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



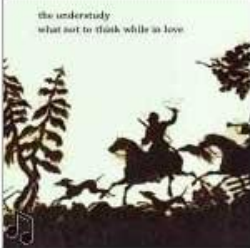



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60Sox Report Volume 1

**From Education to Work in Australia's Digital Content Industries:
The opinions and practices of aspiring creatives in the Creative Industries**

June 2009



Australian Government
Australian Research Council



*Institute for Creative
Industries and Innovation*

60Sox project team:

Project Manager and Originator/Senior Research Associate: Justin Brow

Chief Investigators: Stuart Cunningham, Greg Hearn, and Hitendra Pillay

Research Associate: Amy Purton-Long

Survey design team:

Justin Brow, Greg Hearn, Ruth Bridgstock, and Shane Dawson

Website Programmer: Ben Dalby

Report author/analyst:

Sandra Haukka, Creative Workforce Program, ARC Centre of Excellence for Creative Industries and Innovation (CCI)

Partners:

Australian Research Council; QUT's Institute for Creative Industries and Innovation (iCi); South Australian Department of Further Education, Employment, Science and Technology (DFEEST); tafeSA; Queensland Department of Education, Training and the Arts (DETA); Queensland Department of the Premier and Cabinet; Australian Interactive Media Industry Association (AIMIA); Billy Blue College of Design; Southbank Institute of TAFE; Hippo.com.au; Frollop.com; and Josephmark Design.

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Executive summary

Over the last decade the digital content industries have been recognised as a rapidly emerging industry sector in a number of studies in various countries (Cunningham and Higgs, 2008). They are considered economically imperative to Australia's future (Cunningham, Cutler, Hearn, Ryan, & Keane, 2005a), growing significantly faster worldwide than other economic sectors (DCITA, 2006). In the last comprehensive national study in Australia they were estimated to be worth \$19 billion (3.3% of GDP) and employ 289,000 people (QUT CIRAC and Cutler&Co, 2004). Furthermore, these figures almost certainly under represent true employment of qualified creatives because there are as many creatives employed in other industry sectors as there are in those classified as creative industries (Cunningham & Higgs, 2008). Although the global financial crisis will affect the creative industries, it is too early to tell what these effects may be for Australia, and some sectors may benefit from changes in trade relativities.

What is certain is that the digital content sector requires **highly skilled human capital** (Florida, 2003; Cunningham et al., 2005a; QUT CIRAC and Cutler and Co, 2004). However, the Australian digital content industries often face skills and labour shortages, exacerbated by insufficient supply of high quality industry-ready graduates together with "informational difficulties in predicting demand for skills, and weak linkages between skills providers and some creative industries" (DCITA, 2006). Employers want graduates with the right combination of business/management, technology and creative skills (DCITA, 2006). Increasing the size and effectiveness of the digital content workforce will strengthen the international competitiveness of creative professionals and in doing so contribute to a healthier trade balance (CIE 2005; Cutler & Co 2002).

Research on human resource and human resource development issues in the digital content industries in Australia is limited. As a result, the Australian Research Council, three State governments, industry, and a large vocational education and training (VET) provider funded the 60Sox project to investigate the employability of 507 aspiring creatives. The project involved surveying aspiring creatives who work or intend to work in the publicly-supported, less commercial end of the Creative Industries spectrum as well as those who work or intend to work in the digital content industries. **The 60Sox survey was the largest survey of its kind ever undertaken in Australia.**

The project team set itself three objectives to analyse survey data that align with the overall purpose of the 60Sox project. Key findings for each objective are as follows.

Objective 1: Identify the characteristics, skills and attributes of aspiring creatives who completed the survey

- Over one-half of survey respondents (52.5%) were studying, mainly in higher education institutions, and almost one-third of respondents were graduates (32.7%).
- Almost 13% of respondents reported current paid work using their creative talents and 32.5% reported previous paid work using their creative talents, due in part to the high number of respondents who were students.
- A typical respondent was aged 21 years; female; born in Australia; living in Victoria or New South Wales; employed casually (although not currently in a job using their creative talent); undertaking a Bachelor degree full-time and on-campus, and in the final year of his/her studies; and planning to find employment in the Creative Industries and/or undertake further study after graduating from a CI course.

Objective 1 continued

- Survey respondents generally perceive themselves as having ‘good’ to ‘very good’ employability skills and personal attributes, job-specific skills, and career skills, and needing to improve their business skills and relationships with industry.

Objective 2: Determine the extent to which aspiring creatives (CI graduates) have made successful education-to-work transitions, and identify any factors that influence the ability of aspiring creatives to make successful transitions.

- Only 18.7% of CI graduates who responded to the survey were currently in paid work using their creative talents, and 45.2% of CI graduates were previously in paid work using their creative talents.
- Transitions data on the employment of CI graduates in relevant occupations, security of employment in the Creative Industries, and job/career mobility patterns and intentions indicate that many respondents who were CI graduates were not achieving successful education-to-work transitions.
- Around 70% of respondents who were CI students indicated an intention to work in a job in their favourite creative area when they graduate, suggesting that CI students may have unrealistic expectations about their ability to find work in their preferred occupation given the outcomes for CI graduates.
- Almost half of all respondents stated that finding work was ‘very hard’ or ‘difficult’, citing the key barriers of strong competition for jobs and difficulties in gaining industry experience. Respondents working casually or part-time were more likely to view finding work as ‘very hard’ or ‘difficult’. Over half of all respondents indicated they were already mobile and/or intended to work overseas to improve their career prospects.
- Those respondents who were making successful transitions were more likely to be working full-time, undertaking freelance/project work, self-employed, involved in communities of interest/networks, and personally engaged with industry.

Objective 3: Determine the extent to which aspiring creatives engage in communities of practice in the Creative Industries, and identify ways to encourage their engagement with these communities and industry.

- Over 30% of respondents were involved in online communities of practice. Based on the assumption that face-to-face networking with industry is an effective way to gain employment and develop industry-relevant skills, the project team concluded that respondents were not adequately engaging with industry. Only 13.6% of respondents were involved in ‘physical’ communities of practice, 28.8% had a direct personal involvement with someone in their preferred creative industry, and 14.8% had a mentoring relationship with an industry representative.
- Acknowledging the significant benefits of engaging with industry, over one-quarter of all respondents indicated that they wanted to increase their engagement with industry. This involves not only increasing the motivations of aspiring creatives to engage with industry but also ensuring that a) communities of practice in the Creative Industries are industry relevant, and b) industry offers greater opportunities (e.g. internships, mentoring relationships, invitations to industry events, etc.) that aim to assist aspiring creatives to gain experience and develop networks.

The project team intends to release a second report to industry in August 2009: *From Education to Work in Australia's Digital Content Industries: Comparing the opinions and practices of CI employers and aspiring creatives*. This report will map the results of the survey of aspiring creatives with the results of the employer survey to identify skills deficiencies in Australia's digital content industries. As well as recommending solutions to address these deficiencies, the report will present data on industry employment patterns and intentions in relation to aspiring creatives.

Purpose of this report

The Creative Industries comprise a set of interlocking sectors of the economy focused on extending and exploiting symbolic cultural products to the public such as the arts, films, interactive games, or providing business-to-business symbolic or information services in areas such as architecture, advertising and marketing, design, as well as web, multimedia and software development. Most often *creative* production delivers unique or customised products from incomplete or abstract specifications received either from a client or derived from a desire for personal, artistic exploration (Higgs, Cunningham, & Pagan, 2007, p. 20).

The Creative Industries worldwide are of significant scale and dynamism (Cunningham, 2005b; Cunningham & Higgs, 2008). In the United States, the copyright industries were worth US\$791.2 billion in 2001, representing 7.75% of GDP and employing 8 million workers (DCMS, 2001). In Australia, the Creative Industries experienced significant growth in earnings and jobs between 1996 and 2006 – earnings rose by 113.6% to \$27 billion (Figure 1) and the number of jobs rose by 34% to 474,430 jobs (Figure 2). Growth in earnings and jobs in the software and digital content segment accounted for half of all growth in the Creative Industries.

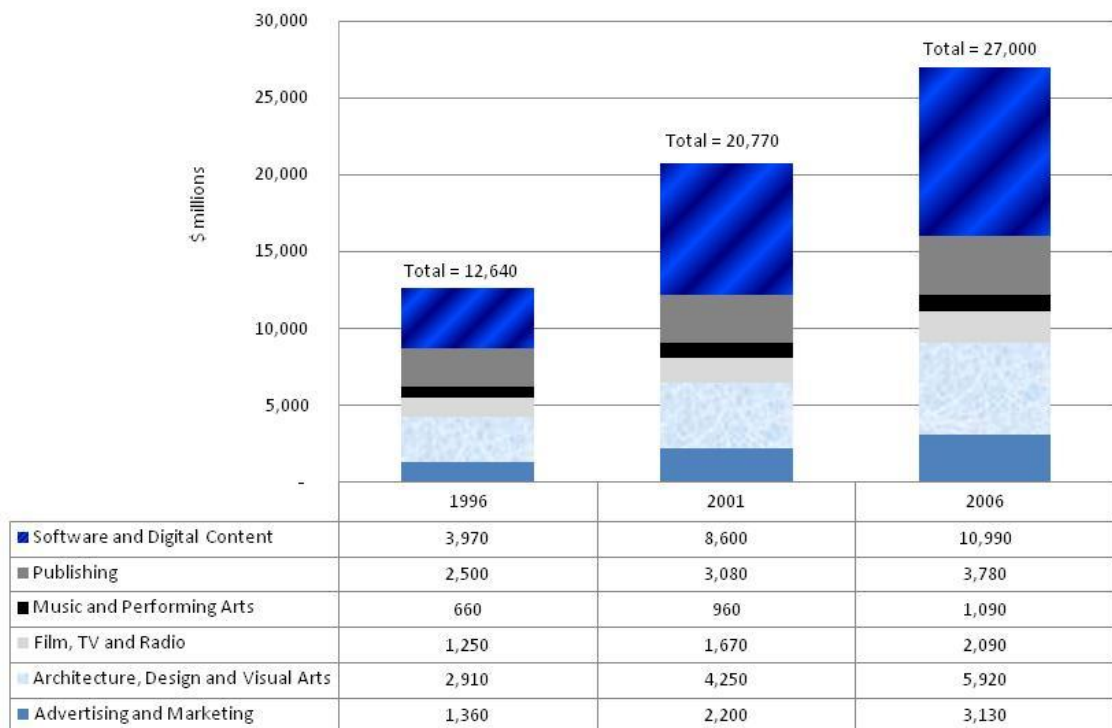


Figure 1. Earnings of the Creative Industries, \$millions, 1996, 2001, 2006

Source: Unpublished ABS data provided by the ARC Centre for Creative Industries and Innovation (CCI)

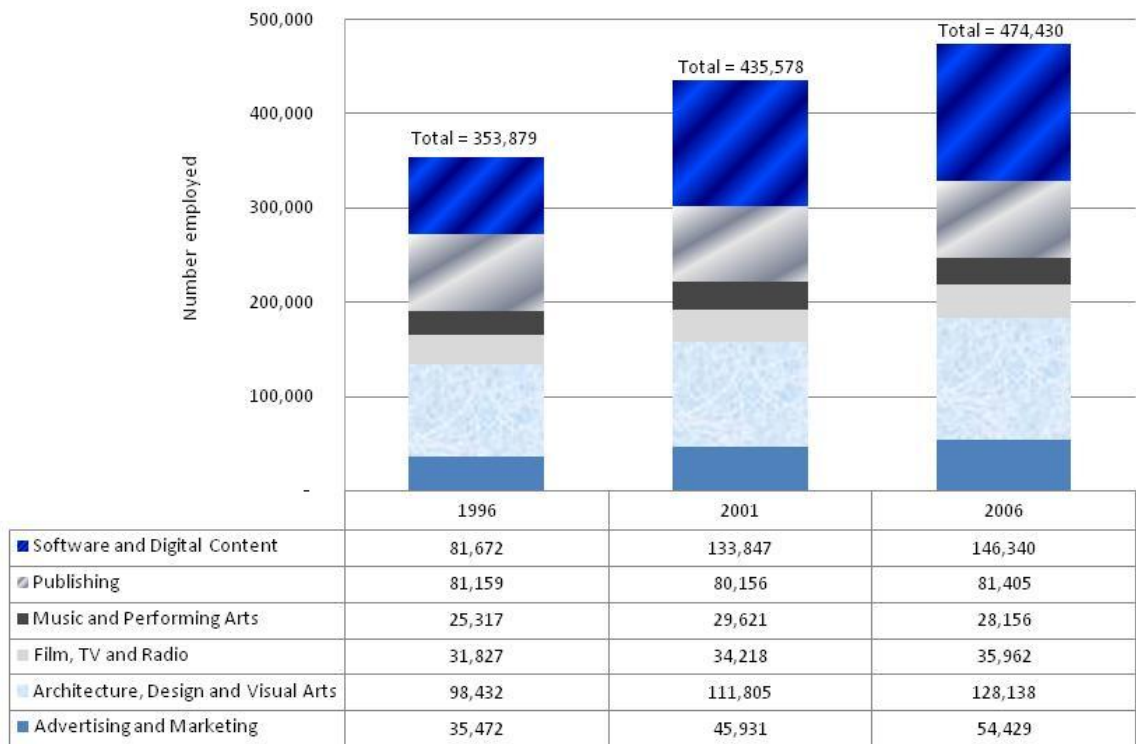


Figure 2. Jobs in the Creative Industries, 1996, 2001, 2006

Source: Unpublished ABS data provided by the ARC Centre for Creative Industries and Innovation (CCI)

Another way of approaching this picture of Australia's Creative Industries is to focus on the digital content industries. They cover a wide span of diverse sectors, including:

- the production and marketing of film and television programs in the form of digital and interactive TV
- online games
- re-usable electronic education content
- the marketing and supply of the holdings of museums, galleries and libraries in digital form
- Internet-based publishing of music, text, films and games
- the development and marketing of software, games, and online services that create digital media and visual effects, or help to manage and publish them

(DCITA, 2006, p. 8)

The way in which the digital content industries are defined in Australia positions these industries as new, high growth, and at the commercial end of the CI spectrum. They are economically significant to Australia's future (Cunningham et al., 2005a), growing faster worldwide than other economic sectors (DCITA, 2006). They are estimated to be worth \$21 billion or almost 3.5% of Australia's GDP and employ 300,000 people. They are drivers of the knowledge economy and enablers for other industry sectors. They translate 'directly into the competitive advantage and innovation capability of other sectors of the economy' (QUT CIRAC and Cutler&Co, 2004).

The digital content industries are knowledge intensive and require **highly skilled human capital** (Florida, 2003; Cunningham et al., 2005a; QUT CIRAC and Cutler and Co, 2004). An internationally competitive

workforce of creative professionals contributes to a healthier trade balance (CIE, 2005; Cutler & Co., 2002). Despite the positive trends discussed above, the workforce for the digital content industries is unstable due to the significant ongoing issues with labour supply and skill mismatches. There is an insufficient supply of high quality industry-ready graduates as well as “informational difficulties in predicting demand for skills, and weak linkages between skills providers and some creative industries” (DCITA, 2006). The *UK Action Plan for the Interactive Media and Computer Games Industries* (SkillsSet, 2004) indicated:

- a need for workers with a broad range of specialist as well as general skills and functional flexibility
- generic skills gaps as well as gaps in business, project and production management skills, company development, client management, sales and marketing, and commercial awareness within an international context
- potential gaps in drawing, diagramming, creative art, and creative or technical writing skills.

Aspiring creatives are increasingly working in organisations characterised by collaboration and networks of alliances such as start-ups, company mergers, and clusters of small entrepreneurial organisations (SkillSets, 2001). They are increasingly responsible for delivering work in decentralised environments and ensuring that their skills remain current given the speed of new technologies, consumer needs, and jobs.

These issues are made more difficult to address given that the workforce for recent graduates in digital content areas is largely a transient one and atypical of many forms of employment. Overall, most are portfolio workers demonstrating high degrees of flexibility and mobility operating on short-term contracts with project based work (MKW, 2001). Many are self-employed (Spillsbury, 2002). They are self-directed learners whose learning is measured on the basis of the products they produce. It is not surprising that experience is often valued more than vocational qualifications, though most workers have degrees (SkillsSet, 2004)

On completion of training, workers must often organise their own process for learning and ongoing upskilling (MKW, 2001). Unlike the long established apprenticeship system for trades or the formal entry into professional recognition bodies for careers such as law, medicine and teaching, digital content creators do not have traditional, well-established structures or organisations to help continue their journey of lifelong learning and continuous upskilling or to facilitate employment opportunities in a systematic manner. Post-entry skills acquisition is primarily through self-directed learning, coaching and mentoring. Training solutions must be characterised by flexibility and modularity (SkillsSet, 2004).

Research on human resource and human resource development issues in the digital content industries in Australia is limited. As a result, the Australian Research Council, three State governments, industry, and a large vocational education and training (VET) provider funded the 60Sox project to investigate the education, training, and work experiences of aspiring creatives in Australia’s digital content industries.

This report represents the first of two reports that aim to understand and enhance the employability of aspiring creatives:

- *60Sox Report Volume 1: From Education to Work in Australia's Digital Content Industries: The opinions and practices of aspiring creatives in the Creative Industries*
- *60Sox Report Volume 2: From Education to Work in Australia's Digital Content Industries: Comparing the opinions and practices of CI employers and aspiring creatives*

It presents findings from the **largest survey of aspiring creatives who work or intend to work in the digital content industries ever undertaken in Australia**. Survey respondents included those with aspirations to work in the publicly-supported, less commercial end of the Creative Industries spectrum as

well as those with aspirations to work in the digital content industries. The survey gathered rich data on their characteristics, skills and attributes, barriers to employment, workforce mobility, career intentions, professional development, mentors and industry supports, and participation in communities of practice. The survey sought to determine if aspiring creatives have the necessary skills and attributes to work effectively in the digital content industries. This task also involved finding out how they develop their skills and attributes, and what they need to develop them further.

The project team set itself three objectives in order to analyse survey data in a way that aligned with the purpose of the 60Sox project:

1. Identify the characteristics, skills, and attributes of aspiring creatives who completed the survey.
2. Determine the extent to which aspiring creatives (CI graduates) have made successful education-to-work transitions, and identify any factors that influence the ability of aspiring creatives to make successful transitions.
3. Determine the extent to which aspiring creatives engage in communities of practice in the Creative Industries, and identify ways to encourage their engagement with these communities and industry.

This report consists of seven (7) sections:

- Executive summary
- Purpose of the report (this section)
- Characteristics, skills and attributes of aspiring creatives
- Education-to-work transitions of aspiring creatives
- Participation of aspiring creatives in communities of practice
- Conclusion

Data collection and analysis

Informed by several focus groups and one-on-one interviews with aspiring creatives around Australia, the survey design team structured the 60Sox survey into six sections:

- Who you are
- What you do
- How you do it
- What you've studied
- What you want to do
- How you will get there

Apart from questions that profiled graduate and emerging creative professionals in terms of their characteristics, skill levels and attributes, the survey included questions about barriers to employment, workforce mobility, career intentions, professional development, mentors and industry supports, and participation in communities of practice. The project team exceeded its original target of a national sample of 300 respondents set in its funding application by recruiting 507 respondents.

Sampling graduates and aspiring creatives is a difficult challenge because no unified database of target respondents exists as a sampling frame and because this cohort are often itinerant; involved in other pursuits or uninterested in responding. Nevertheless utilising the 60Sox network the sample received a strong response exceeding its original target of a national sample of 300 respondents 507 respondents. To attract survey respondents, the project team used a triangulated sampling approach (Liamputtong, 2006)

- *Convenience sampling* – The project team distributed the survey to education and training providers (with relevant course offerings) across Australia. Many respondents were students enrolled in higher education and vocational training courses offered by providers within the project partner network.
- *Opportunistic sampling* - Some respondents became aware of the survey when they browsed and/or contributed to 60Sox.org.au. The survey explained how they would benefit from the project, and that they would go into the draw for a \$1,000 prize if they completed it.
- *Snowballing sampling* – Respondents referred other respondents to the site and survey.



The sampling methods used meant that the respondents were not a representative sample of aspiring creatives or an even mix of students (266 respondents), graduates (166 respondents) and people currently being paid to use their creative talent (64 respondents) (Figure 3). There is an overrepresentation of respondents from Victoria due largely to the project team approaching a greater number of students from educational institutions in this State. These students accounted for 22.9% of all respondents. In addition, a concern with self-assessment exercises is that respondents' assessment of their performance is subjective and not based on a common understanding of expected performance in the digital content industries. Many respondents perceived themselves as having very good employability skills and job-specific skills - contrary to the reported views of employers that graduates are not industry ready. In the second 60Sox report, the project team will compare the views of aspiring creatives about their job-readiness with the views of employers about the job-readiness of aspiring creatives.

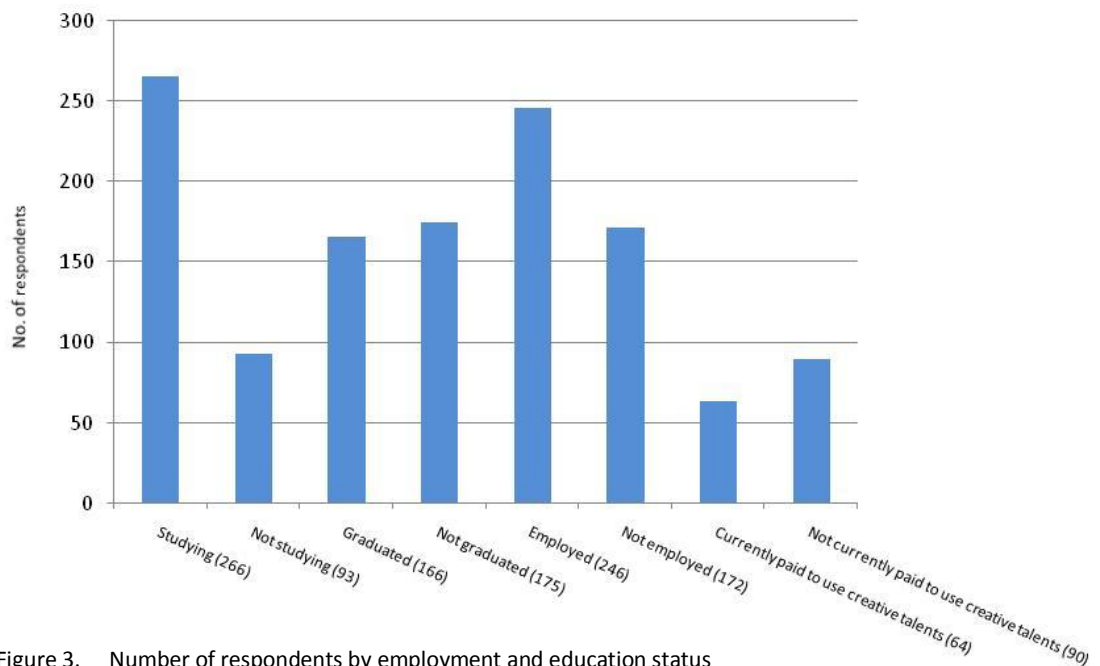


Figure 3. Number of respondents by employment and education status

Using SPSS, the project team analysed data generated from frequency and cross-tabulation calculations. It also used the binary logistic regression (Forward Wald) procedure to identify associations between employment in the creative industries and views about finding work and variables of interest, such as gender, age, personal engagement with industry, involvement in communities of practice, basis of employment (e.g., employed full-time), etc. This analysis sought to identify factors that influence:

- the ability of aspiring creatives to obtain paid work using their creative talents
- the perceptions of those aspiring creatives who rated finding work as difficult or very hard.

The binary logistic regression (Forward Wald) procedure enters variables of interest one by one, and moves forward dropping non-significant variables from the list.

Characteristics, skills, and attributes of aspiring creatives

During the past five years post-compulsory education and training has placed increasing emphasis on graduate employability and workforce relevance, a trend mostly driven by performative funding imperatives from government (Precision Consultancy, 2007). Universities and vocational education providers alike are under pressure to demonstrate that their graduates are ready to navigate the world of work. Aspects of both the graduate and the labour market can markedly affect employment outcomes; however, to date education providers have acknowledged only a small sub-set of these influences in their courses, and those influences are dealt with inadequately (Bridgstock, 2009).

Evidence suggests that discipline-based and technical skills may be lacking in many new graduates (AIMIA, 2005). These skills are those required for performance in a specific field, such as the use of a particular software package. Discipline-based skills and knowledge in the digital content industries require constant updating in line with the evolution of new technologies. Significant resources may often be required and intensive in-house training before the graduate employee in the digital content industries can be 'job ready' and undertake required activities to effectively contribute to an organisation's bottom line.

An often overlooked category of competencies for employability in graduates are those required to self-manage a career (Bridgstock, 2009). These abilities are those an individual needs to constantly look around and ahead for appropriate job and skill development opportunities and to adapt and reinvent themselves accordingly; to create and develop industry-relevant social networks; and to apply for and maintain work. These skills are suggested to be very important for graduates in fields such as the digital content industries where career paths are individually rather than vocationally or organisationally constructed, and the onus is on the individual to remain employable (Bridgstock, 2007).

This section aims to explore how survey respondents perceive their skill sets and employability by addressing the first objective of this report: **Identify the characteristics, skills, and attributes of aspiring creatives who completed the survey.** In order to analyse data relevant to this objective, the project team placed survey responses into one of five categories and structured the section of this report according to these categories:

- Characteristics of survey respondents
- Employability skills and attributes
- Job-specific skills
- Business skills
- Career skills

Characteristics of aspiring creatives

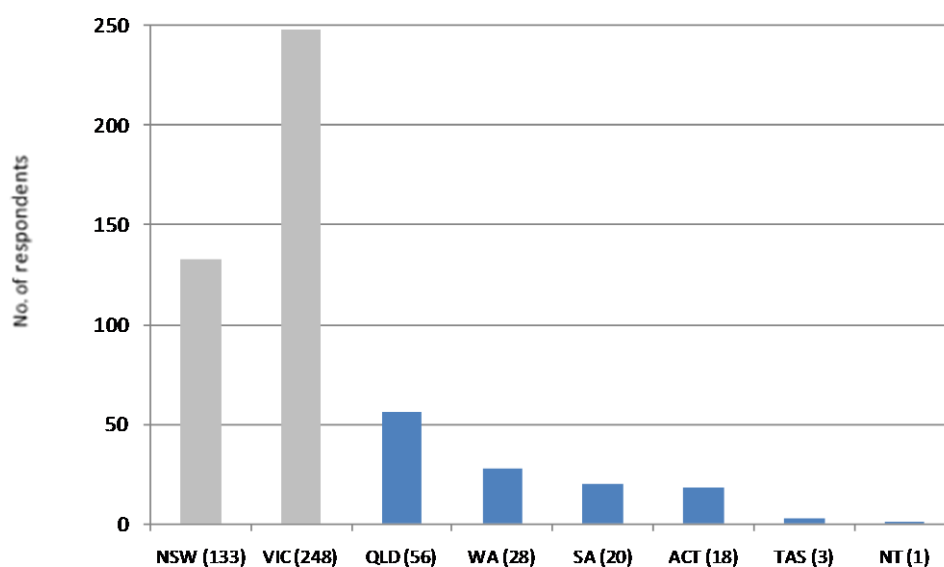
The results presented in Table 1 suggest that a typical survey respondent was:

- aged 21 years
- female
- born in Australia
- living in Victoria or New South Wales

- employed casually, but not in jobs using their creative talent
- undertaking a Bachelor degree full-time and on-campus, and in the final year of his/her studies
- planning to find employment in the Creative Industries and/or undertake further study after graduating from a CI course.

Table 1. Characteristics, employment and education of survey respondents

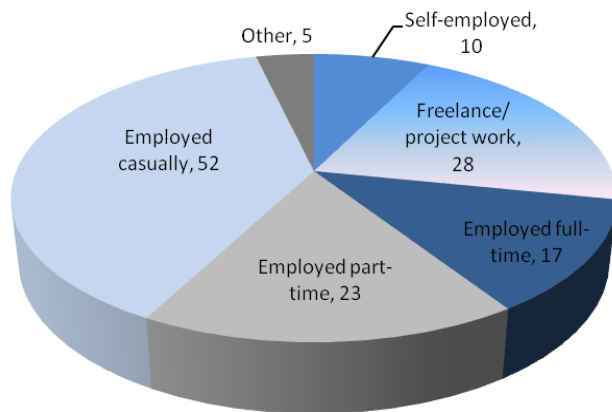
Survey question	Result	Responses/ response rate
Characteristics		
Q.4 Age	Range (15-55 years) Median age = 21 years	495 responses 98.2% response rate (RR)
Q.5 Gender	Males = 183 (36.1%) Females = 324 (63.9%)	507 responses 100% RR
Q.5 Country of citizenship	Australia = 432 (85.2%) Other = 75 (14.8%)	507 responses 100% RR
Q.6 Country of residence	Australia = 488 (96.3%) Other = 19 (3.7%)	507 responses 100% RR
Q.7 State/Territory	ACT = 18 (3.6%) NSW = 133 (26.2%) NT = 1 (0.2%) QLD = 56 (11.0%) SA = 20 (3.9%) TAS = 3 (0.6%) VIC = 248 (48.9%) WA = 28 (5.5%)	507 responses 100% RR



Survey question	Result	Responses/ response rate
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Employment		
Q.20 Employed	Yes = 246 (48.5%) No = 172 (33.9%)	418 responses 82.4% RR

Q.23(i) Employment type (main job)	Self-employed = 10 (4%) Freelance/project work = 28 (11.3%) Employed full-time = 17 (6.9%) Employed part-time = 23 (9.3%) Employed casually = 52 (21.1%) Other = 5 (2%)	135 responses out of 246 employed 54.8% RR
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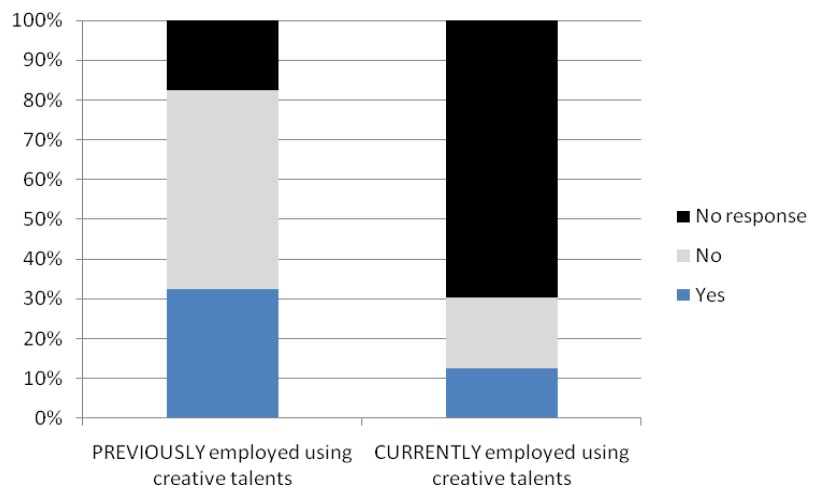


Q.23(i) Percentage of total work load main job accounts for	Median = 100%	127 responses out of 246 employed 51.6% RR
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Q.23(ii)/(iii) Employed in more than one job	Two jobs = 60 Three jobs = 20	80 responses RR n.a.
--	---	-------------------------

Q.21 Previously employed using creative talents	Yes = 165 (32.5%) No = 253 (49.9%)	418 responses 82.4% RR
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Q.22 Currently employed using creative talents	Yes = 64 (12.6%) No = 90 (17.6%)	154 responses 30.4% RR
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Survey question	Result	Responses/ response rate																																													
Education																																															
Q.36 Currently studying	Yes = 266 (52.5%) No = 93 (18.1%)	359 responses 70.8% RR																																													
Q.40 Study level (current studies)	Certificate I = 0 (0%) Certificate II = 2 (0.1%) Certificate III = 14 (5.3%) Certificate IV = 17 (6.4%) Advanced Certificate = 2 (0.1%) Certificate (level unspecified) = 17 (6.4%) Diploma = 23 (8.6%) Advanced Diploma = 27 (10.2%) Bachelor degree = 114 (42.9%) Bachelor (Honours) degree= 2 (0.1%) Graduate Certificate = 18 (6.8%) Graduate Diploma = 13 (4.9%) Masters degree = 4 (1.5%) PhD = 0 (0%)	253 responses out of 266 studying 95.1% RR																																													
	<table border="1"> <caption>Study Level Distribution Data</caption> <thead> <tr> <th>Study Level</th> <th>Count</th> <th>Percentage</th> </tr> </thead> <tbody> <tr><td>Certificate I</td><td>0</td><td>0%</td></tr> <tr><td>Certificate II</td><td>2</td><td>0.1%</td></tr> <tr><td>Certificate III</td><td>14</td><td>5.3%</td></tr> <tr><td>Certificate IV</td><td>17</td><td>6.4%</td></tr> <tr><td>Advanced Certificate</td><td>2</td><td>0.1%</td></tr> <tr><td>Certificate (level unspecified)</td><td>17</td><td>6.4%</td></tr> <tr><td>Diploma</td><td>23</td><td>8.6%</td></tr> <tr><td>Advanced Diploma</td><td>27</td><td>10.2%</td></tr> <tr><td>Bachelor degree</td><td>114</td><td>42.9%</td></tr> <tr><td>Bachelor (Honours) degree</td><td>2</td><td>0.1%</td></tr> <tr><td>Graduate Certificate</td><td>18</td><td>6.8%</td></tr> <tr><td>Graduate Diploma</td><td>13</td><td>4.9%</td></tr> <tr><td>Masters degree</td><td>4</td><td>1.5%</td></tr> <tr><td>PhD</td><td>0</td><td>0%</td></tr> </tbody> </table>		Study Level	Count	Percentage	Certificate I	0	0%	Certificate II	2	0.1%	Certificate III	14	5.3%	Certificate IV	17	6.4%	Advanced Certificate	2	0.1%	Certificate (level unspecified)	17	6.4%	Diploma	23	8.6%	Advanced Diploma	27	10.2%	Bachelor degree	114	42.9%	Bachelor (Honours) degree	2	0.1%	Graduate Certificate	18	6.8%	Graduate Diploma	13	4.9%	Masters degree	4	1.5%	PhD	0	0%
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Bachelor degree	114	42.9%																																													
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Graduate Certificate	18	6.8%																																													
Graduate Diploma	13	4.9%																																													
Masters degree	4	1.5%																																													
PhD	0	0%																																													
Q.37 Study load (current studies)	Full-time = 266 (44.6%) Part-time = 35 (6.9%)	261 responses out of 266 studying 98.1% RR																																													
Q.38 Study mode (current studies)	On-campus = 247 (48.7%) External = 14 (2.8%)	261 responses out of 266 studying 98.1% RR																																													
Q.39 Provider type (current studies)	Higher education institution = 131 (25.8%) TAFE institution = 36 (7.1%) Private college = 16 (12%) Private college/school = 31 (6.1%) TAFE/school = 2 (0.4%)	216 responses out of 266 studying 81.2% RR																																													
Q.53 Stage of study (current studies)	Beginning = 54 (40.7%) Middle = 73 (14.4%) End (final year) = 111 (21.9%)	238 responses out of 266 studying 89.5% RR																																													

Survey question	Result	Responses/ response rate
Q.54 Intended destination after study	<p>Find employment (preferred CI segment) = 187 (70.3%)</p> <p>Find employment (other CI) = 90 (33.8%)</p> <p>Find employment (outside of CI) = 37 (13.9%)</p> <p>Doing more study (CI) = 115 (43.2%)</p> <p>Doing more studies (CI) = 31 (11.7%)</p> <p>Other = 30 (11.3%)</p>	<p>266 studying, with 490 responses as some respondents indicated more than one destination</p> <p>RR n.a.</p>
Q.57 Already graduated (completed studies)	<p>Yes = 166 (32.7%)</p> <p>No = 175 (34.5%)</p>	<p>Responses = 343</p> <p>67.7% RR</p>
Q.59 Provider type (completed studies)	<p>Higher education institution = 48 (29.6%)</p> <p>TAFE institution = 64 (38.6%)</p> <p>Private college = 50 (30.1%)</p>	<p>162 out of 166 finished previous study</p> <p>97.6% RR</p>
Q.58 State/Territory (completed studies)	<p>ACT = 15 (9%)</p> <p>NSW = 43 (25.9%)</p> <p>NT = 1 (0.6%)</p> <p>QLD = 13 (7.8%)</p> <p>SA = 7 (4.2%)</p> <p>TAS = 1 (0.6%)</p> <p>VIC = 76 (45.8%)</p> <p>WA = 6 (3.6%)</p>	<p>162 responses out of 166 who completed previous study</p> <p>97.6% RR</p>
Q.62 Started but didn't complete previous studies	Yes = 58	<p>58 responses</p> <p>RR n.a.</p>

Employability skills and attributes

In 2002, the Business Council of Australia and the Australian Chamber of Commerce and Industry released a report about employers' views of key generic employability skills. The report defined employability skills as the "skills required not only to gain employment, but also to progress within an enterprise so as to achieve one's potential and contribute successfully to enterprise strategic directions" (p. 3). The study produced an Employability Skills Framework consisting of:

- eight (8) key skills – communication skills, team skills, problem-solving skills, initiative and enterprise skills, planning and organising skills, self-management skills, learning skills, and technology skills
- 13 personal attributes – loyalty, commitment, honesty and integrity, enthusiasm, reliability, personal presentation, commonsense, positive self-esteem, sense of humour, balanced attitude to work and home life, ability to deal with pressure, motivation, and adaptability.

Examples of generic skills and attributes in selected positions in the digital content industries sourced from seek.com.au are:

- Animator – working independently
- Graphic designer – excellent communication skills
- Digital producer – clear communicator, focus on collaboration and ideas sharing

- Game engine programmer – excellent written and verbal skills, and strong time management abilities

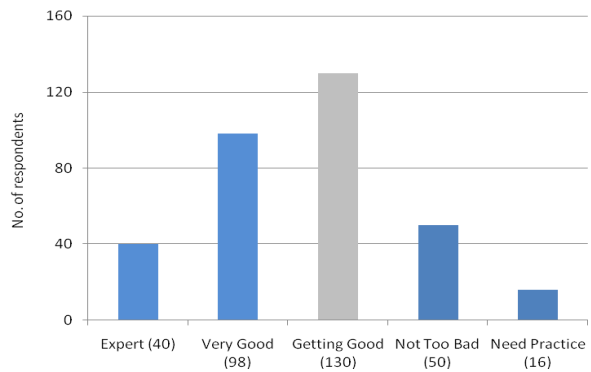
Where possible, the project team mapped survey questions against key skills and personal attributes in the Employability Skills Framework (Table 2). They then used this approach to analyse how respondents self-assessed their key skills and attributes.

Table 2. 60Sox research questions mapped against the Employability Skills Framework: Key employability skills

Key employability skills	Responses to survey questions																										
<p>Communication skills that contribute to productive and harmonious relations between employees and customers</p> <p><i>Finding: Overall, respondents rated themselves very well in terms of interacting positively and effectively with others, and sensitivity to other cultural beliefs, with <u>room for improvement in their communication skills.</u></i></p>	<p>Q.79 Communication skills</p> <table border="1"> <caption>Q.79 Communication skills</caption> <thead> <tr> <th>Category</th> <th>No. of respondents</th> </tr> </thead> <tbody> <tr> <td>Expert</td> <td>120</td> </tr> <tr> <td>Getting Good</td> <td>174</td> </tr> <tr> <td>Need Practice</td> <td>9</td> </tr> </tbody> </table> <p>Q.79 Interacting positively and effectively with others</p> <table border="1"> <caption>Q.79 Interacting positively and effectively with others</caption> <thead> <tr> <th>Category</th> <th>No. of respondents</th> </tr> </thead> <tbody> <tr> <td>Expert</td> <td>117</td> </tr> <tr> <td>Very Good</td> <td>180</td> </tr> <tr> <td>Getting Good</td> <td>33</td> </tr> <tr> <td>Not Too Bad</td> <td>4</td> </tr> </tbody> </table> <p>Q.79 Sensitivity to other cultural beliefs</p> <table border="1"> <caption>Q.79 Sensitivity to other cultural beliefs</caption> <thead> <tr> <th>Category</th> <th>No. of respondents</th> </tr> </thead> <tbody> <tr> <td>Expert</td> <td>174</td> </tr> <tr> <td>Getting Good</td> <td>124</td> </tr> <tr> <td>Need Practice</td> <td>5</td> </tr> </tbody> </table>	Category	No. of respondents	Expert	120	Getting Good	174	Need Practice	9	Category	No. of respondents	Expert	117	Very Good	180	Getting Good	33	Not Too Bad	4	Category	No. of respondents	Expert	174	Getting Good	124	Need Practice	5
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Key employability skills Responses to survey questions

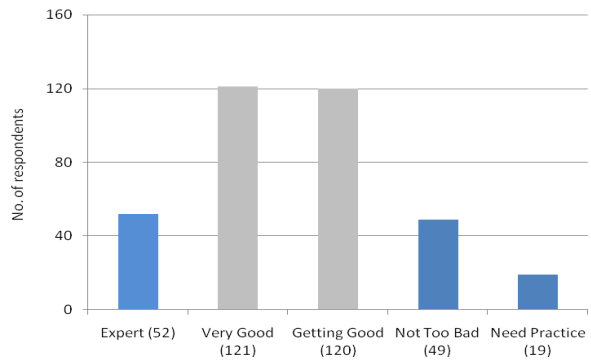
Q.63 Entrepreneurial aptitude



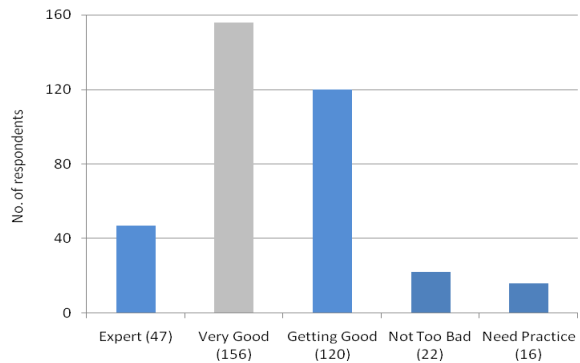
Planning and organising skills that contribute to long-term and short-term planning

Finding: Overall, respondents rated themselves very well in terms of decision-making, with room for improvement in their time management skills.

Q.35 Time management



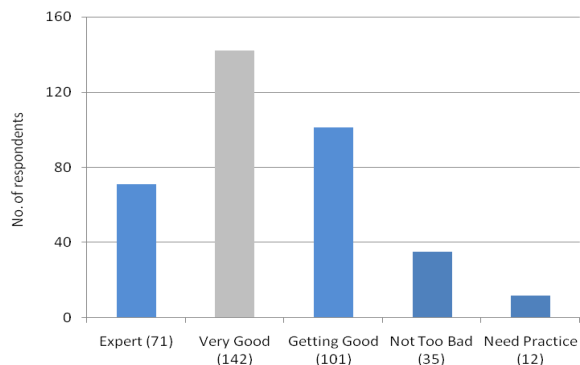
Q.35 Decision-making



Self-management skills that contribute to employee satisfaction and growth

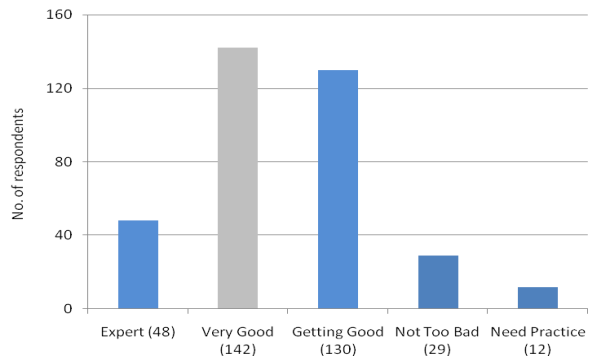
Finding: Overall, respondents rated themselves very well in terms of self-management, self-evaluation, and their ability to work alone.

Q.35 Self-management

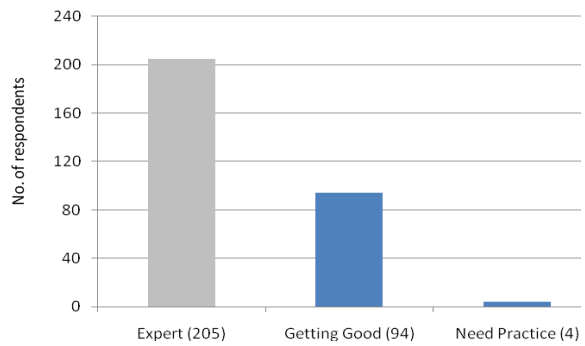


Key employability skills **Responses to survey questions**

Q.35 Self-evaluation



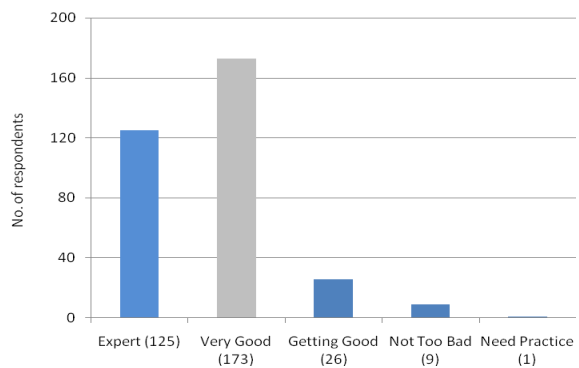
Q.79 Ability to work alone



Learning skills that contribute to ongoing improvement and expansion in employee and company operations and outcomes

Finding: Overall, respondents rated themselves very well in terms of their enthusiasm for ongoing learning.

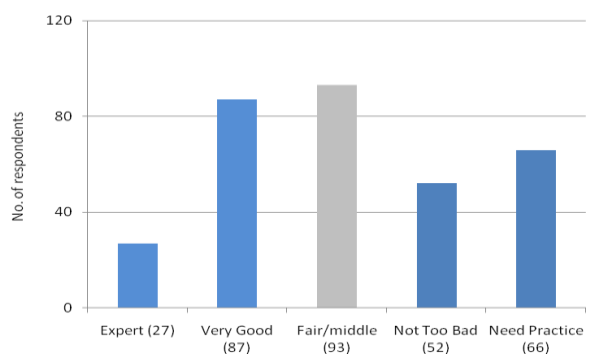
Q.63 Enthusiasm for ongoing learning



Technology skills that contribute to effective executive of tasks

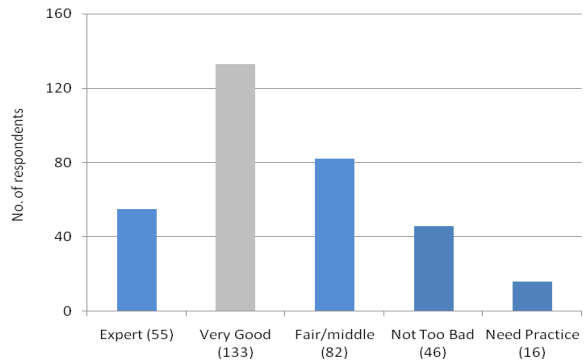
Finding: Overall, respondents rated themselves very well in terms of their proficiency in presenting information using technology, using a range of technologies, and upgrading their technology skills, with some room for improvement in their database skills.

Q.30 Proficiency in database skills

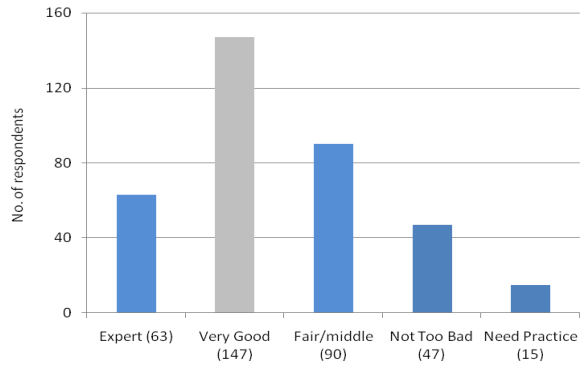


Key employability skills **Responses to survey questions**

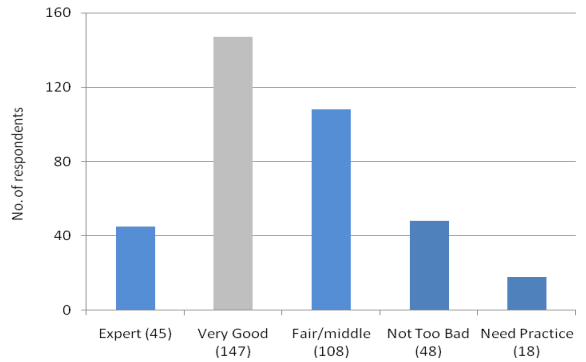
Q.30 Proficiency in human capital interaction



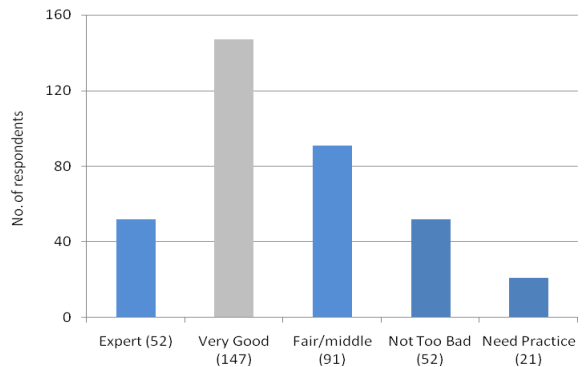
Q.30 Proficiency in presenting information using technology



Q.30 Proficiency in using a range of technologies

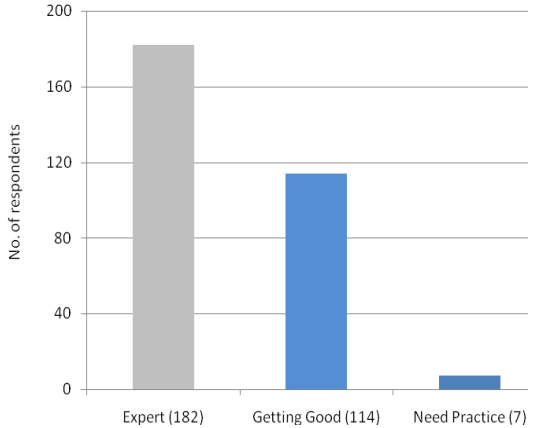
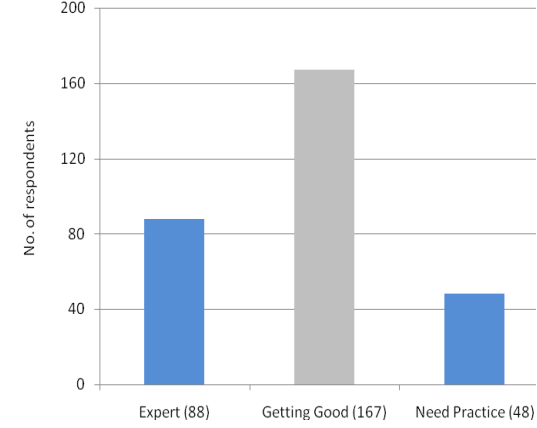
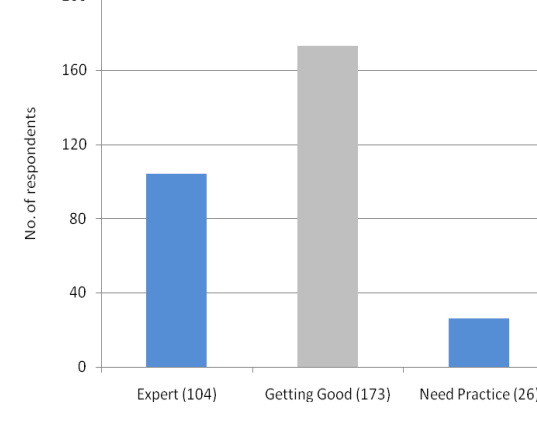


Q.30 Proficiency in updating your technology skills



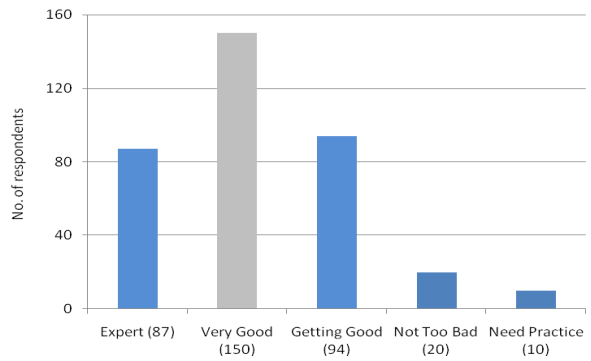
Survey questions aligned to five of the 13 personal attributes in the Employability Skills Framework: personal presentation, positive self-esteem, motivation, adaptability, and ability to adapt to new challenges.

Table 3. 60Sox research questions mapped against the Employability Skills Framework: Personal attributes

Personal attributes	Responses to survey questions								
<p>Personal presentation</p> <p><i>Finding: Overall, respondents rated their personal presentation skills very well.</i></p>	<p>Q.79 Personal presentation</p>  <table border="1"> <caption>Data for Q.79 Personal presentation</caption> <thead> <tr> <th>Category</th> <th>No. of respondents</th> </tr> </thead> <tbody> <tr> <td>Expert</td> <td>182</td> </tr> <tr> <td>Getting Good</td> <td>114</td> </tr> <tr> <td>Need Practice</td> <td>7</td> </tr> </tbody> </table>	Category	No. of respondents	Expert	182	Getting Good	114	Need Practice	7
Category	No. of respondents								
Expert	182								
Getting Good	114								
Need Practice	7								
<p>Positive self-esteem</p> <p><i>Finding: Overall, respondents believe there is room for improvement in their confidence level.</i></p>	<p>Q.79 Overall confidence</p>  <table border="1"> <caption>Data for Q.79 Overall confidence</caption> <thead> <tr> <th>Category</th> <th>No. of respondents</th> </tr> </thead> <tbody> <tr> <td>Expert</td> <td>88</td> </tr> <tr> <td>Getting Good</td> <td>167</td> </tr> <tr> <td>Need Practice</td> <td>48</td> </tr> </tbody> </table>	Category	No. of respondents	Expert	88	Getting Good	167	Need Practice	48
Category	No. of respondents								
Expert	88								
Getting Good	167								
Need Practice	48								
<p>Motivation</p> <p><i>Finding: Overall, respondents rated themselves very well in terms of developing personal goals, with room in their self-motivation.</i></p>	<p>Q.79 Self-motivation</p>  <table border="1"> <caption>Data for Q.79 Self-motivation</caption> <thead> <tr> <th>Category</th> <th>No. of respondents</th> </tr> </thead> <tbody> <tr> <td>Expert</td> <td>104</td> </tr> <tr> <td>Getting Good</td> <td>173</td> </tr> <tr> <td>Need Practice</td> <td>26</td> </tr> </tbody> </table>	Category	No. of respondents	Expert	104	Getting Good	173	Need Practice	26
Category	No. of respondents								
Expert	104								
Getting Good	173								
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Personal attributes **Responses to survey questions**

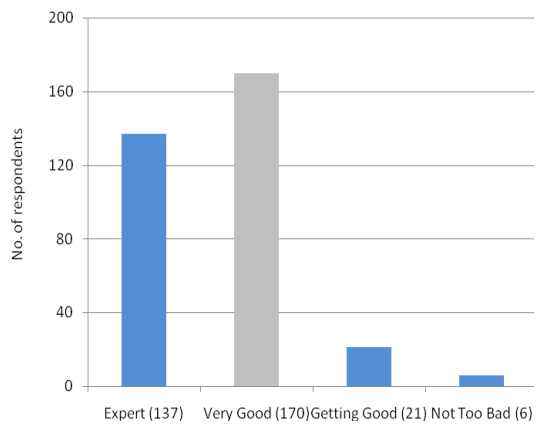
Q.35 Developing personal goals



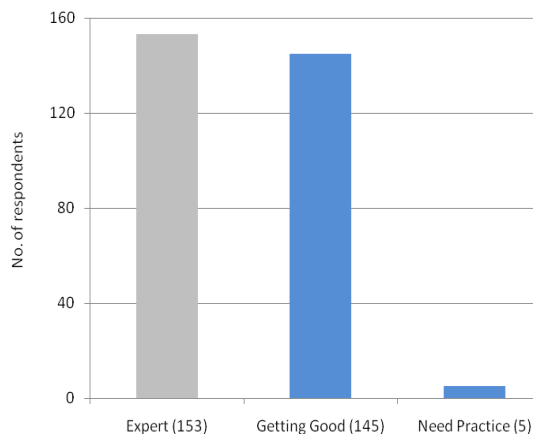
Adaptability

Finding: Overall, respondents rated themselves very well in terms of their openness to new ideas and techniques, and their ability to adapt to new challenges.

Q.63 Open to new ideas and techniques



Q.79 Ability to adapt to new challenges



Job-specific skills

Job-specific skills are those skills people use to do a particular job. Examples of job-specific skills for selected positions in the Digital Content industries sourced from seek.com.au are:

- Animator - 3D programs (Studio Max and After Effects), Flash, animation scripting, and Illustrator
- Graphic designer - HTML, CSS, Flash, and Photoshop
- Digital producer – CMS and publishing, authoring technical documentation, full circle project management background, Microsoft Project, HTML, and Flash
- Game engine programmer - C/C++ programming, multi-threading/multi-core architecture skills, and game platforms (PS2, PS3, Xbox, Xbox360, GameCube)

The analysis of data related to job-related skills indicates that a typical survey respondent (Table 4):

- enjoys photography and drawing/illustrating
- regards him/herself as having very good skills in their favourite creative activity
- has completed writing and design activities for assessment
- uses a PC
- uses Photoshop more than any other software programme
- regards his/her proficiency in the main software program used, human computer interaction, user-centred design, presenting information using technology, and using a range of technologies as 'very good'
- regards his/her database skills as 'getting good'
- regards his/her proficiency in software programming as 'need practice'
- does not have any coding skills.

Table 4. Job-specific skills of survey respondents

Survey question	Result	Responses/response rate
Q.15 Top 5 ranked favourite creative activities	1 Photography (equal 1st) 1 Drawing/illustrating (equal 1st) 2 Graphic design 3 Writing 5 Playing music/singing	n.a.
Q.16 Skill level of favourite creative activity	1 Expert = 82 (16.2%) 2 Very good = 198 (39.1%) 3 Getting good = 117 (23.1%) 4 Not too bad = 14 (2.8%) 5 Need practice = 7 (1.4%)	Responses = 418 82.4% RR
Q.19 Top 5 ranked outputs (for assessment)	1 Writing (equal top ranking) 1 Design (equal top ranking) 2 Photography 3 Film 4 Visual art	n.a.

Survey question	Result	Responses/response rate
Q.19 Top 5 ranked outputs (voluntary)	1 Photography 2 Design 3 Writing 4 Visual art 5 Music	n.a.
Q.27 Top 5 ranked software programmes used	1 Photoshop 2 Word 3 PowerPoint 4 Excel 3 Illustrator	n.a.
Q.28 Skill level of top software programme used	1 Expert = 116 (22.9%) 2 Very good = 198 (39.1%) 3 Getting good = 49 (9.7%) 4 Not too bad = 6 (1.2%) 5 Need practice = 2 (0.4%)	Responses = 371 73.2% RR
Q.30 Proficiency in database skills	1 Expert = 27 (5.3%) 2 Very good = 87 (17.2%) 3 Getting good = 93 (18.3%) 4 Not too bad = 52 (10.3%) 5 Need practice = 66 (13%) 6 Don't know = 46 (9.1%)	Responses = 371 73.2% RR
Q.30 Proficiency in human computer interaction	1 Expert = 55 (10.8%) 2 Very good = 133 (26.2%) 3 Getting good = 82 (16.2%) 4 Not too bad = 46 (9.1%) 5 Need practice = 16 (3.2%) 6 Don't know = 39 (7.7%)	Responses = 371 73.2% RR
Q.30 Proficiency in user-centred design	1 Expert = 14 (2.8%) 2 Very good = 100 (19.7%) 3 Getting good = 80 (15.8%) 4 Not too bad = 56 (11%) 5 Need practice = 37 (7.3%) 6 Don't know = 84 (16.6%)	Responses = 371 73.2% RR
Q.30 Proficiency in presenting info using technology	1 Expert = 63 (12.4%) 2 Very good = 147 (29%) 3 Getting good = 90 (17.8%) 4 Not too bad = 47 (9.3%) 5 Need practice = 15 (3.0%) 6 Don't know = 9 (1.8%)	Responses = 371 73.2% RR
Q.30 Proficiency in using a range of technologies	1 Expert = 45 (8.9%) 2 Very good = 147 (29%) 3 Getting good = 108 (21.3%) 4 Not too bad = 48 (9.5%) 5 Need practice = 18 (3.6%) 6 Don't know = 5 (1%)	Responses = 371 73.2% RR

Survey question	Result	Responses/response rate
Q.30 Proficiency in upgrading your technology skills	1 Expert = 52 (10.3%) 2 Very good = 147 (29%) 3 Getting good = 91 (17.9%) 4 Not too bad = 52 (10.3%) 5 Need practice = 21 (4.1%) 6 Don't know = 8 (1.6%)	Responses = 371 73.2% RR
Q.30 Proficiency in software programming	1 Expert = 8 (1.6%) 2 Very good = 21 (4.1%) 3 Getting good = 48 (9.5%) 4 Not too bad = 42 (8.3%) 5 Need practice = 150 (29.6%) 6 Don't know = 102 (20.1%)	Responses = 371 73.2% RR
Q.31 Coding skills	Yes = 99 (19.5%) No = 272 (53.6%)	Responses = 371 73.2% RR
Q.33 Proficiency in coding in preferred software language	1 Expert = 6 (1.2%) 2 Very good = 17 (3.4%) 3 Getting good = 40 (7.9%) 4 Not too bad = 12 (2.4%) 5 Need practice = 21 (4.1%)	Responses = 96 out of 99 with coding skills 97% RR
Q.29 Mac or PC users	Mac = 89 (17.6%) PC = 282 (55.6%)	Responses = 371 73.2% RR

Business skills

Business skills training for creative industries typically covers the topics like exporting, raising capital, attracting investment, networking, promotion, and pitching ideas and projects to investors and business people (Department of Tourism, Regional Development and Industry, 2009). Similar to the approach used to analyse key employability skills and personal attributes, the project team mapped relevant survey questions against responses to questions about business skills. These skills are particularly important for those survey respondents who are self-employed and/or freelance - 18.5% of respondents had an ABN for creative work and 19.7% had registered for GST (Table 5).

The analysis of data related to business skills of respondents indicates that a typical survey respondent:

- has 'very good' skills in developing a strategic vision and is improving his/her entrepreneurial aptitude ("getting good")
- Is 'getting good' or has 'moderate' skills in pitching, knowledge of his/her preferred industry and its processes, presenting work to potential employers, quality control, and copyright law
- has 'little' knowledge of licencing, creative commons, intellectual property, digital rights management, government grants, grant applications, and venture capital
- has 'no idea' about angel investment.

Table 5. Business skills of survey respondents

Survey question	Result	Responses/response rate
Q.25 ABN for creative work	Yes = 94 (18.5%) No = 312 (61.5%)	406 responses 80% RR
Q.26 Registered for GST	Yes = 100 (19.7%) No = 306 (60.4%)	406 responses 80% RR
Q.35 Developing a strategic vision	1 Expert = 39 (7.7%) 2 Very good = 139 (27.4%) 3 Getting good = 130 (25.6%) 4 Not too bad = 43 (8.5%) 5 Need practice = 10 (2%)	Responses = 361 71.2% RR
Q.63 Entrepreneurial aptitude	1 Expert = 40 (7.9%) 2 Very good = 98 (19.3%) 3 Getting good = 130 (25.6%) 4 Not too bad = 50 (9.9%) 5 Need practice = 16 (3.2%)	Responses = 334 65.9% RR
Q.79 Pitching skills	1 Expert = 52 (10.3%) 2 Getting good = 181 (35.7%) 3 Need practice = 70 (13.8%)	Responses = 303 59.8% RR
Q.79 Awareness of preferred industry and its processes	1 Expert = 88 (17.4%) 2 Getting good = 181 (36.3%) 3 Need practice = 31 (6.1%)	Responses = 300 59.1% RR
Q.79 Presenting work to potential employers	1 Expert = 67 (13.2%) 2 Getting good = 177 (34.9%) 3 Need practice = 59 (11.6%)	Responses = 303 59.8% RR
Q.79 Quality control	1 Expert = 80 (15.8%) 2 Getting good = 202 (39.8%) 3 Need practice = 21 (4.1%)	Responses = 303 59.8% RR
Q.68 Awareness of copyright law	1 Expert = 14 (2.8%) 2 Fair = 112 (22.1%) 3 Moderate = 82 (16.2%) 4 Little = 73 (14.4%) 5 No idea = 28 (5.5%)	Responses = 309 60.9% RR
Q.68 Awareness of licencing	1 Expert = 7 (1.4%) 2 Fair = 68 (13.4%) 3 Moderate = 88 (17.4%) 4 Little = 94 (18.5%) 5 No idea = 49 (9.7%)	Responses = 306 60.4% RR
Q.68 Awareness of Creative Commons	1 Expert = 10 (2%) 2 Fair = 65 (12.8%) 3 Moderate = 80 (15.8%) 4 Little = 85 (16.8%) 5 No idea = 62 (12.2%)	Responses = 302 59.6% RR

Survey question	Result	Responses/response rate
Q.68 Awareness of intellectual property	1 Expert = 13 (2.6%) 2 Fair = 71 (14%) 3 Moderate = 85 (16.8%) 4 Little = 78 (15.4%) 5 No idea = 54 (10.7%)	Responses = 301 59.4% RR
Q.68 Awareness of digital rights management	1 Expert = 6 (1.2%) 2 Fair = 44 (8.7%) 3 Moderate = 81 (16%) 4 Little = 88 (17.4%) 5 No idea = 77 (15.2%)	Responses = 296 48.4% RR
Q.68 Awareness of government grants	1 Expert = 6 (1.2%) 2 Fair = 39 (7.7%) 3 Moderate = 56 (11%) 4 Little = 104 (20.5%) 5 No idea = 92 (18.1%)	Responses = 297 58.6% RR
Q.68 Grant applications	1 Expert = 7 (1.4%) 2 Fair = 25 (4.9%) 3 Moderate = 64 (12.6%) 4 Little = 110 (21.7%) 5 No idea = 88 (17.4%)	Responses = 294 58% RR
Q.68 Venture capital	1 Expert = 2 (0.4%) 2 Fair = 18 (3.6%) 3 Moderate = 46 (9.1%) 4 Little = 89 (17.6%) 5 No idea = 137 (27%)	Responses = 292 57.6% RR
Q.68 Angel investment	1 Expert = 3 (0.6%) 2 Fair = 14 (2.8%) 3 Moderate = 37 (7.3%) 4 Little = 88 (17.4%) 5 No idea = 149 (29.4%)	Responses = 291 57.4% RR

Career skills

Questions in the survey related to career skills were career planning and decision-making, accessing and using careers information, awareness of industry needs, enthusiasm for lifelong learning, difficulty/ease in finding work, mobility intentions, industry engagement and relationships, and involvement in communities of practice/networks.

The analysis of data related to career skills of respondents indicates that a typical survey respondent (Table 6):

- has 'very good' knowledge of specific skills required in his/her chosen profession
- is 'getting good' in making career-enhancing decisions, planning their career development, and improving his/her knowledge of the preferred industry of employment and its processes
- has 'very good' skills in locating and effectively using career information
- regarded his/her enthusiasm for ongoing learning as 'very good'

- believes mobility is important to career progression (with Victoria and New South Wales identified as key locations in Australia), and is willing to work overseas in the future
- is slightly more likely to participate in communities of interest/networks (see the section on *Participation of Aspiring Creatives in Communities in Practice* in this report for more information)
- slightly less likely to engage directly with people working in his/her preferred creative industry
- is unlikely to have a mentoring relationship with an industry representative
- perceives findings work in his/her chosen field as difficult.

Table 6. Career skills of survey respondents

Survey question	Result	Responses/response rate
Q.63 Make career-enhancing decisions	1 Expert = 32 (6.3%) 2 Very good = 127 (25%) 3 Getting good = 122 (24.1%) 4 Not too bad = 41 (8.1%) 5 Need practice = 12 (2.4%)	Responses = 334 65.9% RR
Q.63 Planning your career development	1 Expert = 35 (6.9%) 2 Very good = 96 (18.9%) 3 Getting good = 144 (28.4%) 4 Not too bad = 44 (8.7%) 5 Need practice = 15 (3%)	Responses = 334 65.9% RR
Q.63 Awareness of the specific skills required in chosen profession	1 Expert = 60 (11.8%) 2 Very good = 161 (31.8%) 3 Getting good = 83 (16.4%) 4 Not too bad = 23 (4.5%) 5 Need practice = 7 (1.4%)	Responses = 334 65.9% RR
Q.63 Locating and effective use of career information	1 Expert = 41 (8.1%) 2 Very good = 142 (28%) 3 Getting good = 117 (23.1%) 4 Not too bad = 24 (4.7%) 5 Need practice = 10 (2%)	Responses = 334 65.9% RR
Q.63 Ability to source resources to improve career-specific skills	1 Expert = 47 (9.3%) 2 Very good = 135 (26.6%) 3 Getting good = 105 (20.7%) 4 Not too bad = 37 (7.3%) 5 Need practice = 10 (2%)	Responses = 334 65.9% RR
Q. 63 Enthusiasm for ongoing learning	1 Expert = 125 (24.7%) 2 Very good = 173 (34.1%) 3 Getting good = 26 (5.1%) 4 Not too bad = 9 (1.8%) 3 Need practice = 1 (0.2%)	Responses = 334 65.9% RR
Q.65 Awareness of specific skills required in chosen occupation	1 Expert = 60 (11.8%) 2 Very good = 161 (13.8%) 3 Getting good = 83 (16.4%) 4 Not too bad = 23 (4.5%) 5 Need practice = 7 (1.4%)	Responses = 334 65.9% RR

Survey question	Result	Responses/response rate
Q.65 Level of difficulty/ease in finding work in chosen creative field	1 Very hard = 96 (18.9%) 2 Difficult = 143 (28.2%) 3 Undecided = 50 (9.9%) 4 Easy = 18 (3.6%) 5 Very easy = 5 (1%)	Responses = 312 61.5% RR
Q.79 Awareness of preferred industry and its processes	1 Expert = 88 (17.4%) 2 Getting good = 181 (36.3%) 3 Need practice = 31 (6.1%)	Responses = 300 59.1% RR
Q.81 Mobility important to career prospects	Yes = 194 (38.3%) No = 109 (21.5%)	Responses = 303 59.8% RR
Q.82 Preferred Australian destinations if choose to be mobile	ACT = 20 (3.9%) NSW = 99 (19.5%) NT = 3 (0.6%) QLD = 47 (9.3%) SA = 10 (2%) TAS = 5 (1%) VIC = 104 (20.5%) WA = 13 (2.6%)	Responses = 301 59.4% RR
Q.83 Already mobile	Yes = 57 (27%) No = 137 (11.2%)	Responses = 194 38.3% RR
Q.85 Likelihood of international mobility	Yes = 213 (42%) No = 90 (17.8%)	Responses = 303 59.8% RR
Q.89 Currently involved in creative communities of interest/networks	Yes = 155 (30.6%) No = 148 (29.2%)	Responses = 303 59.8% RR
Q.103 Currently have direct personal engagement with people working in preferred creative industry	Yes = 144 (28.4%) No = 158 (31.2%)	Responses = 302 59.6% RR
Q.104 Level of involvement with industry contacts through 'attending the same events'	Regularly = 48 (9.5%) Occasionally = 67 (13.2%) Rarely = 18 (3.6%) Never = 9 (1.8%)	Responses = 142 RR n.a. (see above)
Q.114 Currently has a mentoring relationship with industry representative	Yes = 75 (14.8%) No = 220 (43.4%)	Responses = 295 58.2% RR

Section summary

This section sought to address the first objective of this report: **Identify the characteristics, skills and attributes of creatives who completed the survey** in order to gain a sense of the profile of aspiring creatives who completed the survey and their perceptions about their skills sets and employability.

The analysis of data related to the characteristics of survey respondents found that:

- over one-half of survey respondents (52.5%) were studying, mainly in higher education institutions, and almost one-third of respondents were graduates (32.7%).
- almost 13% of respondents reported current paid work using their creative talents and 32.5% reported previous paid work using their creative talents, due in part to the high number of respondents who were students.

- a typical respondent was aged 21 years; female; born in Australia; living in Victoria or New South Wales; employed casually (although not currently in a job using their creative talent); undertaking a Bachelor degree full-time and on-campus, and in the final year of his/her studies; and planning to find employment in the Creative Industries and/or undertake further study after graduating from a CI course.

The analysis of data related to key employability skills and personal attributes found that a typical survey respondent perceived himself/herself as having:

- 'very good' communication, team work, problem-solving, initiative and enterprise, learning, and technology skills
- 'very good' personal attributes in the areas of personal presentation, adaptability, and ability to adapt to new challenges
- a need to improve their planning and organising skills, and levels of confidence and motivation.

The analysis of data related to job-specific skills found that a typical survey respondent perceived himself/herself as having:

- 'very good' proficiency in the standard software packages used in the Creative Industries i.e. Photoshop, Microsoft Office, and Illustrator
- 'very good' proficiency in job-specific skills common to most positions in the Creative Industries i.e. human computer interaction, presenting information using technology, using a range of technologies, and upgrading technology skills.

The analysis of data related to business skills found that a typical survey respondent perceived himself/herself as:

- having 'very good' skills in developing a strategic vision improving their entrepreneurial aptitude ('getting good')
- 'getting good' in their proficiency in pitching, knowledge of their preferred industry and its processes, presenting work to potential employers, quality control, and copyright law
- having 'little' knowledge of licencing, creative commons, intellectual property, digital rights management, government grants, grant applications, and venture capital
- having 'no idea' about angel investment.

The analysis of data related to career skills found that a typical survey respondent:

- perceived themselves as having 'very good' or 'getting good' career skills
- believed mobility is important to career progression and were willing to work overseas
- were slightly more likely to be involved in creative communities of interest/networks and slightly less likely to directly engage with people working in their preferred creative industry
- perceived finding work as 'difficult' or 'very hard' regardless of their career skills and involvement in creative communities and industry networks
- were unlikely to have a mentoring relationship with an industry representative.

Education-to-work transitions of aspiring creatives

This section of the report aims to address the second objective of this report: **Determine the extent to which aspiring creatives (CI graduates) have made successful education-to-work transitions, and identify any factors that influence the ability of aspiring creatives to make successful transitions.** It is worth undertaking a brief overview of education-to-work transition before starting the analysis of relevant survey data.

Education-to-work transitions typically involve three interlinking stages: preparation, actual transition, and outcomes in the labour market. However, Hannon, Raffé, and Smyth (1996) found that transitions vary because of:

- different national contexts
- the nature of the education/training system in each country and its interconnection with the labour market, as well as state policies influencing these processes
- the structure of the transition process itself
- outcomes of the transition process - 'success' and 'failure' in transitions, and variations among groups of young people in the outcomes achieved.

In terms of measuring the outcomes of education-to-work transitions, Hannon et al. (1996) identified several **macro outcomes** and **micro outcomes** (Table 7). Arguing that qualifications are of no use if they do not attract a return, Karmel (2009) proposed outcome indicators to assist in determining whether vocational qualifications are valued in the workforce.

Table 7. Measuring education-to-work transitions

Outcomes	Indicators
Macro outcomes (Hannon et al., 1996, p. 6)	Role of education/training systems in promoting economic growth Improving income levels Meeting skills needs
Micro outcomes (Hannon et al., 1996, p. 6)	Labour force participation Employment versus unemployment Occupational status Matching between education/training characteristics and occupational status Wages and wage growth Security of employment Access to on-the-job or employer-sponsored training Job and career mobility Job satisfaction
VET outcomes (Karmel, 2009, p. 12)	Qualification levels in the working-age population Relative employment rates (by qualification type) Relative wages (by qualification type) Overall quality of the workforce Proportion of graduates who improve their employment e.g. move from not employed to employed Proportion of graduates who report that their training is relevant to their current employment

Karmel, Mlotkowski and Awodeyi (2008) examined the match between what people study at the vocational education and training (VET) level and the jobs they get, stating that a good match is an indicator that the VET system is performing its role of helping individuals to gain vocational skills. A mismatch can be measured by a low percentage of VET graduates employed in an occupation relevant to their training, thereby reducing returns on training investment.

The study by Karmel et al. (2008) included the training outcomes for arts and media professionals as well as their perceptions about the relevance of their training (Table 8). They found that:

- only 7.5% of VET graduates who trained as arts and media professionals were working in their intended occupation (at the ANZSCO sub-major group level) compared to over one third (36.6%) for all VET graduates
- 69.9% of graduates who trained as arts and media professionals and were working in their intended occupation indicated their training was highly relevant or somewhat relevant compared to 93.4% for all VET graduates
- 63.6% of VET graduates who trained as arts and media professionals and were not working in their intended occupation indicated their training had very little or no relevance compared to 21.1% for all graduates.

For VET graduates who are arts and media professionals, these findings indicate a serious mismatch between what they study and the jobs they get. However, this data does not indicate whether they are working in other occupations (e.g. management, teaching, sales) that are utilising their specialist and/or generic skills they developed in their VET course. It also does not recognise that career progression for those trained to work in the Creative Industries is not as clear cut as those trained to work in other industries, such as construction and health. Further research to explore these findings is warranted.

Table 8. Matches between intended and destination occupations for graduates who are employed, ANZSCO, 2007

Intended occupation of training activity	Employed in intended occupation	Training is highly relevant or somewhat relevant		Training has very little or no relevance
		<i>Employed in intended occupation</i>	<i>Not employed in intended occupation</i>	<i>Not employed in intended occupation</i>
Managers	14.1%	92.0%	65.9%	19.1%
Professionals	21.5%	90.5%	52.6%	24.4%
Arts & media professionals	7.5%	69.9%	26.4%	63.6%
Technicians & trades workers	60.6%	96.5%	24.2%	14.2%
Community & personal service workers	43.8%	95.1%	29.4%	25.6%
Clerical & administrative workers	23.0%	90.4%	53.7%	22.3%
Sales workers	45.2%	88.2%	37.3%	17.1%
Machinery operators & drivers	26.6%	89.3%	47.7%	24.7%
Labourers	25.5%	88.8%	49.9%	22.5%
Total	36.6%	93.4%	41.2%	21.1%

n.a. = not available

Source: Compiled from Karmel, Mlotkowski and Awodeyi (2008)

Findings from the study by Jung, Misko, Lee, Dawe, Hong, and Lee (2004) on effective measures of school-to-work transitions found that transitions require a close connection between the education and training system and industry. Systems need mechanisms and frameworks to enable accurate assessment of industry and labour market needs, and the reflection of these needs into curriculum (Jung, et al., 2004, p. 12). Particular strategies for successful education-to-work transitions include:

- students spending an adequate amount of time in industry to acquire appropriate industry-specific skills and experience as well as an understanding of work habits and culture, which requires flexibility in timetables
- students accessing teachers with appropriate expertise and industry experience
- students accessing adequate and up-to-date facilities, materials and equipment to enable the practical application of their skills
- institutions providing adequate information on the skill needs of local industries obtained by undertaking their own formal industry needs analyses, developing partnerships with industry bodies, providing regular industry visits, and ensuring dialogue with employers and teaching staff.

(Jung, et al., 2004, pp. 86-89)

An analysis of the education-to-work transitions of survey respondents based on outcome indicators in Table 7 is beyond the scope of this project. The project team was able to analyse relevant survey data using three transition outcome indicators:

- employment of CI graduates in relevant occupations
- security of employment
- job and career mobility.

The binary logistic regression (Forward:Wald) procedure proved useful in identifying any factors that influence:

- the ability of aspiring creatives to obtain paid work using their creative talents
- the perceptions of aspiring creatives who rated finding work as 'difficult' or 'very hard'.

Employment of CI graduates in relevant occupations

Of the 507 respondents, 166 respondents indicated that they had graduated from a university (48), TAFE institution (64) or private college (50), with four respondents not responding to the question. Only 18.7% of graduates (31) were currently in paid work using their creative talents, and 45.2% of graduates (75) were previously in paid work using their creative talents. Examples of positions held by CI graduates who were currently working in the Creative Industries included web page maintenance, web developer/designer, video editor, video director/producer, technical support representative, support services, sound engineer, software developer assistant, programmer, production coordinator, photographer, musician, music producer, projectionist, and mural artist/sign writer.

Figure 4 suggests that university graduates were more likely to previously work in relevant occupations, and VET graduates (TAFE institutions) were more likely to currently work in relevant occupations. However, an analysis of this data found no significant difference between the outcomes of VET versus university graduates using outcomes measures. By State and territory (excluding the Northern Territory and Tasmania as sample sizes were too small), graduates living in the ACT were more likely to previously

work in relevant occupations, and graduates living in South Australia were less likely to previously work in relevant occupations (Figure 5).

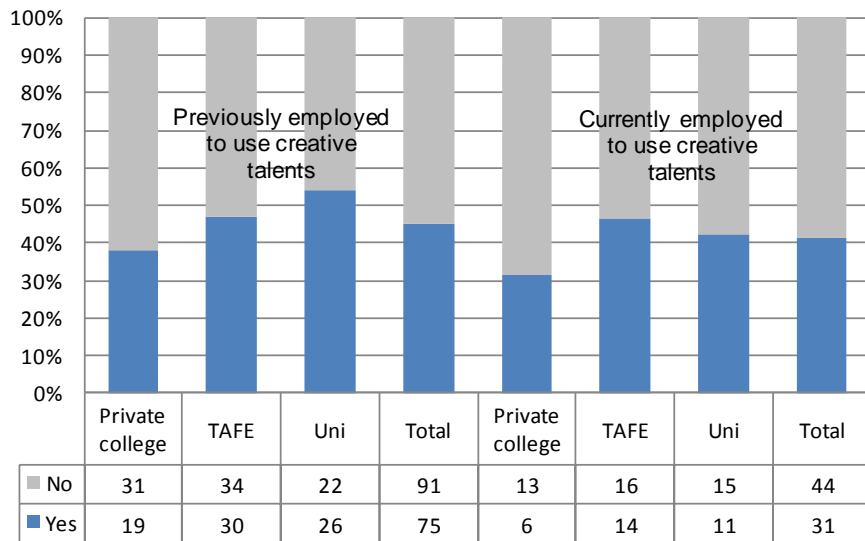


Figure 4. Employment using creative talents by educational institution

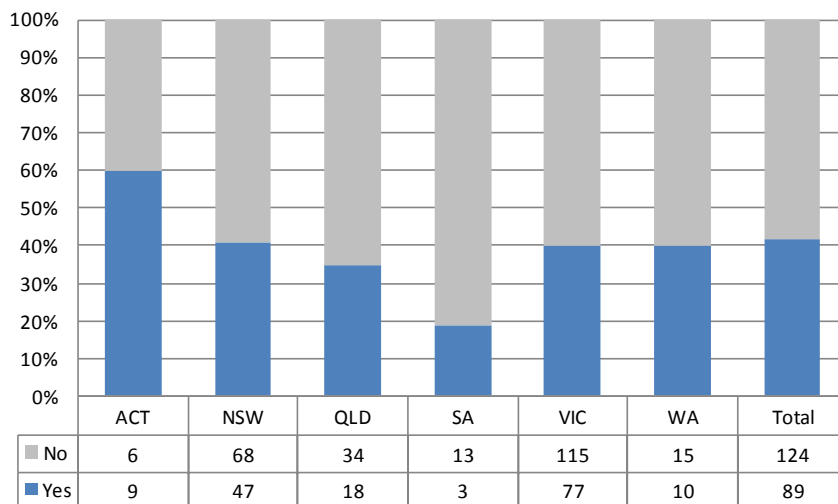


Figure 5. Previous employment using creative talents by State and territory

Around 60% or 186 respondents who were CI students indicated an intention to work in a job in their favourite creative area when they graduate; 90 respondents in a job in another area in the Creative Industries; and 37 respondents in a job outside of the Creative Industries. These findings about future work intentions of CI students do not align with employment outcomes of CI graduates, suggesting that CI students may have unrealistic expectations about their ability to find work in their preferred occupation.

The factors of being employed full-time, undertaking freelance/project work, or being self-employed are associated with a higher likelihood of current paid employment using creative talents (Table 9).

Table 9. Significant associations: Selected characteristics predict current employment using creative talents

Factors/variables associated with higher values	Factors/variables associated with lower values
Employed full-time	Nil
Freelance/project work	
Self-employed	

The factors of age, having an ABN, involvement in communities of interest/networks, and personal engagement with industry are associated with a higher likelihood of previous paid employment using creative talents (Table 10). The factor of being male is associated with a lower likelihood of previous paid employment using creative talents.

Table 10. Significant associations: Selected characteristics predict previous employment using creative talents

Factors/variables associated with higher values	Factors/variables associated with lower values
Age	Male
ABN	
Involvement in communities of interest/network	
Personal engagement with industry	

Security of employment

Out of the 166 respondents who were graduates, 105 respondents were currently working and 67 of these respondents indicated their employment type. Respondents employed to use their creative talents were more likely to work full-time, casually, or through freelance/project work (0). Respondents not currently employed to use their creative talents were significantly more likely to work casually. These findings confirm that many CI graduates lack job security.

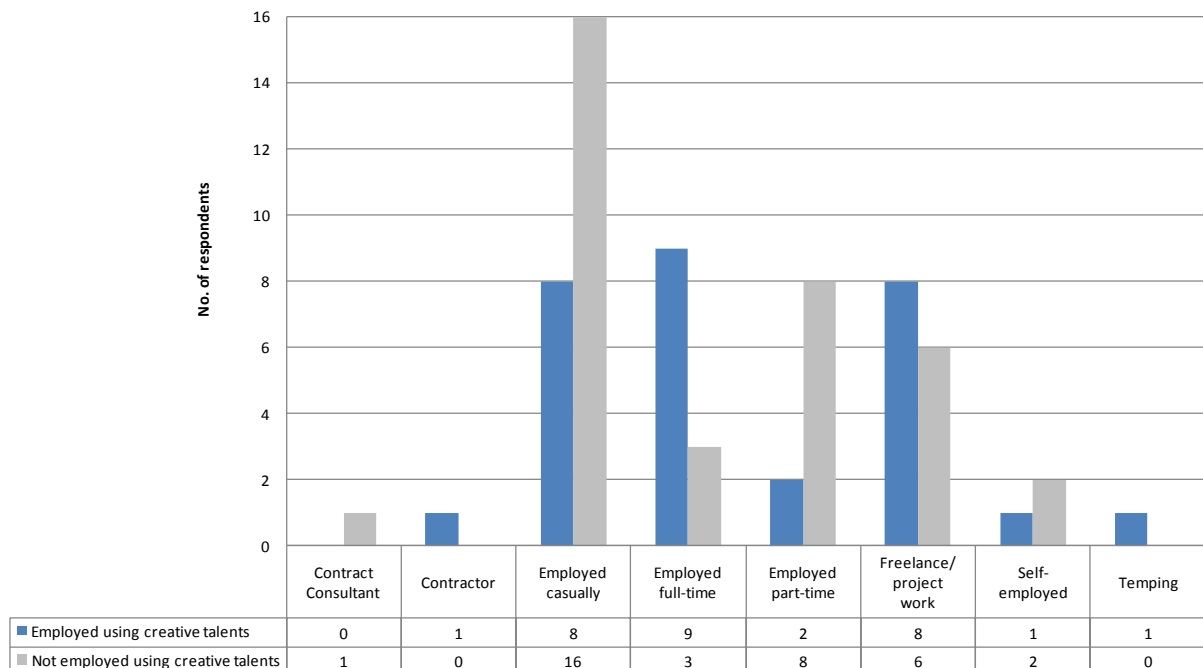


Figure 6. Employment using creative talents by State and territory (excluding NT and Tasmania)

Job and career mobility

Over one third or 194 respondents indicated that mobility was important to their career prospects; 57 respondents indicated that they were already mobile; and 213 respondents indicated an intention to work overseas (Table 11). Respondents who were CI graduates were more likely to indicate that mobility was important to their career prospects than were CI students, and more likely to have already relocated to improve their career prospects. Preferred Australian destinations for work were Victoria and New South Wales. Preferred international destinations for work were New York, London, and Tokyo.

Table 11. Mobility patterns and intentions

Survey question	Result	Responses/ response rate
Q.81 Mobility important to career prospects	Yes = 194 (38.3%) No = 109 (21.5%)	Responses = 303 59.8% RR
Q.82 Preferred Australian destinations if choose to be mobile	ACT = 20 (3.9%) NSW = 99 (19.5%) NT = 3 (0.6%) QLD = 47 (9.3%) SA = 10 (2%) TAS = 5 (1%) VIC = 104 (20.5%) WA = 13 (2.6%)	Responses = 301 59.4% RR
Q.83 Already mobile	Yes = 57 (27%) No = 137 (11.2%)	Responses = 194 38.3% RR
Q.85 Likelihood of international mobility	Yes = 213 (42%) No = 90 (17.8%)	Responses = 303 59.8% RR

Respondents identified several benefits of working overseas. They included greater exposure, networking, new ideas and inspiration, cultural experiences, larger markets, more employment opportunities, better work conditions, lack of employment opportunities in Australia, access to cutting-edge technology, greater recognition of work, and better employment prospects when back in Australia. Examples of comments include:

- “Exposure, size of market, inspiration, relevance to work.”
- “Being inspired by a whole different range of cultures, traditions, customs, architecture, and use of design. Extra networking advantages, broader 'perspective', varied work and cultural experiences.”
- “It looks good no matter what the job was. Walk into a studio over here in Australia and saying "I worked for such and such company in London for the last 2 years" has such a huge 'wow' factor that it honestly doesn't matter if you got only coffee for 18 months of the 2 years.”
- “International experience has a high regard in Australia, so that you can bring it back and pass the knowledge on.”
- “A bigger and broader resume.”
- “There is no work for dancers in Australia for the amount of graduating students for various courses - going overseas is the only option.”
- “Bigger organisations, more opportunities.”

- “Better experience, pay and culture.”
- “Faster advancements in technology.”
- “The same industry can be completely different in different countries. By working internationally, I will be exposed to completely new ideas and new ways of thinking. I will meet more people, create more contacts, and, in general, broaden my understanding of the way things work.”
- “America has, what seems to me, a lot more companies and therefore, positions available to work in. Also the works that are done in America, specifically in the games and film industry, seem to be of higher familiarity with the creative industry. For example, EA Games is more known than Krome studios, and Pixar is more well known than Liquid animation.”

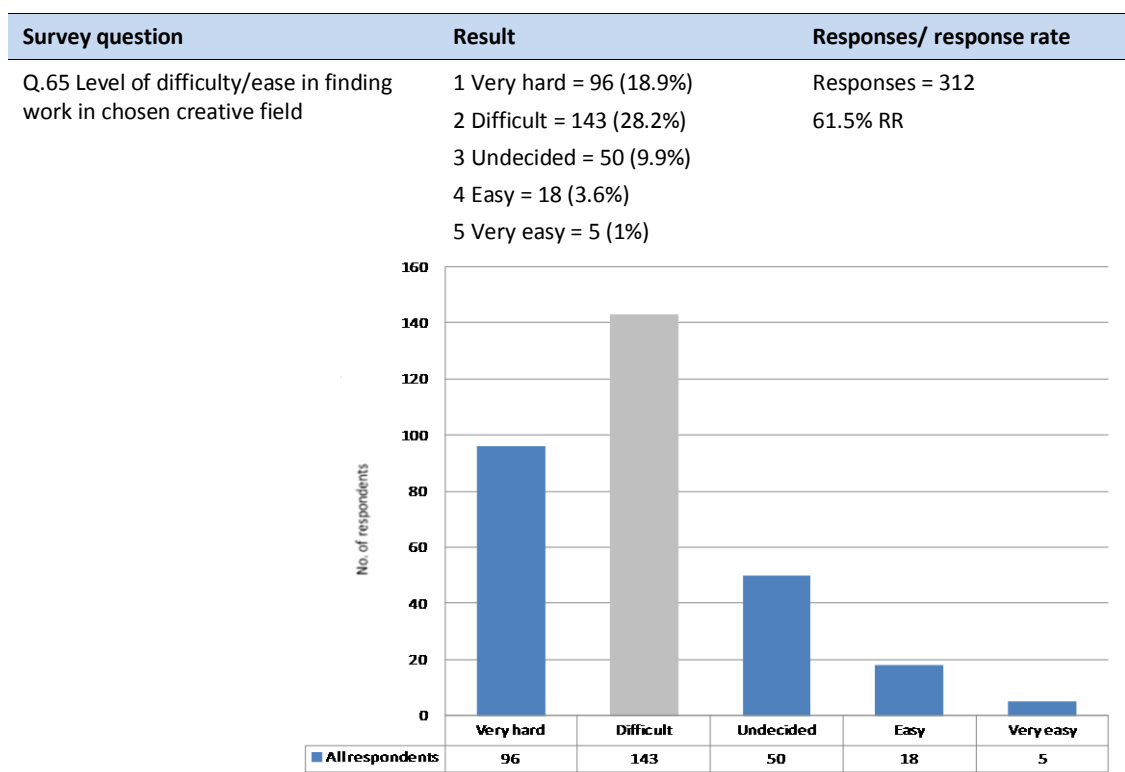
Reasons given by respondents who were not planning to work overseas were good career prospects in Australia, preference to focus on career in Australia, family and friends in Australia, global access through the internet, and cannot afford to leave Australia. Examples of comments include:

- “Australia, and more importantly Melbourne, is a thriving artistic space. Melbourne has opportunities for artists and writers. I am just yet to get any of them!”
- “I think there are sufficient career prospects already in Australia, and would only move to further my already existing career.”
- “There are better prospects in Australia to grow in the creative industry.”
- “At this stage I want to consolidate my exposure in this country where I have done courses and have worked on networking.”
- “I'd want to gain a status and strengthen it near home in a familiar place.”
- “Australia is my home, strong family bonds and want to be close to those I care about.”
- “Family + friends.”
- “It's too hard with young children.”
- “I feel that I have the right skills and attitude to land a job in the competitive advertising industry in Melbourne. Plus all my family, girlfriend and friends all live here.”
- “I don't see a need at the moment. The internet has made everything quite accessible.”
- “I can write from anywhere, and send it anywhere.”
- “Lack of money and contacts.”
- “Cannot afford it, and would have fair amount of luck in Melbourne or Sydney.”

Barriers to successful transitions

Almost half of all respondents indicated that finding work was either ‘very hard’ or ‘difficult’ (Table 12). The project team performed a number of cross tabs to determine whether there were any differences between the views of CI graduates and CI students about the difficulty/ease in finding work, and between the views of respondents employed to use their creative talents and those not employed to use their creative talents. This analysis found no significant differences in the views of these different groups in finding work.

Table 12. Difficulty/ease in finding work in chosen creative field



However, the analysis of data using the binary logistic regression (Forward:Wald) procedure found that the factors of being employed casually or part-time; enrolled in a Graduate Diploma/Graduate Certificate, Diploma or Certificate; or at the beginning, middle or final year of a course were associated with a higher likelihood of having a perception that finding work is ‘difficult’ or ‘very hard’ (Table 13).

Table 13. Significant associations: Selected characteristics predict the perception of aspiring creatives that finding work is ‘difficult’ or ‘very hard’

Factors/variables associated with higher values	Factors/variables associated with lower values
Employed casually	Nil
Employed part-time	
Enrolled Grad Diploma/Grad Certificate	
Enrolled Certificate	
Enrolled Diploma	
Stage of course: Final year (End)	
Stage of course: Middle	
Stage of course: Beginning	

Respondents identified several barriers to finding work: lack of industry connections, lack of hands-on experience, highly competitive industry, availability of jobs, economic climate, and reluctance of employers to employ new graduates. Examples of comments include:

- “Connections, not knowing the right people.”
- “I've had a lot of work experience and great references, but it's a hard industry and there is a lot of competition.”
- “The design industry is flooded. Being a woman has the potential to help or hinder my chances of landing a job depending on the company.”
- “Too much competition, the good jobs are highly sought after.”
- “Oversaturation of the industry, more qualified undergraduates.”
- “Lack of experience. Specialised skills in the area.”
- “It's hard to get a job without much experience, and it's hard to get experience because no one will give you a job.”
- “Barriers I foresee are "experience", all jobs these days are looking for current experience in the area, or so they seem to be.”
- “Real work inexperience. Exploitation of new graduates. Reluctance to allow new graduates work.”
- “I think it will be difficult to find work as an Industrial Designer because of the economic climate. Clients tightening purse strings, which has less people walking into the office. Costs in raw materials and manufacturing/production are getting dearer, again effecting projects being started.”
- “No work available in Australia - have to travel o/s. Current economic situation means there are less and less jobs. Already have been declined for a visa to work in the US - now attempting to find work in Europe. Expensive and time-consuming!”
- “Location. Living in regional NSW not as many opportunities.”
- “My age I'm 44.”
- “Education and courses being needed before even getting my foot in the door. It's called natural talent; give someone a chance. 'Back in the day' no one needed as many courses as they ask for now days and they turned out quite fine.”

Section summary

The purpose of this section was to determine the extent to which aspiring creatives (CI graduates) have made successful education-to-work transitions, and to identify any factors that influence the ability of aspiring creatives to make successful transitions. Transitions data on the employment of CI graduates in relevant occupations, security of employment in the Creative Industries, and job/career mobility patterns and intentions indicate that many respondents who were CI graduates were not achieving successful education-to-work transitions. Only 18.7% of CI graduates who responded to the survey were currently in paid work using their creative talents, and 45.2% of CI graduates were previously in paid work using their creative talents. Around 70% of respondents who were CI students indicated an intention to work in a job in their favourite creative area when they graduate, suggesting that CI students may have unrealistic expectations about their ability to find work in their preferred occupation given the outcomes for CI graduates.

Almost half of all respondents stated that finding work was 'very hard' or 'difficult', citing the key barriers of strong competition for jobs and difficulties in gaining industry experience. Respondents working casually or part-time were more likely to view finding work as 'very hard' or 'difficult'. Over half of all respondents indicated they were already mobile and/or intended to work overseas to improve their career prospects. Those respondents who were making successful transitions were more likely to be working full-time, undertaking freelance/project work, self-employed, involved in communities of interest/networks, and personally engaged with industry.

Participation of aspiring creatives in communities of practice

Networks of business and creative relationships are known to be very important in the creative industries (e.g. Scott, 2000; Jeffcutt, 2004). Online social networking sites may or may not help this process. The survey therefore investigated the extent to which and how aspiring creatives use their online and offline professional networks. In terms of skills development, Wenger, McDermott, and Snyder (2002) defined a community of practice as a group of individuals that is formed around common interests and expertise, providing an ideal vehicle for knowledge flow, exchange, and management. Their model consists of three structural and interconnected elements that require a distinct kind of parallel developmental action and work. These elements include a *domain of knowledge* as common ground, a *community* to provide a sense of belonging and mutual commitment, and *practice* to provide a set of common approaches to problems. According to McDermott (2000, p.1) the role of communities of practices is to effectively share tactical knowledge and think together.

After reviewing 24 industry training networks as part of the Australian's Government *Reframing the Future* initiative, Mitchell (2004) identified key features of effective communities of practice: builds social capital; representation of and participation by industry (regardless of size, location and resources); effective facilitation and information sharing strategies; and open and loosely structured networks that can respond to changes in members' goals and the external environment.

The remainder of this section aims to address the third objective of this report: **Determine the extent to which aspiring creatives engage in communities of practice in the Creative Industries, and identify ways to encourage them to engage with these communities and industry.**

Engagement in communities of practice in the Creative Industries

As shown in Table 14, the analysis of data found that:

- 30.6% of respondents indicated that they were involved in creative communities of interest/networks, participating mainly in 'online' communities several times a week, and having, on average, three (3) regular peer contacts
- 13.6% of all respondents indicated they were involved in 'physical' communities of practice, participating on a regular basis, and having, on average, 10 regular peer contacts.
- the main online communities that respondents were engaged in were Facebook, MySpace, DeviantArt, Flickr, and ArtsConnect, and main methods of engagement were email, messenger, forums, comments, and SMS
- the main reasons for participating in online and physical communities were to gain inspiration/ideas, feedback on creative work, employment opportunities, industry contacts, and information on industry developments
- constructive feedback on creative work from their 'immediate' peers and 'industry' peers was enormously beneficial, and constructive feedback from 'general' peers was somewhat beneficial
- 28.8% of respondents indicated a direct personal engagement with people working in their preferred creative industry, meeting typically through face-to-face meetings, phone calls, online communication (e.g. email), and/or attending the same events. Respondents indicated that they met them through study, a personal introduction, accidentally, contacted them, or through an industry

gathering. They identified work experience, feedback on work, internships, informal drinks/nibbles, and/or an exhibition containing their work as the best ways to engage industry

- the main benefits for direct personal engagement with industry were advice, inspiration, critical feedback, information, and/or motivation
- 14.8% of respondents indicated having a mentoring relationship with an industry representative
- 26.8% of respondents indicated that they wanted to increase their engagement with industry. They identified several ways to do so - attending more industry events, regular networking, joining expert groups, participating in online communities, applying for grants, joining collaborative teams, and working in industry
- the best ways to receive industry information were websites, friends, lecturers, magazines, and/or associates, and favourite websites to obtain industry information were Google, Seek and Tsume, and the magazines of Frankie, International Design Network, 3D World, Desktop, and Juxtapoz.

Table 14. Survey respondents' interest and involvement in communities of practice

Survey question	Result	Responses/response rate
Q.89 Currently involved in creative communities of interest/networks	Yes = 155 (30.6%) No = 148 (29.2%)	Responses = 303 59.8% RR
Q.90 Currently engaged with 'online' creative communities of practice	Yes = 138 (27.2%) No = 165 (32.5%)	Responses = 303 59.8% RR
Q.91 Top five online creative communities engaged in	1 Facebook 2 MySpace 3 DeviantArt 4 Flickr 5 ArtsConnect	n.a.
Q.94 Top five tools used to communicate with other members of favourite online communities	1 Email 2 Messenger 3 Forums 4 Comments 5 SMS	n.a.
Q.95 Currently involved in 'physical world' creative communities of practice	Yes = 69 (13.6%) No = 233 (46%)	Responses = 302 59.6% RR
Q.9 Interest in joining 60Sox	Already a member = 36 (7.1%) Sure = 324 (63.9%) Not sure = 132 (26%) No thanks = 15 (3%)	Responses = 507 100% RR
Q.99 Level of participation in 'online' creative communities	Several times a week = 101 (19.9%) Couple of times a week = 32 (6.3%) Weekly = 21 (4.1%) Fortnightly = 14 (2.8%) Monthly = 10 (2%) Every couple of months = 17 (3.4%) Less often = 12 (2.4%) Not applicable = 95 (18.7%)	Responses = 302 59.6% RR

Survey question	Result	Responses/response rate
Q.99 Level of participation in 'physical' creative communities	Several times a week = 39 (7.7%) Couple of times a week = 24 (4.7%) Weekly = 29 (5.7%) Fortnightly = 12 (2.4%) Monthly = 18 (3.6%) Every couple of months = 20 (3.9%) Less often = 26 (5.1%) Not applicable = 134 (26.4%)	Responses = 302 59.6% RR
Q.101 No. of regular individual 'peer' contacts from 'online' creative communities (mode)	3 contacts (for those participating in online communities)	n.a.
Q.101 Median number of regular individual 'peer' contacts from 'physical' creative communities	10 contacts (for those participating in physical communities)	n.a.
Q.100 Top five reasons for engaging in 'online' creative communities	1 Gain inspiration/ideas 2 Feedback on creative work 3 Employment opportunities 4 Industry contacts 5 Information on industry developments	n.a.
Q.100 Top five reasons for engaging in 'physical' creative communities	1 Gain inspiration/ideas 2 Feedback on creative work 3 Employment opportunities (equal 3 rd) 3 Industry contacts (equal 3 rd) 4 Technical advice 5 Information on industry developments	n.a.
Q.102 Level of benefit from constructive feedback on creative work from 'immediate' peers	Enormous benefit = 143 (28.2%) Great benefit = 118 (23.3%) Some benefit = 36 (7.1%) Not much benefit = 2 (0.4%) No benefit = 3 (0.6%)	Responses = 302 59.6% RR
Q.102 Level of benefit from constructive feedback on creative work from 'general' peers	Enormous benefit = 61 (12%) Great benefit = 104 (20.5%) Some benefit = 110 (21.7%) Not much benefit = 22 (4.3%) No benefit = 5 (1%)	Responses = 302 59.6% RR
Q.102 Level of benefit from constructive feedback on creative work from 'industry' peers	Enormous benefit = 206 (40.6%) Great benefit = 61 (12%) Some benefit = 22 (4.3%) Not much benefit = 6 (1.2%) No benefit = 7 (1.4%)	Responses = 302 59.6% RR
Q.103 Currently have direct personal engagement with people working in preferred creative industry	Yes = 144 (28.4%) No = 158 (31.2%)	Responses = 302 59.6% RR

Survey question	Result	Responses/response rate
Q.114 Currently have a mentoring relationship with someone in preferred creative industry	Yes = 75 (14.8%) No = 220 (43.4%)	Responses = 295 58.2% RR
Q.104 Level of involvement with industry contacts through 'face-to-face meetings'	Regularly = 44 (8.7%) Occasionally = 78 (15.4%) Rarely = 14 (2.8%) Never = 6 (1.2%)	Responses = 142 28% RR
Q.104 Level of involvement with industry contacts through 'phone calls'	Regularly = 20 (3.9%) Occasionally = 70 (13.8%) Rarely = 38 (7.5%) Never = 14 (2.8%)	Responses = 142 28% RR
Q.104 Level of involvement with industry contacts through 'online communication' (e.g. email)	Regularly = 58 (11.4%) Occasionally = 68 (13.4%) Rarely = 9 (1.8%) Never = 7 (1.4%)	Responses = 142 28% RR
Q.104 Level of involvement with industry contacts through 'attending the same events'	Regularly = 48 (9.5%) Occasionally = 67 (13.2%) Rarely = 18 (3.6%) Never = 9 (1.8%)	Responses = 142 28% RR
Q.105 Top 5 ways to gain industry connections	1 Met through study 2 Personal introduction 3 Fluke (accidental) 4 Emailed them 5 Industry gathering	n.a.
Q.106 Top 5 benefits of industry connections	1 Advice 2 Inspiration 3 Critical feedback 4 Information 5 Motivation	n.a.
Q.107 Desire to increase engagement with industry	Yes = 136 (26.8%) No = 6 (1.2%)	Responses = 142 28% RR
Q.109 Top 5 ways to engage with industry	1 Work experience 2 Feedback on your work 3 Internships 4 Informal drinks/nibbles 5 Exhibition containing your work	n.a.
Q.110 Top 5 ways to receive industry information	1 Websites 2 Friends 3 Lecturers/teachers 4 Magazines 5 Associates	n.a.
Q.111 Top 3 magazines to get industry information	1 Frankie 2 International Design Network 3 3D World /Desktop/ Juxtapoz (equal 3 rd)	n.a.

Survey question	Result	Responses/response rate
Q.113 Top 3 websites to get industry information	1 Google 2 Seek 2 Tsumeas	n.a

The survey included open-ended questions on the benefits of participation in online and physical communities of practice. Typical responses to the benefits of participation were gaining inspiration/ideas, feedback on creative work, experience, and interaction with people/networking. Examples of comments are as follows:

Online community of practice

- “Massive forum, and people don't seem as shy telling you what they really think about your work across the anonymity of the internet.”
- “Can communicate with people worldwide and make friends with likeminded people who you may not have ever met otherwise.”
- “People around the world can see my work. They can give me comments, suggestions, concerns, which can make me improve indesign. Other than that, I may get a job from the people that see my work.”
- “They allow you to remain close with distant friends, but also develop networks, belong to groups and talk within forums or write bulletins add comments freely and creatively, also allow you to have your own sort of website choosing backgrounds & applications.”

Physical community of practice

- “I get to talk to people in the industry and get their information to later get in contact with them for other opportunity.”
- “It is a really beneficial place as it is led by people with the knowledge and experience that is crucial for gaining employment.”
- “Consultation between many different people, different approaches, styles, and experience.”
- “You make new friends through common experiences, you have a creative outlet which is very therapeutic, and you get to enhance your skills with the practice.”
- “We're making contacts who are making us contacts. None of us are currently working in the creative industry, but we're working towards future employment together, and some day I may call on Jane Smith from Digital Film & TV for a hand with some advertising material in the industry.”
- “Social interaction with people with similar interests, rewarding satisfaction to contribute to creative groups and organisations, learn new ideas and skills.”
- “It is very important to get out of your comfort zone and find out what is going on in the community beyond. It is difficult to assess your skills without seeing what other people are producing.”

Another indicator of respondents’ interest in participating in a creative ecology was their interest in joining [60Sox](#). 60Sox is an online creative ecology targeted at aspiring creatives who work or intend to work in the digital content industries, developed as part of the 60Sox project. Around 70% of respondents were interested in joining or had joined this online “creative ecology” - a space where they can showcase their work; obtain constructive feedback from peers and industry; and access industry contacts,

commercial experience and work.¹ Because a larger number of females (324) completed the survey than males (183), they accounted for a larger share of new 60Sox membership. Yet male respondents were more likely than female respondents to join 60Sox, with 77% of males joining 60Sox compared to 67.6% of females surveyed (Table 15).

Table 15. Membership of 60Sox by gender

		Already a member/sure	Not sure/no	Total
Females	Number	219	105	324
	% of females	67.6%	32.4%	100%
Males	Number	141	42	183
	% of males	77%	23%	100%
Total	Number	360	147	507
	% of females & males combined	71%	29%	100%

Aspiring creatives who completed the survey and joined 60Sox were more likely to be:

- male
- graduated from study - 83.7% of respondents who had graduated joined 60Sox compared to 68.6% of respondents who had not graduated and joined 60Sox
- currently paid to use their creative talents - 76.6% of respondents who were paid to use their creative talents joined 60Sox compared to 54% of respondents who were not paid to use their creative talents and joined 60Sox
- working casually, full-time, part-time or freelancing/undertaking project work
- living in Western Australia, Queensland and New South Wales (Figure 7).

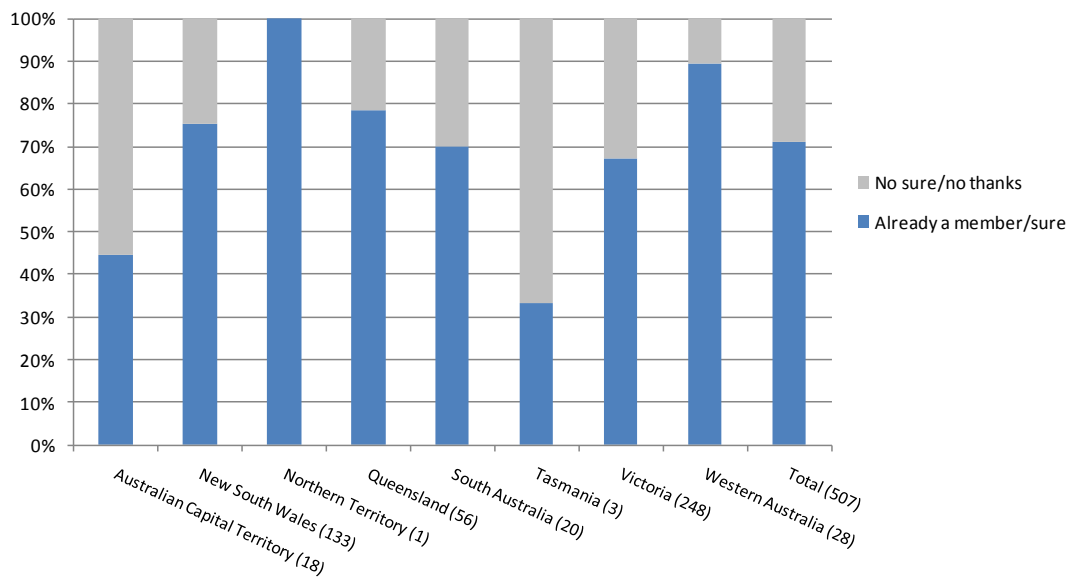


Figure 7. 60Sox membership by State and Territory

¹ <http://60sox.org.au/about/>

The project team was particularly interested in finding out if respondents were involved in mentoring relationships, how these relationships work, and the benefits of these relationships. Almost 15% of respondents indicated having a mentoring relationship with an industry representative.

Common responses about how mentoring relationships work indicated that typical mentors were teachers, colleagues, family members, and friends. Respondents indicated they were able to obtain feedback on their work, share ideas, and learn new skills. Examples of comments include:

- “My high school English teachers are my sole inspiration to wanting to become a writer because they glorified the English language beyond anything else I've ever experienced. Every once in a while we will catch up and our conversations are thought provoking and all I want to do is express myself through words, even if that means simply writing about everyday life.”
- “One of my lecturers who works in my industry is happy to critique any work I give her, and helps me find places where I might publish my work.”
- “The person is my main art tutor where I study at AIE. They are very honest and understanding with positive feedback and have been very nurturing with aiding me in gaining employment so far.”
- “All my TAFE teachers!!! They all have years of experience in the industry, have travelled the world, worked for large design companies, and in some cases employ graduates to work for them. The benefits are they are easy to communicate with and know the tricks that make you stand out from the rest of the field.”
- “I know a Prod Manager at Ch 9 who thinks the same as me and gives me honest opinions of my work.”
- “My boss at the ABC has helped me in every step in my journalistic work, and for this I am very grateful.”
- “I used to work for Sphere agency in Richmond as part of work experience. The creative director there often criticises my work and provides really great feedback.”
- “I work with a young designer who is teaching me technical skills in exchange for my help [with alterations and running the shop]. It works out well for both of us as I work when I am able and am getting experience.”
- “We are brothers, both with similar interests. Being 3 years older than me I can learn from his mistakes and take advantage of his experiences.”
- “My best friend is also into the same creative industry as I am, so we often exchange ideas and give each other feedbacks about our works.”
- “My girlfriend currently works in the games industry, she helps with problems I encounter with the software and also gives inspiration and motivation.”
- “My cousin, who works within the industry overseas, fills me in from time to time about potential work. I also try to follow a similar path that he took to get to the position where he is today.”
- “My dad is in the creative field. To see what he does and how he does it helps to me a lot.”

As some mentors were work colleagues/from industry, it is not surprising that respondents who were currently or previously employed using their creative talents were more likely to have a mentoring relationship (Figure 8).

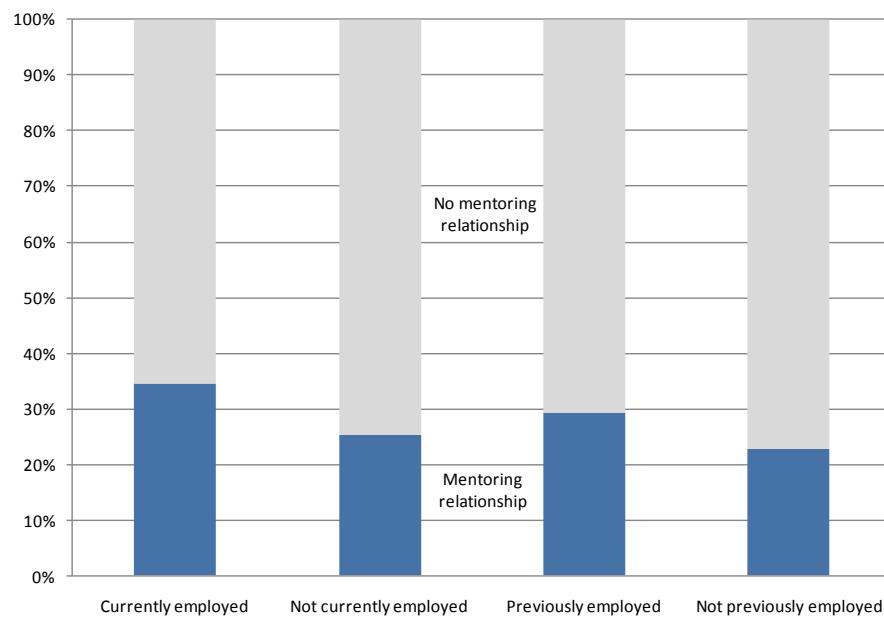


Figure 8. Mentoring relationship and employment using creative talents

Over 200 respondents responded to the question about the benefits of mentoring relationships. Main benefits were employability opportunities, career development, industry knowledge, new skills, and greater motivation. Examples of comments include:

- “Yes. They know the industry and if the relationship is positive enough, they’ll have you in mind if something comes up that suits.”
- “Yes, she has many contacts, works in the industry herself and is always receiving 'heads-up' on any freelance jobs.”
- “Definitely. The opportunity to work with an established industry professional would be priceless. I think the experience, feedback, and contacts acquired through such an individual would be some of the most valuable assets an emerging designer can have. The idea of a 'closer' (one-on-one) relationship with a professional is very appealing, especially over the course of your entire creative career.”
- “Yes, definitely. Knowledge of the industry, coupled with a desire to teach and help, would be amazing. I’d love to be able to work with someone who can help me like that.”
- “Yes, someone to advise me if I’m making the wrong choice or decision, to guide me in a specific direction, feedback etc.”
- “Oh yeah, someone who could help me learn about the industry and how to better my work would be a great help.”
- “Yes. We can motivate one another when one loses this motivation to continue on with this interest. We could also provide each other the latest news about the industry and any employment opportunities.”
- “Most definitely, they would be able to guide me and place me back on track if I was to drift.”
- “Yes, because I would have someone to ask questions and to show me how to do things, including technical skills and industry skills. It would also help me to meet other people in the industry.”

Improving communities of practice

Respondents identified a range of improvements to make online and physical communities more effective, and if adopted are likely to enhance engagement of aspiring creatives in these communities. Typical responses related to technical improvements, features available, industry involvement, and raising awareness of the existence of communities. Examples of comments are as follows:

Online communities of practice

- Copyright – “I want my intellectual property!”; “Retaining ownership of the images you post.”
- Technical – “Get them [online communities of practice] to work together and link to each other”; “By sharing the feedback to the developer of what we need”; “Loose the spam that often comes when you sign up for sites”; “More organised/easier to use so everyone (even the computer-illiterate) have a chance.”
- Awareness – “More publicity/Community awareness of their existence”; “More exposure”; “Make presentations in different places especially design and arts schools, advertising seminar to make people or friends aware of it.”
- Features – “By setting aside forums for lighter comments of work and then more in depth critiques”; “More focussed discussion about particular area or discipline - places where people can branch off to talk about a particular style or to connect more”; “People. Getting them a personal space in the website and engaging actively in it”; “Some could have a better interface, notifications or community”; “More career opportunities”; “More features that are useful to be integrated to our life. Video and voice chat / Portfolio / Blog / News / Hobbies / Games, all built in the same profile page”; “Concentrate more on advertising to buyers not signing up more artists!”
- Industry – “Collaboration with major industries”; “Potential employers being encouraged to visit these to find employees”; “Perhaps having a place where employers are looking to hire young aspiring designers”; “You should be able to search large companies that you wish to work for, show them your work and have them leave you instant feedback, email you job positions, or even have them send you real briefs that their employees are working on, and give you the chance to also do the brief and show these huge companies what you can do.”
- Other – “More encouragement for young people to be involved in the creative arts”; “Providing more physical forms of interaction and updates on upcoming exhibitions etc.”

Physical communities of practice

- Features – “Being more connected to broader communities”; “Variety, a more sociable, casual environment”; “Keep track of those who attend. Follow up after events”; “I would like to see a design student or recent graduate community, where all students/graduates could come together and discuss their work and the industry etc.”; “Possibly by more spaces opening up and more open forums for younger artists to share their fears and opinions”; “More frequent meetings.”
- Industry – “By having some greater integration with prospective employers by having in house talks and lectures on present and future technical and creative skills”; “If they offered more employment opportunities”; “A place where employers could meet with aspiring designers to improve chances of work experience before graduation.”
- Awareness – “If more people knew about them, then maybe they would get involved and creative communities would grow instead of die out”; “More advertising to increase local attendance”; “More people informed about them to get more and different people coming along”; “Students stop

thinking "Oh this is uni, how boring," and start thinking "Oh my god, I could be working with these amazing people in a few years time, better pull my finger out and do some work"; Not everyone realises the opportunity being placed in front of them. It's not all about the grades."

- Support – "Necessary equipment and funds should be provided"; "More funding and support!"; "Having an online iteration as well and encompassing other courses similar to ours for greater collaborative opportunities."

Section summary

The purpose of this section was to determine the extent to which aspiring creatives engage in communities of practice in the Creative Industries, and identify ways to encourage their engagement with these communities and industry. Over 30% of respondents were involved in online communities of practice. Based on the assumption that face-to-face networking with industry is an effective way to gain employment and develop more industry-relevant skills, the project team concluded that respondents were not adequately engaging with industry. Only 13.6% of respondents were involved in 'physical' communities of practice; 28.8% of respondents had a direct personal involvement with someone in their preferred creative industry; and 14.8% of respondents had a mentoring relationship with an industry representative.

Acknowledging the significant benefits of engaging with industry, over one-quarter of all respondents indicated that they wanted to increase their engagement with industry. This involves not only increasing the motivations of aspiring creatives to engage with industry but also ensuring that a) communities of practice in the Creative Industries are industry relevant, and b) industry offers greater opportunities (e.g. internships, mentoring relationships, invitations to industry events, etc.) to assist aspiring creatives to gain experience and develop networks.

Conclusion

Digital content industries are economically significant to Australia's future (Cunningham et al., 2005a), growing faster worldwide than other economic sectors (DCITA, 2006). They are knowledge intensive and require **highly skilled human capital** (Florida, 2003; Cunningham et al., 2005a; QUT CIRAC and Cutler and Co, 2004). However, Australia's workforce for the digital content industries is unstable due to the significant ongoing issues with labour supply and skill mismatches.

There is limited research on human resource and human resource development issues in the digital content industries in Australia. The Australian Research Council and several industry partners funded the 60Sox project to investigate the education, training and work experiences of aspiring creatives in Australia's digital content industries. **This project involved the largest survey of aspiring creatives ever undertaken in Australia.** Respondents included aspiring creatives who work or intend to work in the publicly-supported, less commercial end of the Creative Industries spectrum as well as those who work or intend to work in the digital content industries. Over 50% of the 507 respondents were studying, mainly in higher education institutions, and almost one-third of respondents were graduates.

The survey gathered rich data on respondents' characteristics, skills and attributes, barriers to employment, workforce mobility, career intentions, professional development, mentors and industry supports, and participation in communities of practice. The survey sought to determine if aspiring creatives have the necessary skills and attributes to work effectively in the digital content industries. This task also involved finding out how they develop their skills and attributes, and what they need to develop them further. The analysis of the survey data focused on addressing three objectives:

- Objective 1: Identify the characteristics, skills, and attributes of aspiring creatives who completed the survey
- Objective 2: Determine the extent to which aspiring creatives (CI graduates) have made successful education-to-work transitions, and identify any factors that influence the ability of aspiring creatives to make successful transitions
- Objective 3: Determine the extent to which aspiring creatives engage in communities of practice in the Creative Industries, and identify ways to encourage their engagement with these communities and industry.

Key findings from the analysis of data based on these objectives are as follows:

- Respondents generally perceive themselves as having 'good' to 'very good' employability skills and personal attributes, job-specific skills, and career skills, contrary to the views of employers about the industry-readiness of graduates.
- Many CI students indicated an intention to work in a job in their favourite creative activity when they graduate, contrary to the relatively poor outcomes for CI graduates in finding work aligned to their field of study – suggesting that CI students may have unrealistic expectations about their ability to find work in their preferred occupation.
- Almost half of all respondents stated that finding work was 'very hard' or 'difficult', citing the key barriers of strong competition for jobs and difficulties in gaining industry experience.
- Those respondents who were making successful transitions were more likely to be working full-time, undertaking freelance/project work, self-employed, involved in communities of interest/networks, and personally engaged with industry.

- Respondents were not adequately engaging with industry - only 13.6% of respondents were involved in 'physical' communities of practice, 28.8% had a direct personal involvement with someone in their preferred creative industry, and 14.8% had a mentoring relationship with an industry representative.
- Addressing the issue of the lack of industry engagement by aspiring creatives involves not only increasing the motivations of aspiring creatives to engage with industry but also ensuring that a) communities of practice in the Creative Industries are industry relevant; and b) industry offers greater opportunities to assist aspiring creatives to gain experience and develop networks, such as internships, mentoring relationships, and invitations to industry events.

The second report for the 60Sox project, *From Education to Work in Australia's Digital Content Industries: Comparing the opinions and practices of CI employers and aspiring creatives*, will map the results of the survey of aspiring creatives with the results of the employer survey to identify skills deficiencies in Australia's digital content industries; recommend solutions to address these deficiencies; and present data on industry employment patterns and intentions in relation to aspiring creatives.

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