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Portfolio Literacy and the Transition to Work for Graphic Design Graduates

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Abstract

The graphic design industry has moved beyond its traditional focus on printed matter to deliver multidimensional communication projects involving diverse audiences and media channels. No longer a skills and service industry, graphic design increasingly informs business strategy and innovation processes, requiring heterogeneous expertise, a rigorous design process and the ability to work in multidisciplinary teams. This shift raises the question of the relevance of a traditional design portfolio in demonstrating employability, especially when employers prioritise generic over disciplinary and technical skills. Our article reports the results of a survey of 53 Australian employers of graphic design graduates on the role of the portfolio in evidencing design-specific and more general employability skills, capacities and attributes. The article provides a deeper understanding of the role of a portfolio in the transition to work. We argue that graphic design graduates need 'portfolio literacy'—which combines insight in the curation of the portfolio and its use in interview performance—to demonstrate both core graphic design and creative skills and capacities in communication, collaboration and problem-solving. This significant know-how is best developed during graduates' tertiary studies.

Keywords

capacities and attributes, graduate employability, graduate skills, graphic design, portfolio literacy, recruitment

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Introduction

Traditionally, a graphic design portfolio was a physical collection of design projects bound into a book or housed as a set of sheets in a folder, its role being to demonstrate a designer's capabilities and experience to prospective clients or employers. Before Australian graphic design schools were absorbed into the tertiary education sector in the early 1990s, students submitted their semester of work for assessment as a portfolio. Lecturers' appraisals of these portfolios developed students' insight into curating their work to showcase their achievements, their final-year portfolio being of immediate use in securing employment. The shift away from the studio model in design education, fragmenting teaching and learning into a constellation of units and assessment tasks, has de-emphasised the role of the portfolio in capturing graduates' skills and interests, thereby limiting their ability to self-direct and articulate their design narrative visually.

Many university students focus on academic success rather than eventual employment (Clarke 2018; Jackson & Bridgstock 2018), and while some design programs offer work-integrated learning through industry projects and briefs, few students explore career options until after graduation (Bridgstock 2009, p. 40). In graphic design, this leaves many graduates scrambling to compile a portfolio to demonstrate employability in the highly competitive graduate labour market at a time when the nature of graphic design practice has significantly expanded in scope and complexity (AIGA Educators 2017; Davis 2012; Harland 2011; Kelly 2018). Fontaine (2014) defines today's graphic designers as 'problem-solvers first [and] image-makers second' (p. 49), regarding broad collaboration and thinking skills as being as relevant to contemporary graphic design as core design knowledge and skills. Graduate graphic designers are increasingly required to demonstrate heterogeneous skills, capacities and attributes to be attractive to employers. This reinforces the continuing relevance and importance of the graduate portfolio in helping students evidence their skills through tangible outcomes.

Our article describes a survey of employers of graphic design graduates, undertaken to identify the range of skills, capacities and attributes employers seek when hiring and the role of a design portfolio in demonstrating them. Survey respondents sought a mix of design, technology and generic skills through both portfolios and interviews, and sought generic skills including communication skills, problem-solving, professionalism, self-management and teamwork skills. The survey also showed that graphic design graduates should present a broad selection of project work to prospective employers, in physical and digital form and via online platforms. This finding suggests a misalignment between what employers of graphic design graduates seek and graduates' ability to package and leverage their work to substantiate their employability in an interview. In identifying a barrier to graphic design graduates' transition into the workforce, our article highlights scope for the augmentation of teaching and learning in graphic design education to include portfolio and interview preparation within the curriculum and through the addition of ancillary upskilling programs.

Literature Review: The Context in Which Graphic Design Graduates are Employed Today

Employability is defined as an individual's ability to find and sustain employment (McQuaid & Lindsay 2005); it is important to both graduates and higher education providers (Clarke 2018; Whiteley 2016), for several reasons. Higher education

fees in Australia have risen dramatically in recent years, leaving graduates with significant debt, which makes rapid career progression a necessary goal for many (Jackson & Bridgstock 2018). Simultaneously, following the massification of Australian higher education, graduates face a soft employment market (Karmel & Carroll 2016) characterised by stagnating wages and considerable unemployment and underemployment (Clarke 2018). Niche design programs can be especially prone to these effects, with progression into the workforce being highly competitive due to diverse influences ranging from the desirability of creative careers (McRobbie 2015) and consequent high number of graduates (Jackson & Bridgstock 2018) to the globalisation of 'gig work' in creative industries through platforms such as Freelancer and Upwork (Gandini 2019).

In this climate, universities have begun to compete to produce employable graduates with professional attributes (Jackson & Bridgstock 2018). The Australian government increasingly links higher education policy, funding and the credibility of universities to the creation of job-ready graduates and graduate employment rates (Jackson & Bridgstock 2018; Tehan 2020). Australian governments and employers expect universities to produce graduates with transferable skills (Hinchliffe & Jolly 2011) who can make an immediate impact (Clarke 2018). To this end, universities have introduced work-integrated learning programs that give students access to industry experiences, including internships or work placements (Clarke 2018), providing the means to demonstrate employability (Bourner & Millican 2011). However, Bennett *et al.* (2016) argue that employers, education leaders and students do not see academics as having sufficient knowledge of conditions in industry to assist graduates to transition to work. Universities are seen as failing to capitalise on opportunities, with industry practitioners who teach part-time not allocated the time or resources to provide career counselling or curriculum development to assist students to become job-ready (Bennett *et al.* 2016).

Employers particularly value the ability to navigate complexity within changing environments (Clarke 2018; Bennett *et al.* 2015; Bennett *et al.* 2016; Bridgstock 2009). A focus on employability during university studies is seen to increase industry readiness (Tymon 2013; Clarke 2018) and assist in developing students' pre-professional identity (Jackson 2016). Students typically expect their courses to contribute to their employability and prepare them for the 'real world', but many have little notion of the fields of work they might like to join (Bennett *et al.* 2016), suggesting they are unlikely to appreciate how to gain employment in a competitive labour market. This is a noted problem for a creative career such as graphic design, which many aspiring and practising designers, and employers, regard as a vocation rather than work (McRobbie 2015). Creative careers are seen as inherently rewarding for their scope to exercise creative agency, individual talent and self-actualisation (Neff *et al.* 2005).

McRobbie (2015) argues that the 'euphoria of imagined success' propels legions of graduates to pursue creative careers despite 'the impediments and obstacles of the creative labour market' (p. 3). In such circumstances, Okay-Somerville and Scholarios (2017) stress the importance of graduates adopting proactive career behaviours. They contrast the lack of research into career self-management with the interest in graduates' educational and social backgrounds as factors that influence employment. Various authors show that social and educational disadvantages combine to systematically deny some graduates equal access to good jobs (e.g. Kalfa & Taksa 2015; Mavromaras *et al.* 2010). Okay-Somerville and Scholarios (2017) argue that unlike educational and social background, the

process of becoming employed is not fixed and should be a focus for researchers and educators concerned with improving graduate employability. They argue that universities should be proactive in mediating between education and employment in developing graduate's career self-management capabilities.

Career self-management in creative industries includes the development of identity and self-understanding (Duffy 2015a; 2015b), described as 'part of an individual's labour' (Eikhof & Chudzikowski 2019, p. 34) in securing and maintaining a creative career. A design portfolio is a traditional part of career self-management, but its physical form has changed since the introduction of the Apple MacIntosh in 1985 disrupted the nature of graphic design. The rise of digital portfolios and online image-sharing platforms have further displaced a physical portfolio in demonstrating creative and technical skills, knowledge and experience, and in building a professional profile via self-branding. Scolere and Humphreys (2016, p. 1) describe 'the curatorial labor practices of design professionals' on online image-sharing platforms, where digital images of design projects are used to forge a creative presence as a component of career management.

Globalisation and information and communication technologies have eroded the conditions for employment in creative industries. Creative industries have led other industries in replacing formerly well-paid, high-status jobs with exploitative and insecure work, with individual workers taking on many of the risks previously borne by employers (Fleming 2017; Neff 2012; Neff *et al*. 2005). Bennett *et al*. (2016) include the creative industries among the 'ill-defined, complex or difficult to enter sectors' (pp. 9-10). Students educated for creative careers have significantly less chance of employment in their chosen field than those educated for traditional vocational professions such as engineering, law and medicine (Bridgstock *et al*. 2015; Thorley 2014). The Quality Indicators for Learning and Teaching Graduate Outcome Survey (2020), which measure full-time employment following graduation, shows that in 2020 only 45.8% of Australian graduates in the creative arts and industries had obtained full-time work 4 months after graduation as opposed to Engineering (83%), Law (75.7%) and Medicine (86.7%).

The hurdle to employment for graphic designers is also linked to the changing nature of graphic design. Over the 20th century, graphic design developed into a field focused on transforming client's messages into visual solutions (Buchanan 2001; Givechi *et al*. 2006; Meggs & Purvis 2012), using the selection and application of visual elements including typography, image (illustrations, photographs, symbols) and schematic elements (colours, line, borders) to create aesthetic impact and visual coherence (Frascara 2004; van der Waarde 2009; van de Waarde & Vroombout 2012). However, graphic design and its contexts have broadened significantly, requiring design consultancies and individual designers to extend their skill sets beyond core graphic design skills. Tertiary design education is criticised for not equipping graphic design graduates with the skills, capacities and attributes to be of value to contemporary industry and society. A much-cited 2012 issue of the graphic design journal *Visible Language* titled 'Envisioning a Future Design Education' saw leading design academics extend the competencies of contemporary graphic designers to encompass business strategy, innovation management and service design (Davis 2012), collaboration skills (Ockerse 2012), capacity for continuous learning (Poggenpohl 2012), complex thinking integrating the creative, critical and rational (Venkatesh 2013), evidence-based approaches to design (Frascara & Noel 2012; Poggenpohl 2012) and broad cultural knowledge and experience of the world (Poggenpohl 2012) as informed by anthropology and

psychology (Davis 2012). Substantiating such calls, leading global management consultancies' co-option of Design Thinking has challenged graphic design agencies to offer wider services that align creative approaches with business strategy (Bruce & Bessant 2002; Feldman & Boult 2005; Stevens & Moultrie 2011; Ward *et al*. 2009).

There is a wealth of research in diverse disciplines on the skills, capacities and attributes that employers seek in graduates (e.g. for the apparel industry, see Tain 2010), and many studies focus on employers' satisfaction with graduates' skills (e.g. Cranmer 2006; Doloswala *et al*. 2013; Dziobczenski & Galeotti 2017; Tymon 2013). A branch of this research examines job advertisements to establish what skills, capacities and attributes employers expect, including in architecture (Salleh *et al*. 2013) and industrial design (Ramírez 2012; Yang *et al*. 2005). Dziobczenski and Person (2017) studied 1,406 job advertisements for graphic designers in the United Kingdom (UK); 41.3% listed a portfolio as a requirement for application. They argue that employers should focus their requirements in three main areas: competence, or what graphic designers should be able to deliver; knowledge and skills, or what graphic designers should know; and desirable personal characteristics. Dziobczenski and Person show that these requirements vary according to seniority and between positions for in-house graphic designers employed within a company and freelance designers who are self-employed.

There is a modest literature on the role of the design portfolio as a tool for gauging job applicants' creative and technical skill in design fields (e.g. Ashton 2015; Barrett 2013). Romeo (2017) studied employers' expectations of the organisation, presentation media and content of portfolios submitted for secure internships and entry-level jobs in apparel design. She highlights that the portfolio is more than a simple representation of job applicant's skills and knowledge; the effort and acumen invested in its preparation indicated an applicant's goal-setting abilities and resilience. To date, no known study has examined the role of a design portfolio in how employers of graphic designers assess graduates' design capacities and technical knowledge in relation to general skills, capacities and attributes.

Methods

Between December 2018 and January 2019, we surveyed Australian employers of graphic design graduates about the role of the design portfolio in demonstrating desirable employability skills, capacities and attributes. We adapted a survey conducted with employers of graphic designers in the United States (Gomez-Palacio & Vit 2015) to suit the Australian context, changing some of the terminology and reorienting it to graphic design graduates seeking their first job rather than graphic designers who were already employed. The survey was further adapted to obtain more background information on respondents, deeper insights into their expectations for the form of the portfolio, information about how graduates secure an interview, and information about how to present skills, capacities and attributes through a design portfolio at an interview.

The survey was offered on the Qualtrics online survey platform. It had four sections: how job applicants should make initial contact with employers; the format of the portfolio and presenting it in an interview; expected skills, capacities and attributes; and information on respondents' industry context. Questions on portfolio format included the kind and scope of work, what contextualising information

should accompany projects, and preference for a digital or physical portfolio. Multiple-choice questions provided quantifiable data on respondents' preferences; in eight questions, respondents were asked to comment on their answers. For example, Question 12, about whether respondents expected graduates to lead the discussion of their portfolio, asked respondents to explain their preference. These open-ended responses gave more information on how aspects of the portfolio and the graduate's interview performance mapped against expectations of skills, capacities and attributes.

Section 3 of the survey asked respondents to rate the importance of 28 skills, capacities and attributes on a 5-point Likert scale (*not at all important*, *somewhat important*, *moderately important*, *very important*, *extremely important*). Each skill, capacity or attribute had an accompanying definition to promote validity (measurement of the intended construct); for example, professionalism was defined as professional conduct, attitude and initiative. In analysis, we related these ratings to the respondents' comments to determine why certain choices were important and how they a portfolio aided them in the interview context. In considering which skills, capacities and attributes to rate, we drew on Dziobczenski and Person's (2017) analysis of graphic design job advertisements in the UK. The UK and Australian graphic design industries have long been linked, with several design agencies having offices in both countries and many designers moving between them. In nominating general employability skills, capacities and attributes for respondents to rate, we drew on Clark (2018), Cranmer (2006), Jackson and Bridgstock (2018) and Majithia (2017).

A link to the survey was sent nationally to design recruitment agencies, placed on the Australian Graphic Design Association website, and through the researchers' professional networks using LinkedIn, Facebook and other social media platforms. As our university's Human Research Ethics Committee required, all survey responses were anonymous. Fifty-three respondents completed the survey, most living in New South Wales, Queensland and Victoria. The respondents worked in graphic design studios employing from one to over 20 people, rather than non-design firms with in-house design departments (Figure 1). Figure 2 shows the respondents' duration of employment in the design industry.

Data Analysis

After the survey closed in February 2019, we calculated and graphed the quantitative data as percentages. To code and analyse the qualitative data, we imported it into NVivo for Mac 1.4.1 (QSR International). We discussed the objectives in coding before data analysis began. Participants' comments were analysed in relation to the role of the portfolio and interview performance in demonstrating graphic design or more general employability skills, capacities and attributes. From this coding, the implications of respondents' comments for the role of the portfolio and interview performance in graduates' transition to work were thematised. The coded and thematised data were cross-checked by members of the research team to validate the process. We used frequency counts to compare respondents' preferences and descriptive themes to conceptualise why they held these preferences and their implications for graduates.

Limitations

There were an estimated 6,500 graphic design and associated print related businesses in Australia in 2019 (Australian Industry and Skills Committee 2019) with

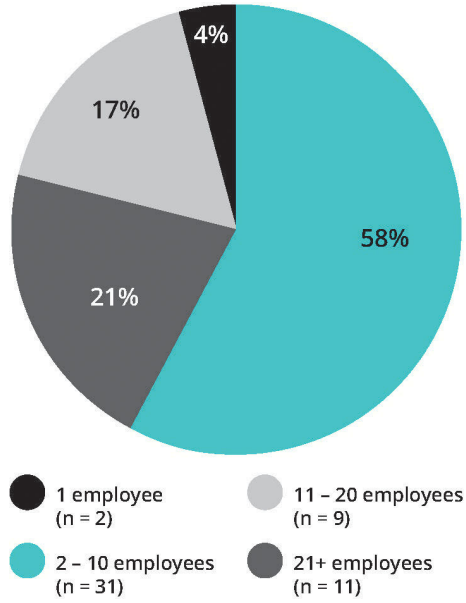

Figure 1
Size of design studios

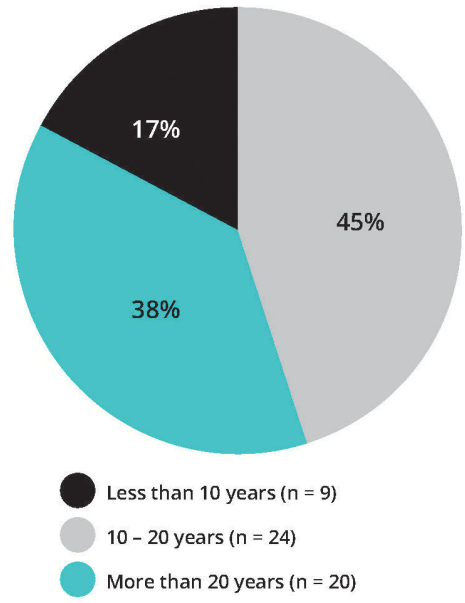

Figure 2
Respondents' duration of employment in the design industry

up to 62,100 people working as graphic and web designers or illustrators (ABS 2020). Our 53 survey responses represent a small proportion of these, although the fact that most were in New South Wales and Victoria—mirroring the distribution of graphic design businesses across Australia—suggests a degree of

representativeness, as does their distribution by number of employees (Figure 1) (Baikie 2021). It is possible that those motivated to respond had a particular interest in the employment of graduates, generating some bias in responses. We also recognise that giving respondents a range of design and generic skills, capacities and attributes to rate could have introduced ideas that they would have neglected if unprompted.

Results

Analysis of the survey data produced four main results. First, the respondents' comments elicited a wealth of insights into the preferred form of the graduate portfolio, its preparation and role in an interview. Respondents were divided between preferring a digital or a print portfolio, with some wanting both, the variation in respondent's preferences indicating that graduates need to prepare for varied scenarios in seeking employment. Second, the respondents' comments showed that what graduates say about their work in an interview demonstrates how they think about design and their design process, while also being a main source of insight into skills, capacities and attributes beyond graphic design. Respondents sought graduates with a multifaceted skill set. Third, for the survey respondents, the portfolio–interview couplet reflects a graduate's burgeoning creative identity and professionalism, the story behind the work often signalling general employability. Finally, our snapshot of industry preferences around the graduate portfolio indicates that graduates need to possess a quality we call 'portfolio literacy'. Portfolio literacy combines the visual narrative of the portfolio with interview performance, and requires knowledge of how to curate a portfolio and how to mobilise it in an interview. The portfolio literacy concept is developed in the discussion section. The following section reports on the research results in terms of the characteristics of the portfolio, the rating of skills, capacities and attributes by respondents, the curation of a portfolio and the conversation around its contents in an interview.

Characteristics of the Portfolio

As predicted, our results confirmed that almost all respondents expect to see a portfolio and use it to assess an interviewee's graphic design skills, processes and design experience. Ninety-eight per cent (n = 52) indicated they expect graduate designers to present a portfolio at an interview; the only respondent to indicate otherwise explained *'I'm interested in the person and expect their portfolio as a URL'*. Respondents' preferred formats were more surprising, with a clear preference for a digitised or online portfolio (52 %, n = 28) over a physical portfolio (32 %, n = 17); the remaining 16 % (n = 8) indicated no preference. There was no clear correlation between portfolio format preference and level of industry experience. Respondents also differed in their preferences for the orientation of digital and traditional bound portfolios. Those preferring an electronic portfolio expected to see a professional presentation of finished designs that they could review in their own time. These respondents were looking for a package of skills, one commenting, *'For a junior, prospective employers are more interested in their thought processes and Mac output, which can be assessed on screen'*. In contrast, respondents preferring a print portfolio expected finished designs to be complemented by evidence of ideation, decision-making, process development and handcraft skills, one respondent commenting, *'I really love seeing print projects in the flesh and seeing process, not just*

a slick, curated website.' Such respondents valued evidence of ideation and design process for providing important talking points in an interview, one commenting, '*a lot [of work] . . . has gone into the outcome and I want to hear about it. I want to hear in their voice that they care about what they are presenting and if they believe it's the right thing.*' These respondents also sought evidence of attributes and capacities beyond graphic design such as creative problem-solving, good communication skills and high personal drive. These could be characterised as emerging rather than typical design skills, one respondent commenting that discussion of the portfolio '*gives me an immediate reading of competence, ability to articulate ideas [and] personality type*'.

The competitiveness of today's graduate labour market, combined with the advent of digital portfolios, means that many graduates are being denied access to the lowest rung of the employment ladder. Prior to the digital era, employers seeking junior graphic designers routinely gauged graduates' design abilities, skills and experience by reviewing a physical portfolio at an interview. However, 81 % (n = 43) of our respondents indicated that they wanted an initial email contact to include sample design work; their comments reflect a labour market in which employers can choose the most fully formed candidates, rather than seeing graduates as human assets to be nurtured for the future of their businesses and the graphic design industry. Accordingly, some comments from respondents who wanted to preview digital work took a dismissive tone; for example, '*happy to take a call, but would always prefer an email with a link to a portfolio before agreeing to anything.*' Another described sample work as '*a good way to screen and organise people first before making further contact. When you're busy you need to prioritise workload, so it's just a more efficient, genuine way to deal with the many people who make initial contact.*' For others, it was more about efficiency: '*it gives me the opportunity to gain a strong insight to their skills and experience without having to go through multiple rounds of contact. This helps to speed up the shortlisting process.*'

As set out in Table 1, 46 respondents varied markedly in their preference for the number of projects they expected to see in a portfolio and the preferred duration of an interview (six participants had no preference). However, the preferences cluster around 25–30 minutes and four to seven projects, suggesting that prospective employers are prepared to devote significant time to a graduate to consider their employability and/or provide career advice. Combined with the diversity of preferences around portfolio format, these results suggest that graduates need to

TABLE 1 Interview duration and preferred number of projects in a portfolio

	10–15 min	15–20 min	20–25 min	25–30 min	30+ min	Subtotals
1–3 projects		3		3	2	8
4–5 projects	1	3	3	6	2	15
6–7 projects	1		3	7		11
8+ projects				2	1	3
No Preference		1	3	4	1	9
Subtotals	**2**	**7**	**9**	**22**	**6**	**46**

be prepared for significant variation in interview scenarios, to adapt their presentation as an interview unfolds, and to sustain a meaningful discussion about their work, all requiring mental agility and practice.

Skills, Capacities and Attributes

Figure 3 shows the means of respondents' ratings of 28 graduate skills, capacities and attributes in descending order. Nine skills, capacities and attributes achieved mean ratings of 4–5 (*very important–extremely important*), with professionalism and being self-driven rated most highly. Of the nine, five—professionalism, self-driven, teamwork, communication and problem solving—can be characterised as general attributes of the individual or employability skills. The remaining four—2D software skills, aesthetic and creative sensitivity, typography and implementation of style guides (a large part of the work of junior graphic designers)—are discipline-specific skills. The other 19 skills, capacities and attributes rated below 4. Among them, general employability skills—including analysis skills, the ability to work independently, and client relationship skills—were rated more highly than discipline-specific skills such as photo manipulation, interface design and photography.

Figure 3
Mean ratings of skills and attributes

The ratings suggest modern graphic design encompasses more than aesthetic decisions, form-giving and craft skills. Respondents' comments confirm that graphic design has become broader and more complex, necessitating graduates with behavioural and soft skills as well as technical ones. One respondent commented that *'far too much attention is spent on "professionalism" at the expense of creating rounded, interesting and confident individuals. We employ people first, and technicians second.'* (Note that professionalism was defined as professional conduct rather than technical ability, which could contribute to its high rating.)

Respondents' comments suggest that the need to work at a high strategic level in business influences the skills, capacities and attributes employers seek in graduates. One respondent wrote, *'The soft skills of the corporate world are just as important … as the rest. I favour well rounded students with personality, motivation and professional maturity over technical skills and fad design folios.'* Other comments reflect the fact that in the contemporary workplace graphic designers are likely to work in teams within the studio and with clients. One respondent commented:

> *Clear communication is the key, make yourself a part of the team and ensure you are gaining good contacts and the respect of your colleagues … Be humble and willing to take on advice, be thick-skinned but also be a sponge and ensure you are … developing your knowledge and skills.*

Portfolio Curation and the Conversation Around the Work

The respondents had few stipulations for portfolio content, placing responsibility for the selection of work on the graduate. One commented, *'this is completely up to the designer and what is most fitting to the studio they're applying for.'* Another respondent suggested a wide range of types of content was valid: *'I am happy to see sketching, concept, idea generation. I also like to see hobby work if relevant.'* A third connected the content to the graduate's creative and personal identity, introducing the concepts of authenticity and self-expression in commenting that a portfolio should include *'whatever they feel best represents who they are.'* These terms seem vague, but graphic designers are creative professionals who need a strong identity (Styhre & Gluch 2009). Simultaneously, the competitive nature of creative industries makes it difficult to maintain confidence in one's creative decisions (Round & Styhre 2017, p. 204), explaining the respondents' reticence to specify the content of a graduate portfolio beyond the expectations that this should reflect the graduate's authentic creative self and aligns with the type of work a studio undertakes. Conversely, the respondents' comments conflict somewhat with the high mean ratings for design and generic skills. Moreover, respondents' comments indicate that how graduates discuss the work in their portfolios is used as evidence for a range of generic skills.

Note that there is a basic tension in work in creative industries between 'creativity' and 'industriousness' (Brown *et al*. 2010). Round and Styhre (2017) argue that 'creative work is of necessity always based on the capacity to align and combine work processes and activities that demand different skills and identities' (p. 202). Graphic design involves both creative and routine, non-creative work as well as collective creativity, in which multiple designers and those with other skills collaborate on client briefs. The idea that a portfolio should be an authentic expression of the graduate reflects traditional notions of graphic design as the product of individual inspiration and personal craft skills. Such a quality also signals the

capacity to create new concepts, suggesting potential that an employer can leverage. While the idea of graphic design as self-expression is a poor representation of how graphic design works are produced today, this mythology clearly persists in the respondents' comments. Respondents' comments and ratings suggest that just as graphic designers today have work responsibilities that require heterogeneous skills, the uses of a graduate portfolio in gauging employability are heterogeneous, with the content of a portfolio needing curation to represent diverse denotative and discursive levels.

There is much academic debate about the value of work-integrated learning or project-based learning in preparing graduates for employment (McGlashan 2011; Mumford & Roodhouse 2010; Saris 2018). However, few respondents suggested graduates should substantiate their competence by including in their portfolios projects undertaken for clients. Generally, the conceptual and formalist quality of the work was taken as evidence of a graduate's basic ability to work in graphic design. One respondent indicated that a graduate's personal stylistic range was as important as industry exposure, commenting *'good to see if their work is a good fit aesthetically and whether they have any 'real world' experience in jobs.'* Respondents' comments on the content of a portfolio thus reveal that its curation is a balancing act; graduates must demonstrate their aesthetic sensibility, conceptual creativity *and* their capacity to attend to day-to-day practice.

The respondents simultaneously confirmed and problematised the industry mythology that securing employment is all about the portfolio and that design work speaks for itself. The results indicate that visually strong design work might secure an interview, but interview performance is pivotal in demonstrating employability. Despite not specifying portfolio content, the respondents saw its effective curation as important, demonstrating initiative, reflection and an emerging understanding of the design industry. As one respondent commented, the portfolio should be presented *'in the format/medium it was designed for.'* A portfolio should be relevant to the position on offer, one respondent stating that a portfolio of *'annual reports doesn't make sense for a digital studio.'* Our results indicate that to secure employment, graduates need a collection of design and process work that they can customise to create position-specific portfolios as required.

In addition to matching the portfolio to the interview context, 75 % of the respondents expected interviewees to lead the discussion of its projects. They indicated that hearing from the graduates about the design process was an important measure of varied skills, capacities and attributes, including communication skills, confidence, initiative and personality, all contributing to employability. As one respondent commented, *'I like to hear their process behind how they got to a design solution. I think self-evaluation is also important, so I want them to have a strong opinion about what is their favourite piece of work.'* Another wrote that an interviewee's ability to discuss their portfolio '*showcases soft skills. Can they talk about their work in a meaningful way? Do they understand the choices they made in that work? Sometimes it's more important to hear this than the actual quality of the work . . ..*' Respondents associated the interviewee's capacity to communicate '*the story behind their design*' or '*the intent of the design*' with a capacity to undertake '*client-facing*' work or to work in creative teams and *'present and talk through rationales.'* In an era in which employers have a choice of accomplished candidates to hire, the ability to speak effectively to a portfolio highlighted qualities such as agency, emotional self-management and *'personality'* over disciplinary and technical skills, one respondent commenting, *'We have to work with them!'*

Discussion

The research results reveal previously unreported dimensions to the role of a design portfolio in securing work in the highly competitive Australian graphic design labour market. The literature review established that graduates face considerable competition in transitioning from university to work, particularly in the creative industries sector. The literature highlights the lack of career-mindedness among young creatives when embarking on tertiary studies and then when entering the workforce, the independence and allure of a creative career obscuring the challenges of securing and maintaining employment. It also shows how the roles and expertise of graphic design agencies have expanded due to ongoing technological advancements and the demand for higher strategic application of design.

In a context in which graphic designers' work is becoming more complex and expansive, our findings suggest that a traditional portfolio of select design projects is insufficient to secure employment, even when these show strong creative idea generation and effective translation into visual solutions. Visual strength in sample design work can prompt some employers to interview a graduate, but the discussion of a portfolio at interview evidences depth as a designer and additional employability skills, capacities and attributes. We use 'portfolio literacy' to denote this convergence of the portfolio and its discussion in the interview context. Based on our results, portfolio literacy has three components:

- the selection of work in the portfolio and its organisation into a visual narrative;
- the explanation of the projects to show that the graduate is not merely a stylist, focused on aesthetics and technical implementation, but understands the graphic designer's contemporary role in providing imaginative, intelligent and strategic responses to clients' needs; and
- the alignment of the portfolio to the nature of the position being sought to show understanding of the industry and the specificity of individual design consultancies.

The second and third components are distinctive manifestations of a graduate's creative identity, signalling industry readiness that exceeds the technical skills to practise as a designer.

Our results align with Dziobczenski and Person's (2017) findings that employers seek capacities across three categories: competence, knowledge and skills and desirable personal characteristics. In addition to this, our findings reveal how graduates can use a portfolio in interviews to display their capacities across these categories. The interview is a sensory process in which employers want to see a graduate's work, hear about their design journey, and observe their attributes in action, and combine these to assess employability.

Explanation of the Design Process

Our findings identify employers' interest in hearing from graduates about how they arrived at their finished designs, revealing their creative intention, concept development, problem-solving and visual resolution. The interview performance indicates graduates' ability to present to and communicate with clients and colleagues, while revealing desirable personal characteristics such as enthusiasm and self-belief, which contribute to effective interaction with others in activities such as pitching and collaborating. While an interview can be rehearsed, our findings indicate that

the interview context and the use of a portfolio within it can involve many variables. A skilled interview performance indicates adaptability, the ability to anticipate, and reflectiveness, important capacities for the graphic designer.

It has long been theorised that reflective practice is integral to the activity of design. Donald Schön (1983) describes designing as the exercise of reflection-in-action, where designers execute a design action, reflect on its execution, decide on the next action, then repeat until they achieve the objectives of the design brief. Extending on the work of Schön, Thompson and Thompson (2018) argue that exercising critical reflective practice is how designers build professional knowledge and provide value to their clients. Our findings suggest that when graduates discuss their design process in an interview, employers recognise (consciously or unconsciously) competence in reflective practice. In an era of strategic designing, this represents more than effective communication. Poggenpohl (2008) argues that as the design disciplines have moved from artefact-based craft production to consultative, strategic roles in complex business and organisational contexts, designer's reflective practice has necessarily moved from tacit understanding of doing to encompass the explicit articulation and justification of design processes and outcomes to clients. To design successfully, contemporary designers must harness reflection in applying their knowledge, evaluating outcomes and probing the effectiveness of their practice. Hence, a graduate's capacity for meaningful discussion of projects in a portfolio suggests capacity to convince others of the value of their work in commercial practice.

Portfolio as Visual Narrative

Our findings indicate that scope for reflective practice is demonstrated in the portfolio's curation. We have argued that discussion of the portfolio adds important dimensions such as identifying varied employability skills, capabilities and attributes beyond those core to graphic design. The portfolio itself is more than a collection of individual works. The creative and strategic organisation of visual images into meaningful relationships is central to graphic design, as is reconfiguring designs for different audiences and contexts. Selecting and organising design works in a portfolio creates a visual narrative that prospective employers recognise as an expression of creative identity and professional purpose.

The pertinence of a graduate's portfolio to the interview context reflects the fact that in a digital age, graphic designers curate their work for multiple contexts and purposes, this now being integral to professional creative labour. To navigate the graduate labour market and become employed, graduates must present samples of work in different forms, devoting significant time and resources to this as an investment in their future. The number of graphic designers graduating from Australian universities provides employers with an unprecedented range of choice in graduate hiring, but also the need to filter candidates. As our respondents revealed, employers might require a digital sample before deciding whether to offer an interview or request a link to an online portfolio.

Portfolio Literacy

Our findings indicate that Australian graphic design graduates can no longer rely on a portfolio of conceptually and visually strong design work to secure employment. They require the higher capacity of portfolio literacy, encompassing the curation of the portfolio to reflect the mode of contact with a prospective employer and the employment opportunity, and insight into how to leverage its content in an

interview. During an interview, the content of the portfolio and the candidate's interview performance must signal heterogeneous skills, capacities and attributes. Leveraging portfolio literacy to signal employability requires a holistic and nuanced approach to self-presentation that combines the seen and heard, the tacit and the explicit. Graduates' presentation of their portfolio can be likened to pitching creative solutions to colleagues and clients within professional practice. If accomplished effectively, the presentation represents the graduate as a valuable employee who can identify opportunities and act on them.

Nevertheless, our findings show that employers are unlikely to specify or even be consciously aware of what is required to demonstrate employability, hence their emphasis on the graduate leading discussion of their portfolio in an interview. Portfolio literacy demands agency and insight into the skills, capacities and attributes that the graphic design industry currently needs. As our findings show, some key characteristics of employability go beyond the core graphic design skills and knowledge focused on in tertiary education and romanticised by industry. Projecting employability requires the simultaneous demonstration of individualistic creativity and scope for process-based collaborative work with colleagues and clients, in addition to the capacity to undertake many routine activities of day-to-day practice.

Conclusion

Jackson and Bridgstock (2018) echo many researchers in arguing that higher education institutions should focus more on students' employability and career management. Educational qualifications indicate a graphic design graduate's possession of core design knowledge and skills. However, if industry is sceptical of universities' capacity to produce work-ready graduates, a degree signifies only academic success, making understanding of how to marshal heterogeneous evidence of employability through a portfolio vital. Currently, neither a portfolio of design work nor the literacy to develop one are guaranteed by-products of tertiary graphic design studies. A consequence is to send graduates to the countless 'how-to' websites advocating the creation of 'killer portfolios', which focus on stylistic flair and technical prowess and neglect employers' increasing emphasis on generic skills, capacities and attributes.

A portfolio can be developed through specific curricula and extracurricular activities, but portfolio literacy involves more profound capacities bound up in reflective practice and industry awareness. The experience of designing is highly individualised (Lawson 2006; Schön 1983), as is the journey towards understanding how one designs (Cross 1982). Developing reflective practitioners requires time and skilled guidance. This process needs to extend across a student's entire tertiary education, nurturing identity formation and industry awareness alongside creative, conceptual and technical abilities. A graduate's capacity to curate a portfolio to evidence employability depends on scaffolding curricula throughout a graphic design degree so that projects substantiate graduates' identity, range and strengths as designers and workers, the discussion of which reveals their depth and breadth of knowledge, skills and personal attributes. Our concept of portfolio literacy indicates that tertiary design schools need to afford students continuous opportunities to reflect on their practice and create compelling presentations of themselves as designers in a competitive graduate labour market. Future research could examine

the 'employability literacy' of employers to understand what they recognise and respond to when graduates share their portfolios and reflect on their choices.

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References

AIGA Educators. (2017) AIGA Designer 2025, Why Design Education Should Pay Attention to Trends. Available at: https://educators.aiga.org/wp-content/uploads/2017/11/2017-18_aigaDEC_facultyResearchGrant_guidelines.pdf (accessed 14 September 2021).

Ashton, D. (2015) Creative work careers: pathways and portfolios for the creative economy, *Journal of Education and Work*, Vol. 28, No. 4, pp. 1–19.

Australian Bureau of Statistics. (ABS). (2020) XXX.

Australian Industry and Skills Committee. (2019) Printing and Graphic Arts: Overview. Available at: https://nationalindustryinsights.aisc.net.au/industries/printing-and-graphic-arts (accessed 31 August 2021).

Baikie, V. (2021) *Specialised Design Services in Australia* (IBISWorld AU Industry Report), June.

Barrett, J. C. (2013) *Designing your Fashion Portfolio from Concept to Presentation*. New York, NY: Fairchild Books.

Bennett, D., Richardson, S. & MacKinnon, P. (2016) *Enacting Strategies for Graduate Employability: how Universities can Best Support Students to Develop Generic Skills*. Perth: Curtin University of Technology, School of Education.

Bennett, D., Richardson, S., Mahat, M., Coates, H. & MacKinnon, P. (2015) Navigating uncertainty and complexity: higher education and the dilemma of employability, *38th Higher Education Research and Development Conference: HERDSA*. Available at: https://espace.curtin.edu.au/handle/20.500.11937/16096

Bourner, T. & Millican, J. (2011) Student-community engagement and graduate employability, *Widening Participation and Lifelong Learning*, Vol. 13, No. 2, pp. 68–85.

Bridgstock, R. (2009) The graduate attributes we've overlooked: enhancing graduate employability through career management skills, *Higher Education Research & Development*, Vol. 28, No. 1, pp. 31–44.

Bridgstock, R., Goldsmith, B., Rodgers, J. & Hearn, G. (2015) Creative graduate pathways within and beyond the creative industries, *Journal of Education and Work*, Vol. 28, No. 4, pp. 1–13.

Brown, A. D., Kornberger, M., Clegg, S. R. & Carter, C. (2010) 'Invisible walls' and 'silent hierarchies': a case study of power relations in an architecture firm, *Human Relations*, Vol. 63, No. 4, pp. 525–49.

Bruce, M. & Bessant, J. (2002) *Design in Business: Strategic Innovation Through Design*. London: Financial Times Prentice Hall.

Buchanan, R. (2001) Design research and the new learning, *Design Issues*, Vol. 17, No. 4, pp. 3–23.

Clarke, M. (2018) Rethinking graduate employability: the role of capital, individual attributes and context, *Studies in Higher Education*, Vol. 43, No. 11, pp. 1923–37.

Cranmer, S. (2006) Enhancing graduate employability: best intentions and mixed outcomes, *Studies in Higher Education*, Vol. 31, No. 2, pp. 169–84.

Cross, N. (1982) Designerly ways of knowing, *Design Studies*, Vol. 3, No. 4, pp. 221–7.

Davis, M. (2012) Leveraging graduate education for a more relevant future, *Visible Language*, Vol. 46, No. 1/2, pp. 110–21.

Doloswala, K. N., Thompson, D. & Toner, P. (2013) Digital based media design: the Innovative contribution of design graduates from vocational and higher education sectors, *International Journal of Technology and Design Education*, Vol. 23, No. 2, pp. 409–23.

Duffy, B. (2015a) Amateur, autonomous, and collaborative: myths of aspiring female cultural producers in Web 2.0, *Critical Studies in Media Communication*, Vol. 32, No. 1, pp. 48–64.

Duffy, B. (2015b) The romance of work: gender and aspirational labour in the digital culture industries, *International Journal of Cultural Studies*, Vol. 19, No. 4, pp. 441–57.

Dziobczenski, P. R. N. & Galeotti, A. A. (2017) Preparing design students for the market: an initial investigation on the required knowledge and skills for graphic designers in Brazil, *The Design Journal*, Vol. 20, pp. S1241–9.

Dziobczenski, P. R. N. & Person, O. (2017) Graphic designer wanted: a document analysis of the described skill set of graphic designers in job advertisements from the United Kingdom, *International Journal of Design*, Vol. 11, No. 2, pp. 41–55.

Eikhof, E. & Chudzikowski, K. (2019) Creativity is a skill that everyone has': analysing creative workers' self-presentations', *Creative Industries Journal*, Vol. 12, No. 1, pp. 34–47.

Fleming, P. (2017) The human capital hoax: work, debt and insecurity in the era of Uberization, *Organization Studies*, Vol. 38, No. 5, pp. 691–709.

Fontaine, L. (2014) Learning design thinking by designing learning experiences, *Visible Language*, Vol. 48, No. 2, pp. 49–66.

Feldman, J. & Boult, J. (2005) Third-generation design consultancies: designing culture for innovation, *Design Management Review*, Vol. 16, No. 1, pp. 40–7.

Frascara, J. (2004) *Communication Design: Principles, Methods, and Practice*. New York, NY: Allworth.

Frascara, J. & Noël, G. (2012) What's missing in design education today, *Visible Language*, Vol. 46, No. 1/2, pp. 36–53.

Gandini, A. (2019) Labour process theory and the gig economy, *Human Relations*, Vol. 72, No. 6, pp. 1039–56.

Givechi, R., Grouïx, I. & Woollard, M. (2006) Impact: inspiring graphic design through human behaviors, in A. Bennett [Ed] *Design Studies: Theory and Research in Graphic Design*. New York, NY: Princeton Architectural Press, pp. 306–10.

Gomez-Palacio, B. & Vit, A. (2015) *Flaunt: Designing Effective, Compelling and Memorable Portfolios of Creative Work*. Austin, TX: Under Consideration.

Harland, R. (2011) The dimensions of graphic design and its spheres of influence, *Design Issues*, Vol. 27, No. 1, pp. 21–34.

Hinchliffe, G. & Jolly, A. (2011) Graduate identity and employability, *British Educational Research Journal*, Vol. 37, pp. 563–84.

Jackson, D. (2016) Developing pre-professional identity in undergraduate through work-integrated learning, *Higher Education*, Vol. 74, pp. 833–53.

Jackson, D. & Bridgstock, R. (2018) Evidencing student success in the contemporary world-of-work: renewing our thinking, *Higher Education Research and Development*, Vol. 37, No. 5, pp. 984–98.

Kalfa, S. & Taksa, L. (2015) Cultural capital in business higher education: reconsidering the graduate attributes movement and the focus on employability, *Studies in Higher Education*, Vol. 40, No. 4, pp. 1–16.

Karmel, T. & Carroll, D. (2016) Has the Graduate Job Market Been Swamped? (NILS working paper series No. 228/2016). Adelaide: Flinders University.

Kelly, R. (2018) Design in decline: breathing new life into an industry through education, *Design Management Journal*, Vol. 13, No. 1, pp. 41–52.

Lawson, B. (2006) *How Designers Think: The Design Process Demystified*, 4th edn. Burlington, MA: Elsevier and Architectural Press.

Majithia, R. K. (2017) What's next in design education? Transforming role of a designer and its implications in preparing youth for an ambiguous and volatile future, *The Design Journal*, Vol. 20, Supp. 1, pp. S1521–S1529.

Mavromaras, K., McGuinness, S., O'Leary, N., Sloane, P. & Fok, Y. K. (2010) The problem of overskilling in Australia and Britain, *The Manchester School*, Vol. 78, pp. 219–41.

Meggs, P. B. & Purvis, A. W. (2012) *Meggs' History of Graphic Design*, 5th edn. Hoboken, NJ: Wiley.

McGlashan, A. A. (2011) Designer stories: a commentary on the community of design practice, *International Journal of Technology and Design Education*, Vol. 21, No. 2, pp. 235–60.

McQuaid, R. W. & Lindsay, C. (2005) The concept of employability, *Urban Studies*, Vol. 42, No. 2, pp. 197–219.

McRobbie, A. (2015) *Be Creative: Making a Living in the New Culture Industries*. Cambridge: Polity Press.

Mumford, J. & Roodhouse, S. (2010) *Understanding Work-Based Learning*. Farnham: Gower.

Neff, G. (2012) *Venture Labor: Work and the Burden of Risk in Innovative Industries*. Cambridge, MA: MIT Press.

Neff, G., Wissinger, E. & Zukin, S. (2005) Entrepreneurial labor among cultural producers: "cool" jobs in "hot" industries, *Social Semiotics*, Vol. 15, No. 3, pp. 307–34.

Ockerse, T. (2012) Learn from the core – design from the core, *Visible Language*, Vol. 46, No. 1/2, pp. 80–94.

Okay-Somerville, B. & Scholarios, D. (2017) Position, possession or process? Understanding objective and subjective employability during university-to-work transitions', *Studies in Higher Education*, Vol. 42, No. 7, pp. 1275–91.

Quality Indicators for Learning and Teaching. (2020) Short-Term Graduate Outcomes in Australia. Available at: https://www.qilt.edu.au/docs/default-source/resources/gos/2020/2020-gos-national-report.pdf?sfvrsn=478c15e2_3 (accessed 12 July 2021).

Poggenpohl, S. (2008) Design literacy, discourse and communities of practice, *Visible Language*, Vol. 42, No. 3, pp. 213–36.

Poggenpohl, S. (2012) Envisioning a future design education, *Visible Language*, Vol. 46, No. 1/2, pp. 8–19.

Ramírez, M. (2012) Employability attributes for industrial design graduates, in *Proceedings of the 5th International Conference of Education, Research and Innovation*, pp. 2462–71.

Romeo, L. D. (2017) Industry professionals' evaluation of apparel design student portfolios, *International Journal of Fashion Design, Technology and Education*, Vol. 10, No. 2, pp. 111–8.

Round, H. & Styhre, A. (2017) Reality bites: managing identity ambiguity in an advertising agency, *Creative Innovation Management.*, Vol. 26, No. 2, pp. 202–13.

Salleh, R., Yusoff, M. A. M., Amat, S. C., Noor, A. M. & Suredah, N. (2013) Profiling industry-relevant competencies of graduate architect through online job advertisements, *International Business Research*, Vol. 6, No. 11, pp. 43–51.

Saris, B. (2018) Inside out: comparison of traditional and collaborative pedagogical approaches for visual communication design students in transition to industry, *The International Journal of Design Education*, Vol. 12, No. 2, pp. 25–38.

Schön, D. A. (1983) *The Reflective Practitioner: How Professionals Think in Action*. New York, NY: Basic Books.

Scolere, L. & Humphreys, L. (2016) Pinning design: the curatorial labor of creative professionals, *Social Media+Society*, Vol. 2, No. 1, pp. 1–13.

Stevens, J. & Moultrie, J. (2011) Aligning strategy and design perspectives: a framework of design's strategic contributions, *The Design Journal*, Vol. 14, No. 4, pp. 475–500.

Styhre, A. & Gluch, P. (2009) Creativity and its discontents: professional ideology and creativity in architect work, *Creativity and Innovation Management*, Vol. 18, No. 3, pp. 224–33.

Tain, L. (2010) *Portfolio Presentation for Fashion Designers*, 3rd edn. New York, NY: Fairchild Books.

Tehan, D. (2020) Higher Education Support Amendment (Job-ready Graduates and Supporting Regional and Remote Students) Bill. Available at: https://www.legislation.gov.au/Details/C2020B00096/Explanatory%20Memorandum/Text (accessed 5 January 2021).

Thompson, S. & Thompson, N. (2018) *The Critically Reflective Practitioner*. New York, NY: Red Globe Press.

Thorley, M. (2014) Graduate meets employer – a model for embedding industry professional involvement in the development and assessment of student portfolios, *Journal of Music, Technology and Education*, Vol. 7, No. 3, pp. 325–9.

Tymon, A. (2013) The student perspective on employability, *Studies in Higher Education*, Vol. 38, No. 6, pp. 841–56.

van der Waarde, K. (2009) On Graphic Design: Listening to the Reader? Available at: https://lectoratenakvstjoost.files.wordpress.com/2010/04/kvdw_listeningtothereader.pdf

van der Waarde, K. & Vroombout, M. (2012) Communication design education: could nine reflections be sufficient? *Visible Language*, Vol. 46, No. 1/2, p. 20.

Venkatesh, A. (2013) A study on revelations of design students' thinking styles in reflective journals, *Visible Language*, Vol. 47, No. 2, pp. 1–36.

Ward, A., Runcie, E. & Morris, L. (2009) Embedding innovation: design thinking for small enterprises, *Journal of Business Strategy*, Vol. 30, No. 2/3, pp. 78–84.

Whiteley, S. (2016) Creating a coherent performance indicator framework for the higher education student lifecycle in Australia, in R. Pritchard, A. Pausits & J. Williams [Eds] *Positioning Higher Education Institutions*. Rotterdam: Sense Publishers, pp. 143–60.

Yang, M. Y., You, M. & Chen, F. C. (2005) Competencies and qualifications for industrial design jobs: implications for design practice, education, and student career guidance, *Design Studies*, Vol. 26, No. 2, pp. 155–89.