical constructions are repeatedly verified, modified and enhanced through the addition

of new data, until theoretical saturation is reached; that is, further data collection does not result in further changes or additions to the theory.

As is customary in qualitative research, a theoretically drawn sample (Huberman and Miles 2002) was used in this research study. Nine artists and designers were sourced progressively through media searches, awards scheme archival information, and by word of mouth. They were selected according to eligibility criteria, and also in accordance with the constant comparative method for maximum variation within the sampling frame – particularly by primary field of practice, which helps ensure maximal generalisability of the generated theory (Glaser and Strauss 1967). Eligibility criteria included: (1) Australian nationality (by birth or naturalisation), (2) working in art and/or design disciplines, (3) national or international level award/s or other, equivalent, peer-based recognition; and (4) less than 10 years since completion of formal education (to limit the participant pool to mid-career, and ensure relatively good recall of formal educational experiences). The primary fields of practice of the artists and designers included: graphic design; visual communications design; interior design; fashion design; visual art (painting); visual art (sculpture); visual art (photography); games art; and animation.

An initial recruitment email contained information about the nature of the study and eligibility criteria, and invited participation. Potential participants were then followed up by telephone. All of the artists and designers who were approached agreed to participate. A researcher then either travelled to conduct face-to-face interviews, or where participants were located overseas or were otherwise not available for a face-to-face meeting, conducted telephone interviews. The 60-90 minute interviews were recorded and transcribed for analysis (Strauss and Corbin 1998; Glaser and Strauss 1967) during the interviewing process. The data were deidentified, as agreed with participants, for analysis and reporting. Participants will be referred to as ‘artist’ (‘A’) or ‘designer’ (‘D’) and by number for the purposes of the present discussion.

In accordance with the Grounded Theory approach (Strauss and Corbin 1998; Glaser and Strauss 1967), we asked exploratory questions based on existing literature relating to the influences on individual career development, and determinants of the participants’ career success. An emergent theoretical model was constructed from successive iterations of data collection and coding, including components relating to intrapersonal factors such as

motivations, personal background and developmental factors, skills, and socio-environmental conditions. This article concentrates on one distinct component of the theoretical model: high level ‘generic’ professional capabilities for the 21st century creative career.

The next section of this article will describe and discuss these skills and professional capabilities. Findings from the study, including participant quotes, and the extant literature will be woven together to build a meaningful narrative relating to each capability theme.

Study Results

Career self-management

In the portfolio career pattern, the onus is on the artist or designer to repeatedly obtain or create employment and to manage their own career progression (Arthur et al., 1999). Unlike the ‘traditional’ linear career pattern within one organization and in one sector, in which professional development and other career development actions such as promotion are often mediated by a human resources department and/or a work supervisor, a much greater imperative exists for portfolio careerists to recurrently obtain or create employment for themselves, and otherwise manage their own careers in an ongoing way (Arnold 1997). Author (2011) demonstrated an empirical link between the propensity and ability to career self-manage and positive career outcomes among emerging and established artists, designers, and other creative workers who engage in portfolio careers (such as musicians and film makers).

Career management can be viewed as the ability to build a career; to manage intentionally the interaction of work, learning and other aspects of life throughout the lifespan (Haines, Scott and Lincoln 2003; Watts 2006). Career management occurs through an ongoing interaction of reflective, evaluative and decision making processes, based on ongoing information gathering about self and the world of work (Author 2009). Effective career self-management involves a significant degree of adaptability and self-reinvention, driven by metacapabilities (Furlong and Johnson 2003) – an overarching set of skills which guide and steer ongoing learning and career building activities in ways which are aptitude, value, and lifestyle congruent for the individual, and are also likely to be attractive to potential clients and employers.

*To some degree anyway you’ve got to be prepared to go with what the market wants.
But you also have to keep hold of that passion ... which got you into it in the first*

place. There's no point otherwise. So you've got to keep one eye outward, one eye inward, and one eye on the horizon figuring out what happens next. You have to be a three-eyed monster [laughs] (A4).

Underpinning the self reinventive process of career self-management is the development and maintenance of an adaptive career identity (Meijers 1998). The term career identity relates to self-definition in terms of work or career. It describes 'who I am', 'who I want to be', and 'what's important to me' in the career context, and acts as a cognitive compass (Fugate, Kinicki and Ashforth 2004, p.17) which provides input into the process of direction and regulation of individual's learning, job creation and acquisition actions, and career building strategies. Career identity is not fixed through the lifespan. It is grounded in past experiences and future imaginings and desires, and it also shifts over the life course in response to changing needs and new experiences. Adaptive career identities are realistic ones (i.e., based in good information about the self and the world of work). Adaptive career identities are also flexible, multifaceted and broad enough to ensure that the individual's career goals are likely to be met (Author 2011).

Finding out who I was as a visual communicator took a long time but it was so important because everything you do is based on that (D2).

...it's not something I learned at uni, no – it's kind of, what's my niche which you do talk about at uni, but your niche can be broader than you think, or three or four things and it can change, it should change... I know what my core is and providing there's some element of that I can basically go anywhere, do anything (A1).

Unfortunately, students in any discipline can hold unrealistic expectations of the career they will engage in, the nature of the workplace, and what their roles in the workforce will entail (Perrone and Vickers 2003). Students who must adjust their views markedly to fit with the reality of work in a job or field will have difficulty in their transition-to-work experiences (Holton and Russell 1997). In art and design fields, as with others in which the portfolio career pattern is dominant, the aim should be to have graduates depart university with a strong and realistic sense of: (1) their own capabilities, values and career aspirations; (2) the nature and workings of the world of work in their intended discipline/s; along with (3) the reflective, evaluative and decision-making capabilities to begin to build a satisfying career.

Enterprise and Entrepreneurship

The portfolio career pattern in art and design leads logically to the need for a second, related, cluster of skills: those of enterprise and entrepreneurship. While there remains some confusion around what these terms should and do mean with respect to art and design education (see, for instance, Beckman 2007) broadly speaking these are the skills associated with the application and distribution, as opposed to the generation or making, of creative work. Two senses to this cluster of skills will be discussed here – the new business venture start-up and creation ‘entrepreneurship’ sense, and the opportunity identification / creation and value-adding ‘enterprise’ sense (Drucker 1985; Dees 1998; Schumpeter 1934)

It seems inevitable that artists and designers, the majority of whom are likely to be self-employed to some extent, must be equipped to engage in venture start-up and management activities to some degree. The National US Content Standards for Entrepreneurship Education (Consortium for Entrepreneurship Education 2004) outlines some 403 skills across 50 skill ‘clusters’ which may be required by entrepreneurs in order to start and manage a business, covering areas such as sales and marketing, legal issues, business strategy, and finance. However, while nearly all artists and designers will probably need to be conversant with the basics of entrepreneurship (Author 2010), they probably will not need in-depth knowledge across all areas of business management. Lazear (2004) reports that entrepreneurs can usually get away with being generalists – i.e., they may not need specific knowledge of the workings of in-depth topics such as accrual accounting or taxation law. Recent research with creative workers suggests that those who do not have the natural inclination for running a business may in some instances be able to form partnerships with more entrepreneurially inclined individuals, and thus may only require a consciousness of the commercial sphere, an appreciation of the importance of entrepreneurship, and an understanding of core business concepts (Author 2011b).

I think that if you've got a good product you need to find the best way of getting it out there or it's pointless. We knew we had something fantastic ... but we really had no idea at all when it came to business models ... or any of that. It just isn't my thing. Thankfully I knew this guy... (A4)

Rather more central to the activities of a professional artists or designer in the 21st century is enterprise: the identification or creation of creative opportunities, and exploitation of those opportunities in terms of applying creativity in order to add value of some kind. In order to build a sustainable career in art or design, it is increasingly insufficient to rely solely on technical expertise and creative ability; creative workers also need to be outwardly focussed, and driven by opportunity.

There are many lists of qualities for successful enterprise which come from the general business literature. Duening (2010) utilises Gardner's (2006) 'minds' approach to present a theoretical framework for enterprise capabilities which is generic to all disciplines. Each enterprising 'mind' is a meta-categorical representation of a range of cognitive sub-skills that have been identified through research to be important to enterprise success. The five minds for the entrepreneurial future are: (1) The Opportunity Recognising Mind; (2) The Designing Mind; (3) The Risk Managing Mind; (4) The Resilient Mind; and (5) The Effectuating Mind.

Briefly, Duening's (2010) Opportunity Recognising Mind identifies distinctive patterns in factors like consumer behaviour, resource availability, and economic conditions, as creating a potential opportunity. The Designing Mind then works to exploit that opportunity, by creating a new product or service; or redesigning a product or service to meet market needs. The Risk Managing Mind minimises risk in the venture, either by adapting to ambiguity and living with risk, or by external strategies such as raising capital from external investors. The Resilient Mind is behind effective rebounding from failure, in emotional, financial, and reputational spheres. The Effectuating Mind undertakes focussed and goal-directed action, orientated towards understanding and exploiting the gap between current and future reality.

Coming up with ideas, yeah there's a bit of fun in that, but you know everyone's got a hundred ideas and if you're working with fifty people that's five thousand ideas... you've got back them up with what you call the execution. An idea that people can't interact with has no real value. Successful implementation has been a big part of what I've been about. (A3)

Enterprise and entrepreneurship are controversial in the arts (and less so in design), largely because of the profit imperative which traditional business entrepreneurship literature (e.g., Timmons and Spinelli 2003) seems to take as the sole benchmark of success, as do some creative industries and creative economy theorists. For instance, in the seminal work 'The

Creative Economy', Howkins (2002) states that successful creative entrepreneurs must, realize their success will be measured in financial terms; the rest is in shadows (p.130). However, a growing body of literature acknowledges that the value derived from entrepreneurship and enterprise can also be social, cultural, environmental, or that there might be a combination of different types of value derived (Mair and Marti 2006). The 'quadruple bottom line' principle acknowledges interdependence and balance between economic, environmental, social and cultural spheres in order for enterprises to be sustainable. This means not giving automatic primacy to economics and relegating other values to serve economic imperatives (Hawkes 2001).

It's never about money money money. It's about making something beautiful and functional, meeting the clients need and your own and running a business as well. Clients want[ed]... [environmentally] sustainable solutions and it fit with our ethos... eco friendly became our thing. (D1).

A second interesting tension evident in some creative enterprises arises from the high degree of intrinsic motivation which is often brought to bear in creative work, which must be balanced with the needs of the market as part of successful enterprise. Often in the arts, there is a strong link between personal identity and practice. Artist participants talked about this 'balancing act' between being demand-driven and internally motivated, as being a key distinctive skill in being a successful and enterprising artist.

I never understood the selling out thing. You just figure out a way to meet your artistic needs in a way that will also pay the rent. I know it's easy to say and maybe harder for people to do but it's something I have always had no problem with. (A2)

In summary, most artists and designers will need to possess enterprise and entrepreneurship capabilities to some degree, although an expert level of knowledge in specialist business functions may not be required by the emerging artist or designer. University students will certainly benefit from gaining an appreciation of the extent to which their discipline is entrepreneurially driven, along with a basic knowledge of what it takes to run a creative business. Students must also be given the opportunity to reflect upon the potential benefits of creative enterprise for them individually – how their creative, financial, social and personal aspirations might be met through such endeavours, and how their enterprises might be built

with these ends in mind. As demonstrated by the participants in the present study, successful creative enterprise and entrepreneurship does not have to be about mindless commercialising.

Transdisciplinarity

In contrast with the similar terms multidisciplinary and interdisciplinarity which involve disciplinary rapprochement but do not break disciplinary boundaries, transdisciplinarity is integrative in nature (Jantsch 1972). Transdisciplinarity involves synthesis and integration of knowledge and perspectives from multiple disciplines. Transdisciplinarity has become increasingly accepted by science and technology disciplines in terms of both research and development and teaching activities (Klein 2004). There is agreement that problems of society are increasingly complex and interdependent, are not isolated to particular sectors or disciplines. Gibbons and colleagues (1997) proposed a new 'mode 2' form of knowledge production in science, characterised by complexity, hybridity, non-linearity, reflexivity, heterogeneity, and transdisciplinarity. In mode 2 production, configurations of knowledge are generated in an ongoing way, with multiple and diverse stakeholders are involved in formulating a problem from the beginning, contributing heterogeneous skills and expertise.

It is also becoming clear that transdisciplinarity and mode 2 thinking are essential in at least two ways to the creative sectors of advanced economies: as an underpinning to creative content and service creation, and as a driver for effective delivery and distribution of creative products and services (Author 2011). In the former instance, expertise, knowledge and perspectives from multiple sectors (e.g., health science and visual communication design) or multiple disciplines within sectors (e.g., modern dance and animation) is combined and integrated in novel ways to produce truly innovative creative work. The participants in the present study possessed transdisciplinary backgrounds including: architecture and sculpture; mathematics and visual communication design; microbiology and painting.

In the latter instance, disciplinary expertise is combined with expertise in different forms for optimal delivery of creative content (e.g., transmedia and novel staging), and/or with business, marketing and entrepreneurship expertise to identify and exploit market opportunities (Author 2010).

By the time I went to VCA [Victorian College of the Arts] I already had a successful t-shirt business at St Kilda markets and online... yeah I designed the t-shirts and did

really well actually, it was easier because my family ran a small business when I was a kid.(D5)

Transdisciplinarity for both creation and enterprise demands more than possession of multiple skill sets. It requires epistemological and cultural agility. That is to say, it requires the invention of new dialects and capacities for translating across well established and largely impermeable disciplinary boundaries (McWilliam, Hearn and Haseman 2008). Individual transdisciplinary capability is important in the art and design sectors (where there are a large number of micro-businesses and SMEs, and thus individuals must adopt multiple roles in the value chain – e.g., procurement, HR functions, creative art/design work, and marketing), and among artists and designers who are ‘embedded’ in other sectors like health, education or mining. Transdisciplinary innovation will often occur collaboratively, through the actions of a multi-disciplinary team (Author 2010).

Social networking capability

The participants were selected for the present study in part because they had received a significant degree of individual recognition for their creative work. However, participants indicated consistently that they had in no way worked in isolation. Rather, they relied heavily on input of various kinds from other people. Put another way, their social networks provided a significant proportion of the ‘ingredients’ required for creative success. Indeed, several participants refused to discuss their achievements in individual terms, indicating that being ‘too much of an individualist’ was counterproductive.

If you are in a team and you involve yourself in many projects and you give your ideas into the big pot of ideas and others do the same, then you won't have that output just for yourself but you will have more output overall, and in the long term it will benefit you. You are going to get paid back multi-fold for that and you will have a very good network, will have made friends. (D2)

It is widely accepted that social capital is very important to the success of individuals and enterprises throughout the creative industries. Much has been written about the network mechanisms that are responsible for the generation of social capital, and also the strength and groupings of connections in networks (Burt 2000). However, much less is known about these connections at the level of the individual and small groups. Despite a plethora of popular literature in the area, we know a surprisingly modest amount about how artists and designers can go about creating

and maintaining optimal social networks for creativity and career success (c.f. Seibert, Kraimer and Liden 2001)

At the individual level, social networking capability involves the capacity to build and maintain personal and professional relationships with others for mutual benefit in work or career (Forret and Dougherty 2001). It is through these relationships that much of the processes of both creation/making and enterprise/entrepreneurship occur. Being social network capable involves what McWilliam and Dawson (2008) refer to as network agility—the ability to develop and navigate social networks in a strategic and enterprising (and yet genuine) manner. What kinds of relationships are likely to be helpful to building the creative enterprise? Who possesses key capabilities the artist or designer needs and can work with effectively? Which weak ties can the artist or designer make now which might be able to be turned into an important strong tie (e.g., collaboration) later?

Empirical research (Author 2011b) suggests that successful creative enterprise relies on social networks in three main ways: (1) by fostering creativity through exposure to new people and new ideas (particularly through multidisciplinary input and transdisciplinarity) (Granovetter 2005); (2) by providing a uni-disciplinary ‘powerhouse’ of strong-tie relationships which helps ensure that creative ideas are integrated, implemented, and brought to fruition (Obstfeld 2005); and (3) by finding opportunities for enterprise – for example, new markets (Author 2011b).

You have to keep both (types of relationships) up. You need a strong team of creative people with a shared vision, and you get together and get the work done and then get it out there, but you also need to not be afraid to go outside the team for new ideas and inspiration. Then you draw those new outside people in as well, see what happens, mix it up a bit. (D1)

I think networking is definitely a really great way of finding the new project or finding your next interest. You never know who is going to look at your work and you never know who is maybe interested in getting in touch with you and work with you or use your work. That's why I am on Facebook and I am on Twitter and all the other social network media. I think definitely social network media is a great tool for opening new possibilities. (A2)

The study findings suggest that students need a more nuanced understanding of social relationships and social networks than is commonly acknowledged by educators or in the research literature. Skills such as communication, teamwork, and interpersonal skills are commonplace in graduate attribute skill lists, and are routinely included in higher and

professional education programs (Bennett, Dunne and Carré 1999). These socially oriented generic skills are certainly essential to social network capability. However, they form a small subset of the skills required to form, develop, and maintain networks. Students should graduate from programs with a working knowledge of how to form and maintain professional relationships (particularly with stakeholders from multiple disciplines and with diverse aims), and how different kinds of relationships can contribute to various aspects of creative work.

Discussion and Implications

Curriculum for 21st century creative career capabilities

The present study identified a number of broad 21st century capabilities which are associated with success in art and design, alongside the strong disciplinary skills / knowledge and creative abilities which are already fundamental foci of tertiary art and design programs. These capabilities: career self-management; enterprise and entrepreneurship; transdisciplinarity; and social network capability are central to navigation of art and design careers and the application and distribution of creative work, as well as the core creative practices of art and design. The findings suggest the need for 21st century graduates to be far more outward-looking – for instance, to recognise and exploit opportunities actively, and to engage in proactive relationship building. However, they may also need to be more reflective and introspective in some respects, particularly in terms of ensuring that their creative work is personally value congruent, both in terms of their career aims and career building efforts, and in terms of the objectives and practices of the enterprises they create or become involved with.

Critical to the effective acquisition of disciplinary and 21st century skills is the development of an adaptive and adaptable career identity, which becomes a filter for all engagement with the curriculum. Rather than front-loading courses with disciplinary content and allowing much career identity development to occur in the final semesters of study (or even after course completion), it is suggested that students begin to be exposed to various aspects of ‘real world’ professional practice in their fields within the first year. As Nystrom and Dahlgren (2008) and Hodkinson and Hodkinson (2003) argue, a realistic and adaptable career identity is developed through exposure to the work context, which causes student learning to become contextualised, meaningful and useful. Thus, the tertiary curriculum becomes far more immediately significant to students, and they are able to start building more complex and realistic cognitive frameworks from which to make sense of disciplinary learning

materials. Adaptive career identity drives the responsive acquisition of relevant disciplinary capabilities both during and beyond university (Author 2011). 21st century skill development does not necessitate the ‘dumbing down’ of curriculum, or a paring back of disciplinary content. It involves a restructuring so that students can engage with disciplinary content more meaningfully.

Early student exposure to professional environments and practices also engenders better appreciation of the generic skills required by artists and designers. If practising professionals model career self-management, social networking and entrepreneurship as part of their usual working practices, students observing them and working with them are more likely to view these skills as useful, rather than seeing them as ‘irrelevant’ and then disengaging from certain learning activities (as a first year visual arts student once said to the author: This group assignment isn’t relevant to me. I’m going to be a painter, so I won’t need to interact with anyone else).

One key to the development of the capabilities outlined in the present research is experiential, project-based work (Raffo et al. 2000). Theoretical knowledge relating to 21st century capabilities (e.g., social network theory, enterprise theory, career management theory) can be supplemented with case studies of successful art and design enterprises which model the capabilities in concrete ways. Authentic, situated learning opportunities such as industry-based internships (Crebert et al. 2004) provide further modelling of 21st century skills in situ.

By the conclusion of their programs of study, students should also have had experience creating and managing their own enterprises in the safe environment of university, including building their own transdisciplinary project teams. Some success has been had in mixing advanced students from different programs for the purposes of joint project-based learning (Hammer and Soderqvist 2001). Student projects can begin as pieces for assessment, and may grow into ‘real’ enterprises with the help of industry mentors, creative business incubators, and teaching staff. Appropriate scaffolding of students' experiential learning processes, from a collaborative team of academic advisors, careers education specialists, and (possibly) more advanced students or recent graduates, is vital to the success of the development of these capabilities.

The development of advanced disciplinary, creative and technical skills via studio-based and traditional teaching forms should remain the core aim of art and design higher education. 21st century capabilities must also be woven through the educational experience, to ensure that these core skills find purchase, and students can build fulfilling and sustainable careers.

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