University of South Australia

SKILLS GAPS IN THE SOUTH AUSTRALIAN ADVERTISING AND DESIGN SECTOR

Final Report

December 2022

Figure 1: UniSA Bachelor of Design students. Photograph by Juan Van Staden

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ACKNOWLEDGEMENTS

This report was commissioned by the Department of Industry, Innovation and Science.

Project Partners:

The Adelaide Advertising and Design Club (AADC) is a volunteer-run, not-for-profit organisation committed to the purpose of inspiring, connecting and promoting members and the industry at large, through a series of events, initiatives and more.

The Australian Screen Production, Education and Research Association (ASPERA) is the peak discipline body of Australian tertiary institutions teaching and researching film, video, television and new media as screen-based production practices.

The research team would like to thank Joe Godsell and members of the ASPERA Research subcommittee. Thanks also to Professors Craig Batty and Sam Sellar, the research support team at UniSA Creative, the Creative People, Products and Places (CP3) Research Centre, the Centre for Change and Complexity in Learning (C3L), and staff at the Department of Industry, Innovation and Science.

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EXECUTIVE SUMMARY

In July 2022, researchers at UniSA received funding from the Department of Industry, Innovation and Science (then known as the Department for Innovations and Skills) to investigate skills gaps for graduates entering the South Australian advertising and design sector. This report outlines the methodology for the five-month project, presents an analysis of findings and makes recommendations for future actions.

The project explores skills gaps using a mixed method approach to isolate desirable hard and soft skills, as well as skills gaps for graduates. **Firstly, a quantitative component** that uses two approaches was employed as **Phase 1 of the project**. This involved a direct keywords and phrases extraction method, as well as a skill framework-based approach, to extract and compare both hard and soft skills from job advertisements and relevant university and TAFE programs. The list of hard skills was sourced in accordance with the 2020 European Union (EU) skill and competency framework, which captures more than 10,000+ hard skills (including knowledge requirements) across various disciplines. Additionally, the Singapore Government's 21st-century competency framework and various industry white papers (e.g. Deloitte, 2017) informed 10 categories of soft skills.

Two data sets were prepared for analysis. Firstly, the project sourced original job advertisements from publicly available sources between Sep 2017 to Aug 2022. A total of 60,171 SA-related job advertisements were selected. Secondly, seven University of South Australia (UniSA) programs, one Flinders University program, and one TAFE program (diplomas or degrees) were identified as relevant by the research team in conjunction with project partner the Adelaide Advertising and Design Club (AADC), providing 444 distinct courses and subjects that could be cross referenced against the job advertisement data. The quantitative analysis extracted key words, key phrases, top hard and soft skills from both job market data and program contents. Differences and similarities were identified to indicate the potential gaps between job market demand and program coverage.

Phase 2 of the project involved the collection of **qualitative data** on desirable skills and skills gaps from industry stakeholders by means of workshops, a survey and interviews. A co-design methodology underpinned this qualitative data collection to engage and involve key stakeholders from the initial stage to assessing implications and evaluation. A first co-design workshop was held online using zoom on September 6th, 2022. Data from this workshop, as well as quantitative results, informed the design of a survey and interview questions for industry stakeholders. Additionally, feedback from project partners, the Australian Screen Production, Education and Research Association (ASPERA) Research Subcommittee and from the AADC shaped the survey design. The survey was completed by 34 stakeholders, 11 of whom indicated a willingness to be interviewed. Seven follow up interviews were conducted with a selection of these stakeholders, all of whom had several years of experience in the industry.

When triangulated, the two data sources (quantitative and qualitative) show some overlaps and discrepancies. **The most desired hard skills** for graduates entering the advertising and design sector based on qualitative data are: **writing skills, design thinking, visual communication, storytelling** and **project management**. Based on the quantitative data, the most desired hard skills are: **graphic design, communication design, two-dimensional design, knowledge of artwork** and **conceptualisation graphic design.** The quantitative hard skills were heavily focused on the technical aspects of design, whereas the qualitative hard skills focused on communication and the process of design.

The most desired soft skills for graduates entering the advertising and design sector based on the quantitative data are: **experience, teamwork, professionalism, self-management** and **problem-solving.** Based on the qualitative data the top desired soft skills are: **attention to detail, communication skills, creativity, initiative/proactive** and **problem-solving/critical thinking.** Initiative/proactive, self-management, and problem-solving were identified across both data sets. The quantitative data showed a complete match between soft skills in job ads and soft skills covered in education programs, indicating that education programs appropriately cover soft skills.

The **skills gaps** highlighted by the study relate to **communication design, various forms of advertising (photography, television, exhibition)** and **service marketing** (quantitative results), and **communication skills, design thinking and understanding business objectives** (qualitative results). The gaps in communication skills in graduates include presentation skills, feedback skills and articulating ideas clearly. Regarding design thinking, following the design

thinking process and articulating the journey taken to arrive at a solution were seen as skills graduates lacked. Understanding business objectives was also seen as a skills gap as education focuses more on theory and technical aspects of design but does not focus on how creative agencies function, their processes or how they make money. According to the keywords and phrases analysis, specific skills related to software, such as Adobe Creative Suite, are in demand, but may not be prioritised in teaching programs.

A second co-design workshop for industry and educational stakeholders was held online using zoom on November 21st. In response to the presented quantitative and qualitative findings, participants suggested that increased collaboration between the education and professional sector was key to addressing skills gaps. Suggestions for increased collaboration included industry participation in course design, providing insight into current industry trends, providing real-world briefs, or offering more work experience opportunities during students' degrees or diplomas.

This research project represents the first step in a larger project to address graduate skills gaps in the South Australian advertising and design sector. The research team acknowledges the limited timeframe of the project and the effect of this on the data collected. The next stage might see educators and industry stakeholders respond to these findings so as to address skills gaps in the classroom and workplace, creating value for employers and the broader industry.

INTRODUCTION

The 2020 Department of Innovation and Skills (DIS) Creative Industries Strategy identifies 10 'distinct (but often intersecting) sectors' that make up South Australia's creative industries, one of which is Advertising and Communication Design (DIS, p.9). While aspiring advertising creatives may undertake relevant skills development in marketing, design or a related area in South Australia, a university or TAFE course tailored to the specific needs of the advertising industry does not exist in the state. This sector and related creative ecosystems more broadly continue to evolve in response to social, cultural, and technological change; however, the local impact of this change on graduate skills and attributes has not yet been studied.

In July 2022, researchers at UniSA received funding from the Department of Industry, Innovation and Science (then known as the Department for Innovations and Skills) to investigate skills gaps for graduates entering the South Australian advertising and design sector. This research project, which intends to generate new knowledge in this area, is supported by the Adelaide Advertising and Design Club (AADC) and the Australian Screen Production, Education and Research Association (ASPERA).

Two key questions for the study are:

1) As creative work continues to evolve, what graduate skills and attributes are desired by employers in the advertising and design sector?

2)What gaps exist in relation to tertiary course curricula in related creative areas and the skills requested by industry employers?

This report outlines the methodology for the five-month investigation of these questions, presents an analysis of findings and makes recommendations for future actions.

BACKGROUND

While no existing research has looked specifically at the challenges for graduates in the advertising and design sector in Australia, several studies have explored related areas. In 2009, two reports funded by the Australian Research Council (ARC) surveyed aspiring creatives and employers within the creative industries to develop an understanding of respective stakeholder concerns for the future. The surveys found that recent graduates were struggling to transition from education to work. The causes outlined included industry dissatisfaction with education and training, lack of vocational programmes that teach 'real world' skills, and lack of industry engagement at the planning level (Haukka, 2011). On a related note, a 2011 study explored Australian creative graduates' career management skills and the effect of these on graduate outcomes. This study determined that career management and intrinsic work motivations were predictors of early career success in recent graduates (Bridgstock, 2011). It also suggested that career management skills such as intentional career building should be integrated into the length of education programs and not only focused on during capstone projects (Bridgstock, 2011).

Looking outside of Australia, we note a 2017 Creative & Cultural Skills and Arts Council England (ARC) commissioned survey of creative and cultural businesses to assess skills gaps and shortages. The resulting report's findings showed that the largest skills gaps were in relation to business marketing and communication, followed closely by problem-solving skills (Bowes et al., 2018). In the study, 83.9% of businesses agreed that young people are unaware of the career paths available in the creative sector. This aligns with the findings from Bridgstock (2011), suggesting that career management and development are important skills for graduates.

In recent years, the Covid-19 pandemic has impacted upon teaching and internship opportunities at local Universities. Moreover, the Australian 'Jobs Ready Graduate' legislation, which increased the cost of arts and humanities degrees, has impacted on student numbers in the creative arts. As a result, there have been reviews and closures of creative programs at several Universities (Del Favero 2021).

METHODOLOGY

The project explores the two research questions using a mixed method approach. A quantitative component that comprises an AI-driven skills gap analysis was undertaken as the first phase of the project. This process utilises an AI skill analytics engine that was developed to extract and match professional and enterprise skills from university program outlines and industry jobs. By using this AI skill analytics engine, the research team were able to isolate and compare keywords, phrases and established skills frameworks across industry job advertisements and curricula, noting overlaps and discrepancies.

The second phase of the project involved the collection of qualitative data from industry stakeholders by means of co-design workshops, a survey and interviews, to interrogate desirable soft and hard skills for graduates, and to identify skills gaps. The methodology of low-contact co-design (LCCD) underpins the qualitative data collection to engage and involve key stakeholders from the initial stage to assessing implications and evaluation. LCCD allowed the research team to collect data remotely by utilising online collaboration tools and video conferencing software.

CO-DESIGN METHODOLOGIES		
CREATIVE AND TRADITIONAL CO-DESIGN • Builds genuine partnerships • Adapts to stakeholder and research needs • Provides creative and novel approaches to meaningfully engage stakeholders	EXPERIENCE-BASED CO-DESIGN • Focus' on experience to improve the interaction with services • Humanises service interactions and allows stakeholder to control the narrative • Brings multiple stakeholders together to co-create interventions	LOW-CONTACT CO-DESIGN • Allows fluid assemblage of synchronous and asynchronous approaches, in person & remote • Identifies engaging new strategies to build genuine partnerships • Supports greater participation from people from vulnerable backgrounds

Figure 2: Co-design methodologies (Adapted from Co-design for sustainable youth mental health in Australia, Zabar et al. 2023)

The methodology for the two phases will be unpacked further in the sections below. This mixed method approach allowed the research team to examine graduate skills gaps from multiple angles and to engage key stakeholders from industry and educational contexts. The combined data is triangulated and analysed in the report's discussion section, providing intelligence that can inform future training products and delivery.

PHASE 1: QUANTITATIVE RESEARCH

Skills Extraction Methods

To understand both the hard and soft skills that are desired by employers, the first phase of the project utilised two distinct approaches to extract knowledge and skills requirements from recent job advertisement data and relevant study program data. Using these two methods we can gather a comprehensive overview of skills gaps based on a comparison of direct expression of keywords as well as analysis based on established skills frameworks.

The first approach involves a direct keywords and phrases extraction method: The latest machine learning technique, Bidirectional Encoder Representations from Transformers (BERT), is adopted in this study. BERT is a transformer-based machine learning technique for natural language processing (NLP) pre-training developed by Google. The literature survey conducted in 2020 (Rogers, et al, 2020) concluded that BERT has become a ubiquitous baseline in NLP experiments, becoming the leading industry and academic natural language processing model.

In this study, we used the open-source implementation KeyBERT, a software tool based on Google's latest pre-trained models to extract the keywords and phrases from each job advertisement text. In addition, a "diversification" technique is implemented to aggregate different phrases with similar meanings (e.g., learning algorithm analysis vs algorithm learning training). While the "diversification" method has a positive impact in aggregating similar key phases, it has many limitations at the word level (due to lack of context).

The second approach involves a skill framework-based extraction method: Based on the content of job advertisements, a text comparison technique is used to extract hard and soft skills according to well-known skill frameworks. A list of hard skills is sourced from the 2020 European Union (EU) skill and competency framework (https://esco.ec.europa.eu/en), capturing more than 10,000+ hard skills (including knowledge requirements). Additionally, the Singapore Government's 21st-century competency framework and various white papers (e.g., Deloitte, 2017) contributed 10 categories of soft skills including problem-solving; self-management; leadership; professionalism; communication; teamwork; courtesy; responsibility; flexibility and experience.

Quantitative Data Sets

This project has used both publicly available job data and university internal program data to perform skill extraction.

Job market data

This project has sourced the original job advertisements from publicly available sources including Seek.com.au, Careerone.com.au, APSjobs.gov.au and Monster.com. The data ranges from Sep 2017 to Aug 2022. Given the research questions of this project, a primary focus has been placed on South Australian jobs. After reviewing sample job advertisements, a total of 60,171 SA-related jobs based on the following job categories (as shown in Table 1 and Table 2) were selected for analysis.

Top Job Category	Sub-categories
Advertising, Arts & Media	Promotion Programming and production Photography Media strategy, planning & buying Management Art direction Agency and Account management
Design & Architecture	Graphic design Illustration and animation Web and interactive design

Table 1: Selected job categories

Year	Total Number of Processed Jobs - SA
2017 (from Sep only)	7313
2018	13166
2019	11560
2020	6800
2021	12706
2022 (up to Aug 29)	8626
Total	60171

Table 2: Total number of selected SA jobs

Relevant university and TAFE program data

This study focuses on 7 current University of South Australia (UniSA) programs, 1 Flinders University program and 1 TAFE program (See Table 3). With UniSA programs, the actual analysis is performed at the course/subject level including course objectives, outlines, lecture, workshop slides and assessment specifications. These courses were identified as relevant by the research team in consultation with a representative of the Adelaide Advertising and Design Club (AADC). With the Flinders university and TAFE program, course content extraction is performed based on the publicly available information from the university and TAFE websites, which may contain less elaborate descriptions. In total, 444 distinct courses are included in this data set.

Institute and Number of programs	Relevant programs
UniSA (7)	Bachelor of Creative Industries Bachelor of Design (Communication Design) Bachelor of Design (Illustration and Animation) Bachelor of Business (Design and Marketing) Master of Design (Communication Design) Graduate Diploma in Design – 5 courses Master of Management (Advertising and Brand Management)
Flinders (1)	Bachelor of Creative Industries (Writing & Publishing)
TafeSA (1)	Diploma of Photography & Digital Imagery

Table 3: Selected programs (2022 version)

Analytics

A distinct counting method is used when performing key phases and skill extraction with the above two methods. For example, regardless of how often the same keyword, key phrase, or skill appears in one job advertisement or a course/subject data (within the same program), this particular phrase or skill is counted only once. This method avoids potential bias as some job advertisements or course content may potentially overuse the same terms.

Once the job-level key phase extraction and skill extraction are completed, the overall count and corresponding percentage are calculated. The top 20 results are presented. The identical approach is also applied to the course and subject analytics, contributing to an overall program-level skill coverage understanding.

It is noted that when performing keywords analytics for all 2017-2022 SA jobs and programs data, due to the large volume of keywords presented in all 60,171 jobs, the underlying algorithm only takes the top 3 keywords from each job advertisement text. The overall frequency is therefore calculated by aggregating all keywords from individual job analysis results. This approach also applies to the keyword extraction process for all relevant programs.

Results

Job Market Skill requirements (Keywords and phrases)

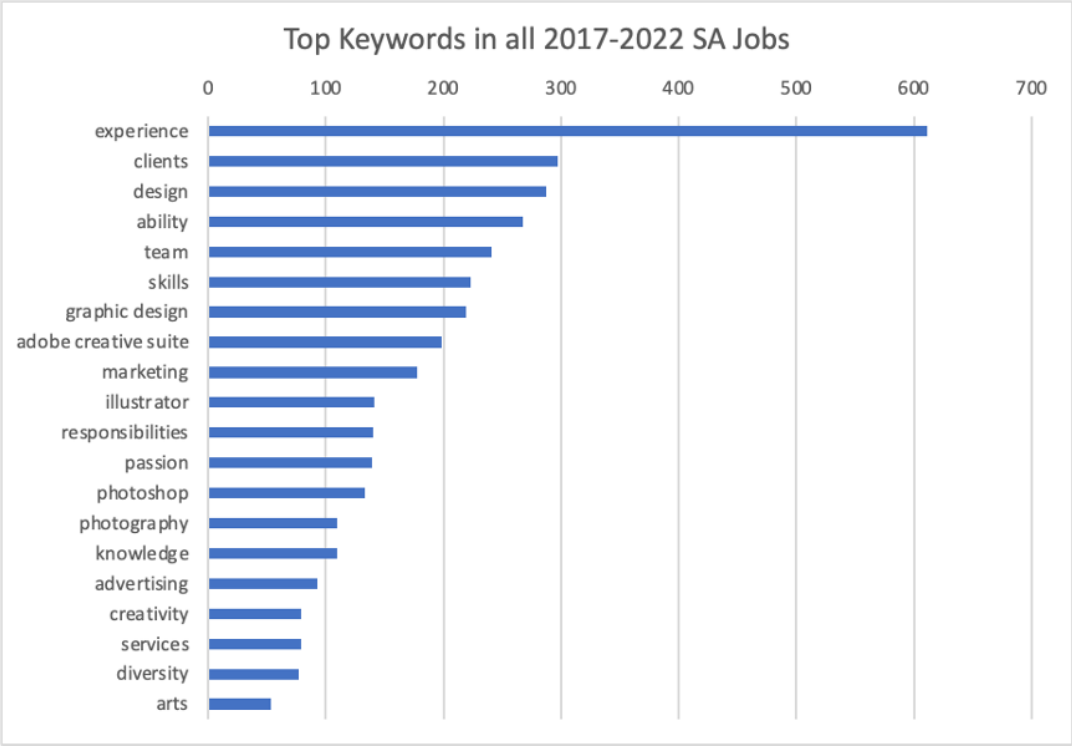

Figure 3: Top 20 Keywords from all selected SA jobs (aggregated instances)

By removing unrelated keywords including places such as “Australia” and general ones such as “letter”, “applications”, “year”, etc, the top 20 keywords are presented in Figure 3. The above result indicates a strong focus on photography and graphic design skills. In addition, soft skills such as “team” and “creativity” are also desirable.

Job Market skill requirements (Skill-framework based on EU and Singapore frameworks)

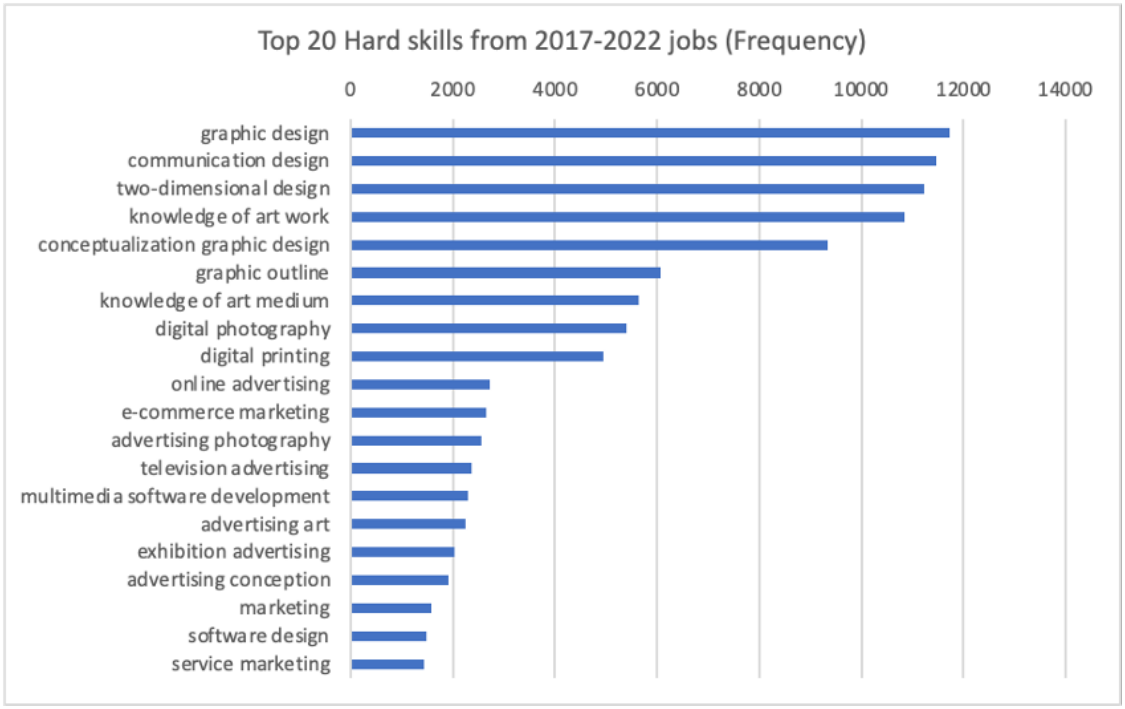

Figure 4: Top 20 Hard skills from all selected SA jobs by frequency (aggregated instances)

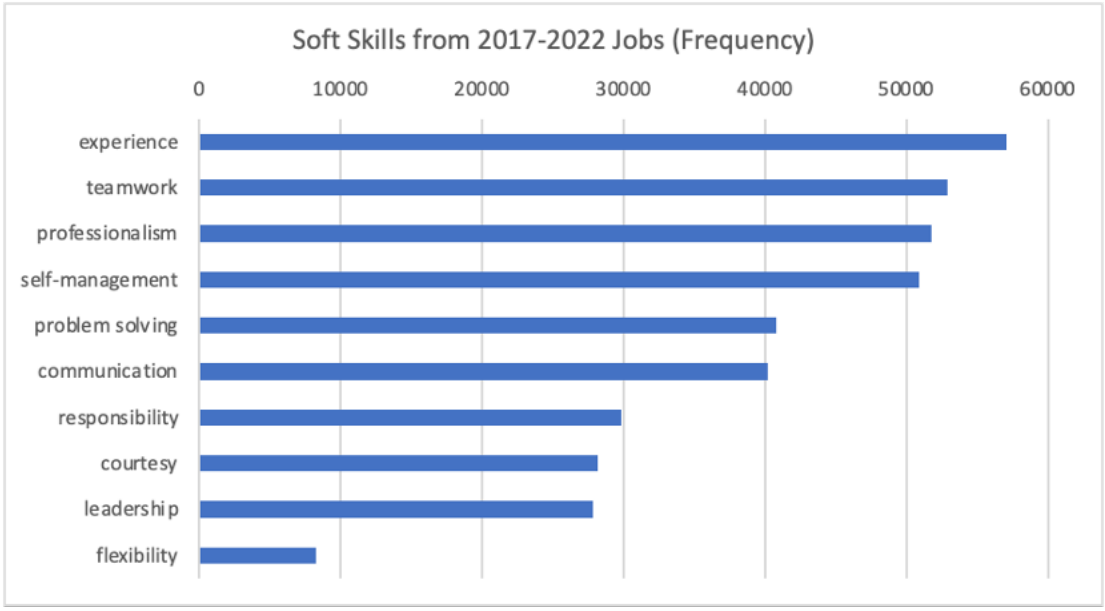

Figure 5: Soft skills from all selected SA jobs by Frequency (aggregated instances)

Relevant programs analytics

Program skill coverage (Keywords and phrases)

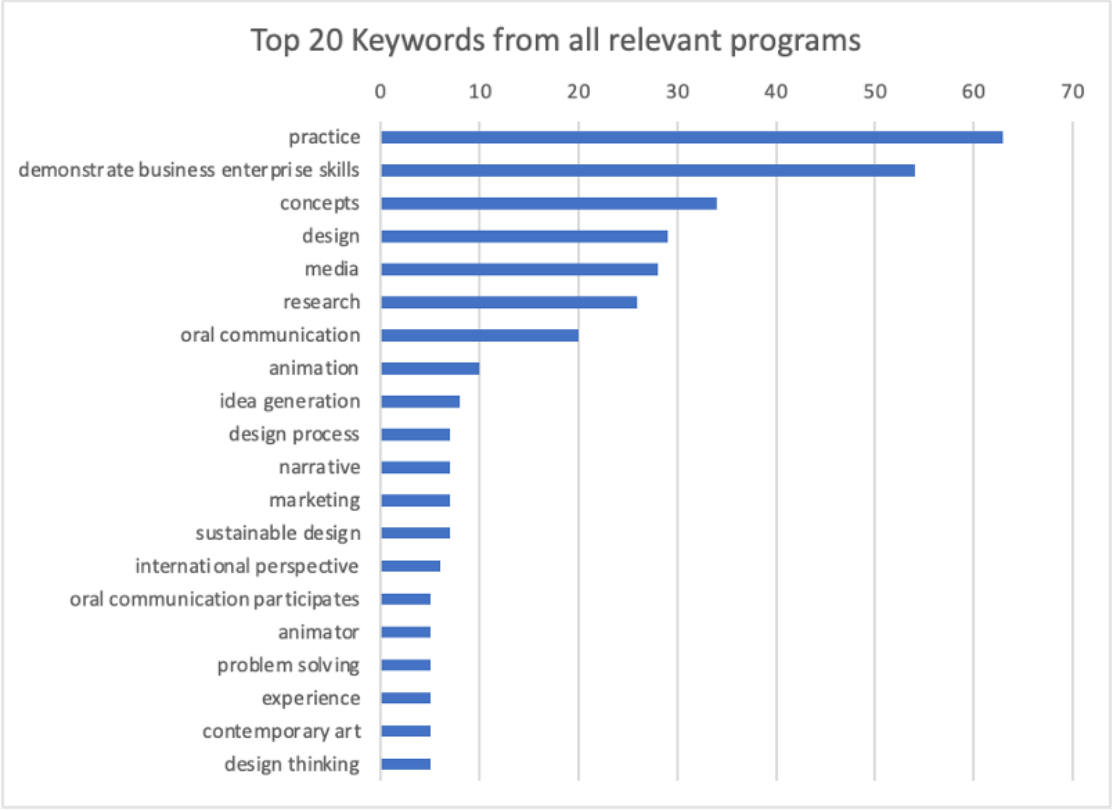

Figure 6: Top 20 Keywords from all selected relevant programs (aggregated instances)

By removing unrelated keywords, including places such as “course”, “time”, “graduate qualities”, etc., the top 20 keywords are presented in Figure 6. The above result indicates a strong focus on design skills. In addition, soft skills such as “communication” and “problem-solving” are also heavily featured.

Program skill coverage (Skills analysis based on EU and Singapore frameworks)

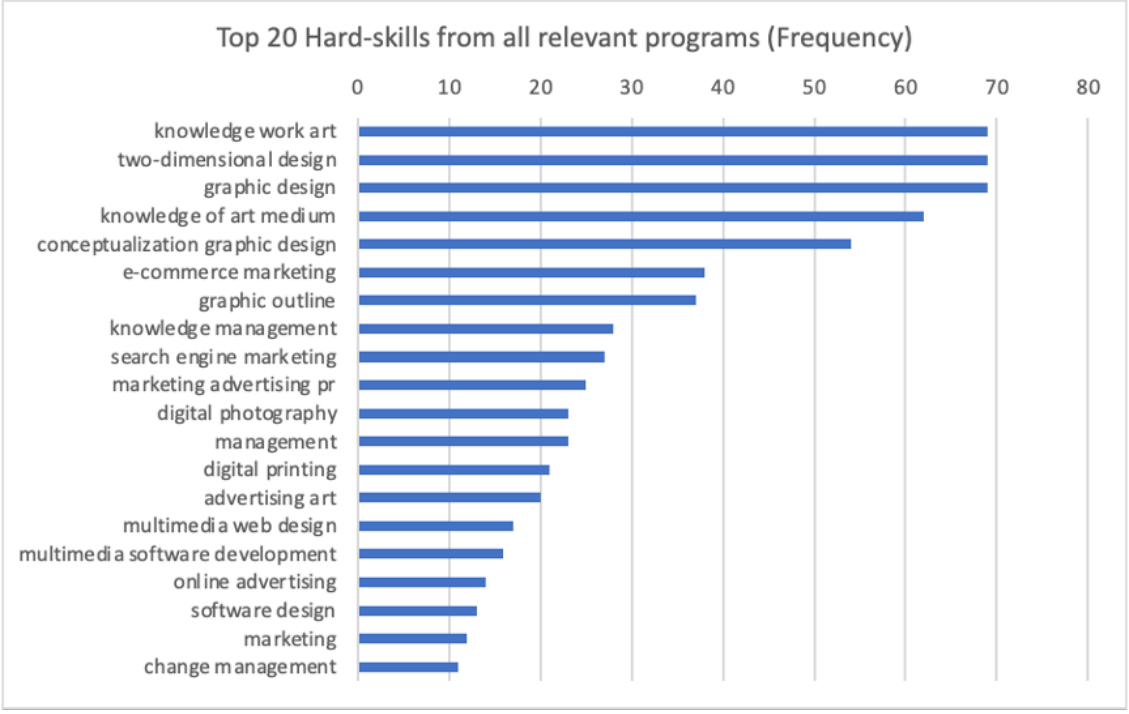

Figure 7: Top 20 Hard skills from all relevant programs by frequency (aggregated instances)

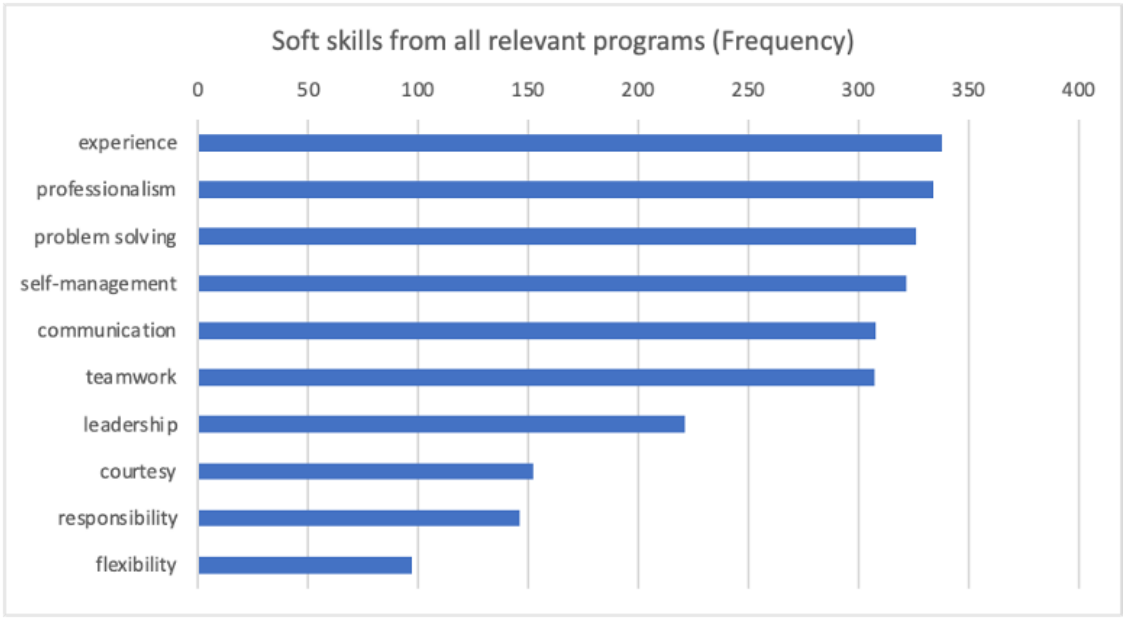

Figure 8: Soft skills from all relevant programs by frequency (aggregated instances)

Comparison – Job demand vs. Programs coverage

Based on the keywords and framework-based extractions, comparisons are presented below to highlight the differences in job market demand and program coverage. It is noted that this report only includes the top 20 keywords, top 20 hard skills and all 10 soft skills. The mismatched results do not necessarily mean that the required skills are not covered by the relevant programs. Both the order and term expression differences contribute to the mismatching status.

Job market demand (Position)	Programs coverage (Position)
Experience (1)	(18)
Clients (2)	Not present in Top 20
Design (3)	(4)
Ability (4)	Not present in Top 20
Team (5)	Not present in Top 20
Skills (6)	Not present in Top 20
Graphic design (7)	Not present in Top 20
Adobe creative suite (8)	Not present in Top 20
Marketing (9)	(12)
Illustrator (10)	Not present in Top 20
Responsibilities (11)	Not present in Top 20
Passion (12)	Not present in Top 20
Photoshop (13)	Not present in Top 20
Photography (14)	Not present in Top 20
Knowledge (15)	Not present in Top 20
Advertising (16)	Not present in Top 20
Creativity (17)	Not present in Top 20
Services (18)	Not present in Top 20
Diversity (19)	Not present in Top 20
Arts (20)	Not present in Top 20

Table 4: Top 20 Keywords and phrases (Method 1)

Additional top 20 keywords and phrases that are presented in programs include:

Practice	position 1
Demonstrate business enterprise skills	position 2
Concepts	position 3
Media	position 5
Research	position 6
Oral communication	position 7
Animation	position 8
Idea generation	position 9
Design process	position 10
Narrative	position 11
Sustainable design	position 13
International perspective	position 14
Oral communication participates	position 15
Animator	position 16
Problem solving	position 17
Contemporary art	position 19
Design thinking	position 20

Job market demand (High – low % and Position)	Programs coverage (% and Position)
Graphic design 19.5% (1)	15.5% (3)
Communication design 19.1% (2)	Not present in Top 20
Two-dimensional design 18.7% (3)	15.5% (2)
Knowledge of artwork 18.0% (4)	15.5% (1)
Conceptualization graphic design 15.5% (5)	12.2% (5)
Graphic outline 10.1% (6)	8.3% (7)
Knowledge of art medium 9.4% (7)	14.0% (4)
Digital photography 9.0% (8)	5.2% (11)
Digital printing 8.2% (9)	4.7% (13)
Online advertising 4.5% (10)	3.2% (17)
E-commerce marketing 4.4% (11)	8.6% (6)
Advertising photography 4.3% (12)	Not present in Top 20
Television advertising 3.9% (13)	Not present in Top 20
Multimedia software development 3.8% (14)	3.6% (16)
Advertising art 3.7% (15)	4.5% (14)
Exhibition advertising 3.4% (16)	Not present in Top 20
Advertising conception 3.2% (17)	Not present in Top 20
Marketing 2.6% (18)	2.7% (19)
Software design 2.5% (19)	2.9% (18)
Service marketing 2.4% (20)	Not present in Top 20

Table 5: Top 20 Hard skills (based on Method 2)

Additional top 20 hard skills that are presented in programs include:

Knowledge management: 6.3% position 8

Search engine marketing: 6.1% position 9

Marketing advertising PR: 6.1% position 10

Management: 5.2% position 12

Multimedia web design: 3.8% position 15

Change management: 2.5% position 20

Job market demand (High – Low % and Position)	Programs coverage (% and Position)
Experience 95% (1)	76% (1)
Teamwork 88% (2)	69% (6)
Professionalism 86% (3)	75% (2)
Self-management 85% (4)	72% (4)
Problem solving 68% (5)	73% (3)
Communication 67% (6)	69% (5)
Responsibility 50% (7)	32% (9)
Courtesy 47% (8)	34% (8)
Leadership 46% (9)	49% (7)
Flexibility 14% (10)	21% (10)

Table 6: Soft skills demand vs Program coverage and position differences (based on Method 2)

Summary of quantitative findings

The analysis above suggests that, according to the keywords and phrases analysis, specific skills related to software, such as Adobe Creative Suite, are in demand, but may not be prioritised in teaching programs. Moreover, based on the skills framework-based approach, hard skills gaps exist in the areas of communication design, various forms of advertising (photography, television, exhibition) and in the area of service marketing. While the top 10 desired soft skills were present in the studied programs, the skill of teamwork featured less prominently in the latter.

Figure 9: UniSA Student Matilda Bristow at the 2019 Art, Architecture and Design End of Year Exhibition

PHASE 2: QUALITATIVE RESEARCH

Methods

Qualitative data were collected through multiple methods, including two co-design workshops, a survey and interviews.

Co-design workshop 1

A first co-design workshop was held online using Zoom on Tuesday 6th September 2022. The aim of this workshop was to extract initial data from stakeholders about desired graduate hard skills, soft skills and current skills gaps. Data was collected through Miro, an online collaboration tool. The information obtained from the first workshop was used to shape the survey questions and pre-defined response options.

This 1.5-hour workshop was attended by 24 stakeholders from industry and educational organisations. Most of the participants were from a creative agency (14), with participants also coming from the education sector (6), media agencies (2), advertising agencies (1) and recruitment (1). Participants from the creative agencies were relatively senior, with roles including Digital Director, Head of Art, Managing Director, Creative Director, Innovation Director and Head of Creative. The participants from the education sector included Associate Professors, Senior Lecturers, Career Advisors, and the Head of the South Australian branch of the Award School. Participants from the 'other' category included several client strategy managers and the Managing Director of a recruitment agency for the creative sector.

Survey

A survey of industry-stakeholders was used to collect a wider pool of data on desirable hard skills, soft skills, and the current gaps in graduate skills and attributes. This consisted of six questions that captured participant's area of employment, role within the industry, top five most highly valued hard and soft skills for graduates, and perception of current graduate skills gaps. A final question was used to recruit participants for interviews to gain a deeper understanding of their survey responses. A full list of survey questions is attached as appendix 2.

The survey used a mixture of closed and open-ended questions. For the soft and hard skills questions, the participants were asked to indicate their top five skills (they had to select five responses), which could be chosen from a list of pre-defined responses or by providing an answer in their own words. The survey provided the following definition of hard and soft skills to participants- *"A hard skill relates to knowledge or a technical ability required to carry out a specific task whereas a soft skill relates to personal attributes and behaviours."*

To identify skills gaps, participants had to respond in their own words and could provide a minimum of one response and a maximum of five responses. Data collected during the first co-design workshop and feedback from the AADC and ASPERA Research Subcommittee were used to develop the pre-defined soft and hard skill choices. These pre-defined responses were the most common hard and soft skills discussed during the workshop.

Convenience sampling was used to select survey participants from the industry in South Australia. The survey was distributed through the Adelaide Advertising & Design Club (AADC) mailing list and by direct email to relevant participants, as identified by the AADC co-president. The survey was built and shared through Qualtrics. To give recipients of the survey enough time to respond, the survey was active for 58 days. There was a total of 56 attempts, with 34 people completing the survey. As one survey respondent was from the architecture area, their answers were removed from the results as their profession is outside the scope of this project. This means that there was a total of 33 valid survey responses.

Interviews

Of the 34 people who completed the survey, 11 agreed to be interviewed by the research team. In total, seven of these participants were interviewed. Interviewees were chosen based on their seniority level, availability and to provide an even gender split for a balanced viewpoint. These interviewees included an Academy Director, Managing

Director, Managing Director and Strategist, Head of Art, Senior Graphic Designer, Direct to Studio Director, and the CEO of a marketing and communications company. The interviews were semi-structured. Each participant was emailed a set of three to four questions prior to conducting the interview. The questions asked were based on their responses to the survey questions, which meant each interview was slightly different. The questions were expanded on during the interview with other follow-up/clarifying questions asked if required. The interviews allowed the research team to better understand the participants' survey responses, their journey through the industry, their training, and their observations of recent graduates in the workforce. The interviews were 30 minutes in length, conducted over zoom and were recorded and transcribed for further analysis. A full list of interview questions is attached as appendix 3.

Co-design workshop 2

A second co-design workshop was held online using zoom on the 21st of November. The aim of this workshop was to discuss how the education sector might respond to the survey results. In addition to the researchers, 11 people attended the 1.5-hour workshop. Three participants were from the advertising and design sector (two directors and one recruiter), while eight were from the education sector (three Communication Design Lecturers, a Graphic Design and Illustration Lecturer, a Product Design Lecturer, a Career Advisor, and an Associate Professor).

Qualitative Data Sets

First Co-Design Workshop- findings

In the first Co-Design Workshop, participants used digital sticky notes to write down their ideas and share them with the group. The images below represent screenshots from the Miro board, each colour representing a different breakout room. The workshop was divided into three sections, focusing on the hard and soft skills desired in graduates and the current gaps the industry stakeholders have identified as existing for new graduates. Participants were randomly placed into one of three breakout rooms where they discussed what they considered to be important graduate skills. The participants then came back into the main room, where the broader group discussed the outcomes from the breakout rooms. Unfortunately, participants did not have enough time during the workshop to rank the hard and soft skills and current skills gaps based on importance. The scale on each graph can therefore be ignored. The placement of skills is random and does not indicate any level of importance.

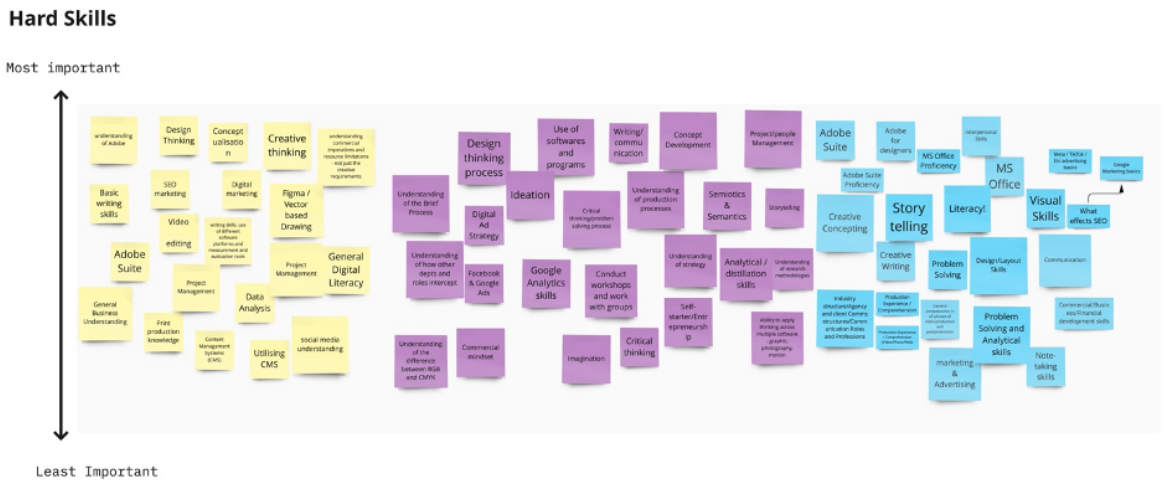

Figure 10: Hard skills identified as most important in new graduates by workshop participants.

The data from the workshop were analysed using thematic analysis. The most prominent themes for desirable hard skills were:

- Design software skills
- Analytics tools
- Marketing and social media tools
- Design thinking
- Ability to conduct focus groups and workshops
- Visual communication
- Writing skills
- Commercial mindset
- Project management
- Problem-solving

Hard skills identified across all three breakout rooms included design software skills (specifically the Adobe Creative Suite), design thinking, social media advertising, writing skills, and understanding how businesses within the creative industry operate.

Figure 11: Soft skills identified as most important in new graduates by workshop participants

The most prominent themes for desirable soft skills were:

- Cognitive skills
- Business sense
- Cultural awareness
- Emotional intelligence
- Creativity
- Critical thinking

Soft skills such as empathy, communication, teamwork, curiosity, self-awareness, and people management were mentioned by each breakout group. The soft skills focused on emotional intelligence; participants wanted new graduates that were confident in their skills without being conceited. This included receiving feedback and implementing changes without taking criticism personally, managing stress, being self-aware, and managing

expectations when entering the field for the first time. Interpersonal skills were also seen as very important. These included skills such as teamwork, communication, presentation skills, and stakeholder management. Finally, a strong business sense was seen as essential. This included knowing when to change gears, how to be creative in a commercial environment, working to a brief, and understanding team roles.

The above-identified hard and soft skills were used to inform pre-defined response options for the survey (see below).

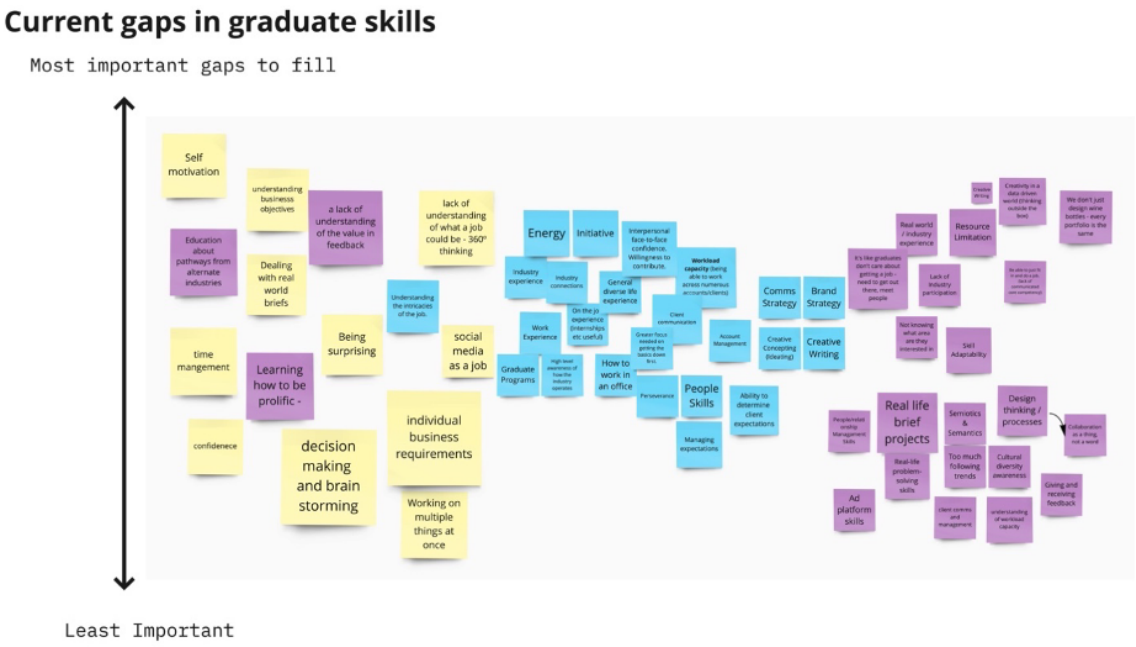

Figure 12: Current gaps in graduate skills as identified by workshop participants

Workshop participants voiced their perceptions regarding a range of graduate skills gaps. These related to soft and hard skills, with a particular focus on understanding business objectives. Participants noted that some graduates had a limited understanding of working within the confines of a real-world brief and a limited ability to give and receive feedback. Some participants felt that the education sector was not teaching students the pathways they could follow from alternate industries or the varying kinds of jobs that exist in the design and advertising industry. Other participants felt that new graduates did not understand how the creative industries worked. This included understanding ways to obtain a job, the importance of networking, and graduates actively participating in the industry throughout their studies.

Survey and interview data

The survey was completed by stakeholders from across the advertising and design sector, with a significant number of participants coming from a creative agency (42%).

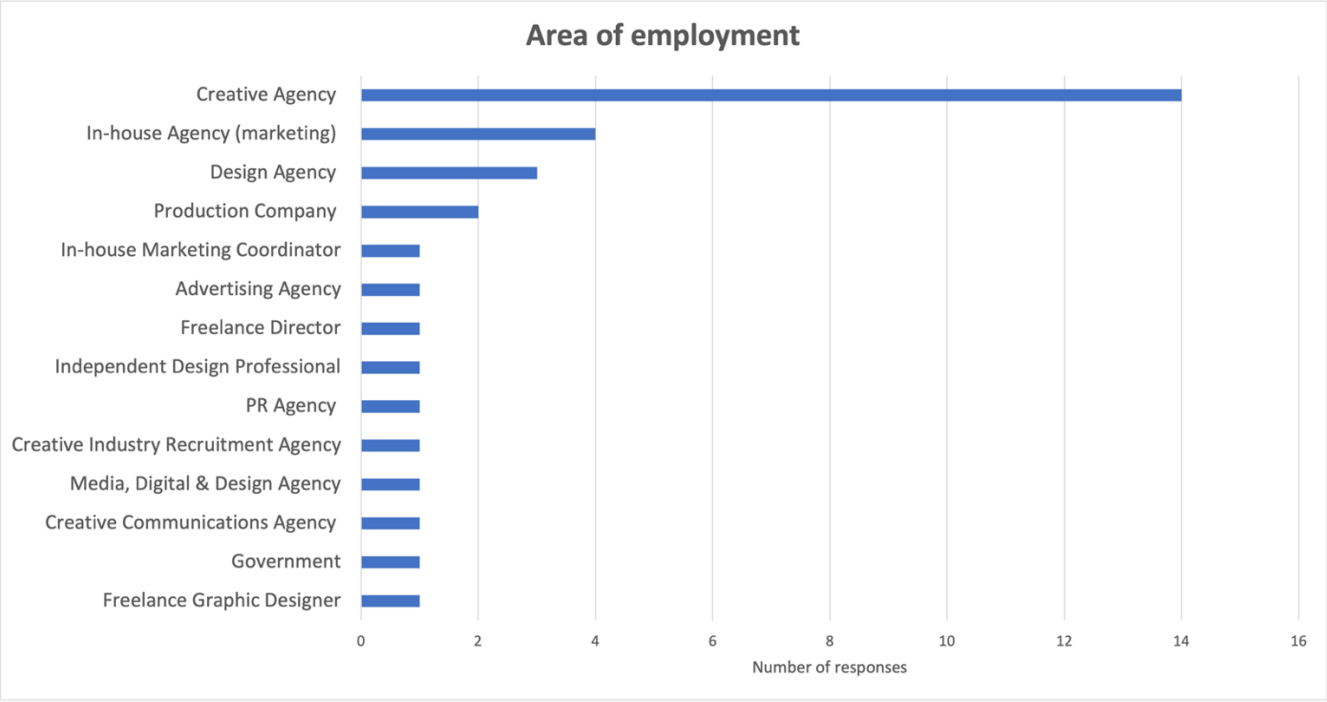

Figure 13: Area of employment for survey participants

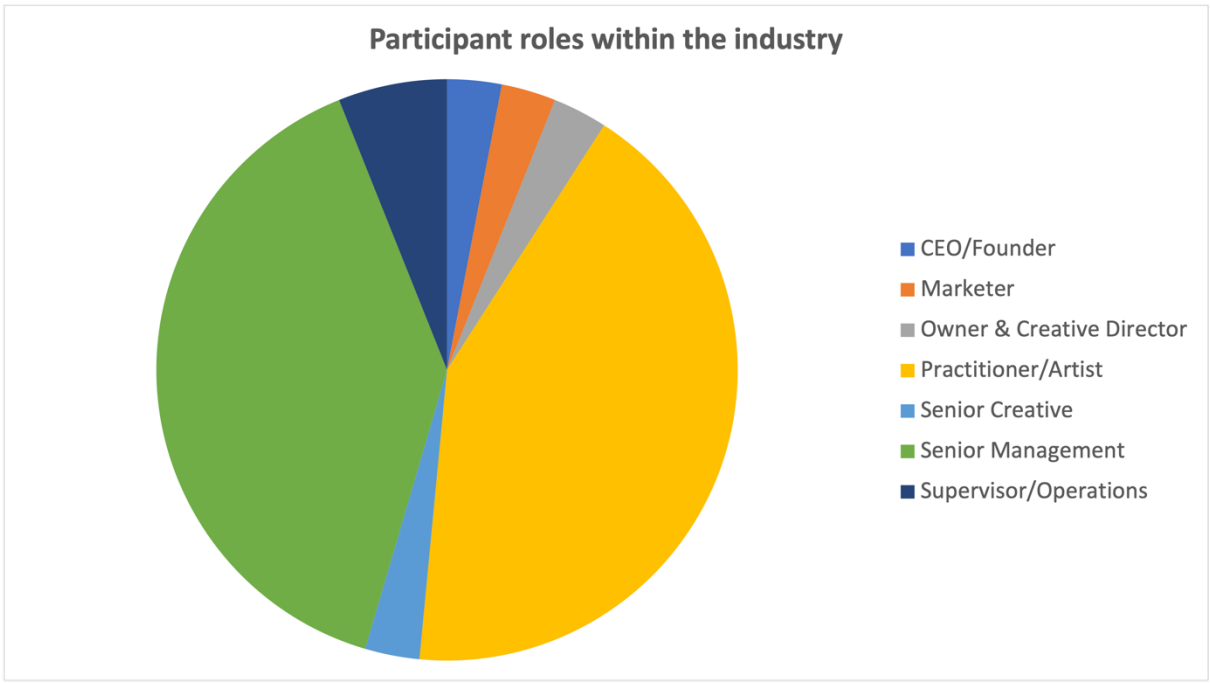

Figure 14: Roles within the industry of survey participants

Figure 14 shows the role or seniority of each of the survey participants. A large portion (42%) of participants were practitioners or artists within the advertising and design sector or related industries, with 39% of participants coming from senior management.

In the following section of the report, key survey findings will be expanded upon with reference to the industry stakeholder interviews.

Most valued Hard Skills

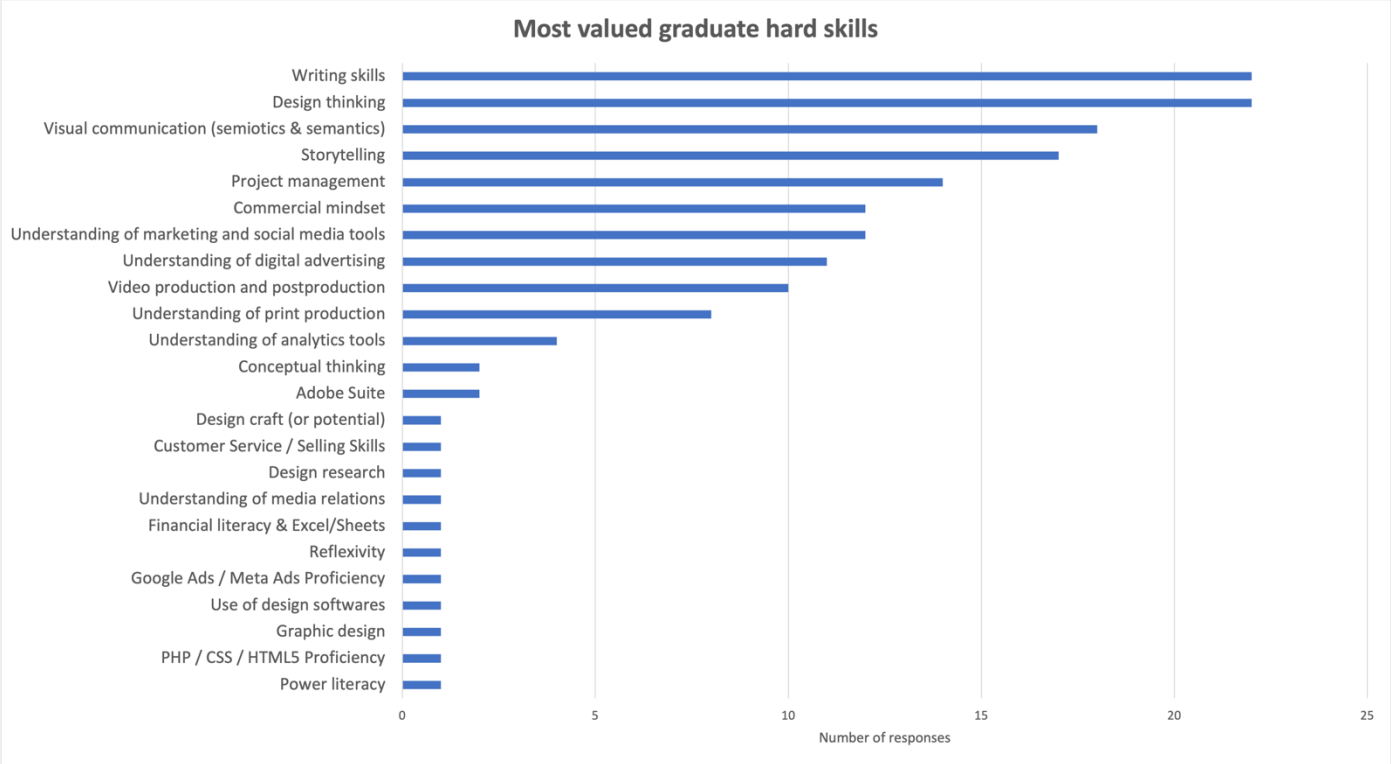

Figure 15: Survey participant's most valued hard skills

Survey participants were required to select their top five most valued hard skills in no particular order, meaning there was a total of 165 responses to this question. According to the survey, the two highest and equally valued hard skills were **design thinking** and **writing skills** (creative and professional), with 67% of participants selecting these as a response.

Several interviewees commented on the importance of design thinking as a means of generating solutions, which can then be communicated to a client:

"You need people who can actually independently think and attack a problem and go, these are the kind of options that I've developed based on this process that I've got." – Academy Director

"Rather than simply talking specifically about what we've created, what can be really compelling for a client is to be able to articulate why we've created something and why it will be of benefit." – Senior Graphic Designer

Visual communication, storytelling, and **project management** were the next most valued hard skills. We note that the top four most valued hard skills all relate to ways to communicate ideas clearly and effectively.

Most Valued Soft Skills

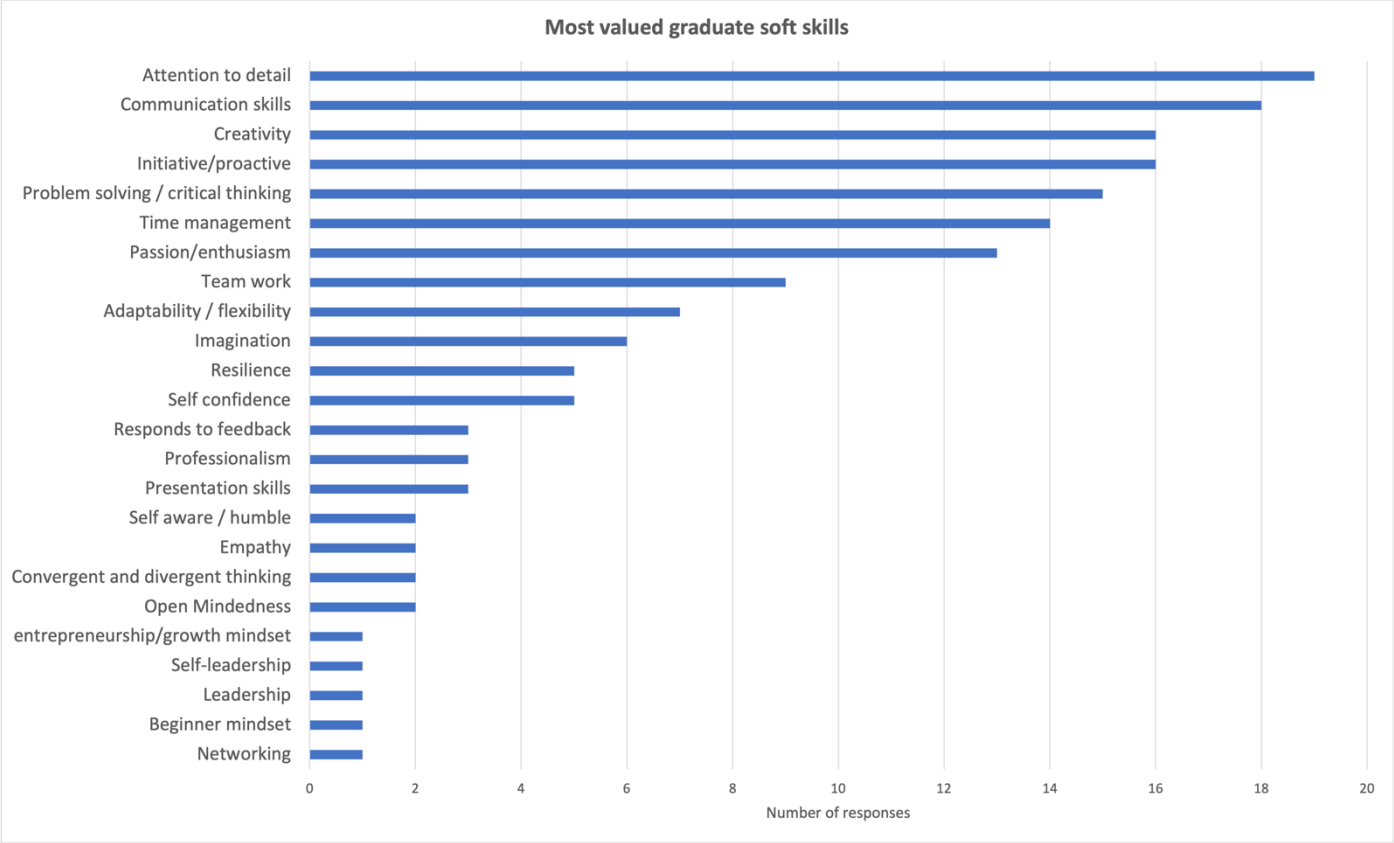

Figure 16: Most valued soft skills from survey participants' perspectives

Survey participants were required to select their top five most valued soft skills in no particular order, meaning there was a total of 165 responses to this question. The most highly valued soft skill was **attention to detail** (57%) closely followed by **communication** (55%). The next most valued soft skills were **creativity** (48%) and **initiative/proactive (**48%). Interestingly no survey participants chose the following pre-defined answers even though they were considered important skills in the first co-design workshop: cultural awareness, stress management, and being goal orientated.

The subject of initiative was talked about at length by several interviewees and was seen as a critically important soft skill for graduates to possess. Two interviewees mentioned that they hire graduates based more on personality and potential rather than technical skills. They voiced an opinion that technical skills can be taught on the job, but that initiative or passion for learning is much more difficult to teach.

"I think you get thrown in the deep end very quickly as a junior and it is a very sink or swim mentality, and those who tend to swim are the ones who have initiative." – Direct to Studio Director, Global advertising Agency

Identified Skills Gaps

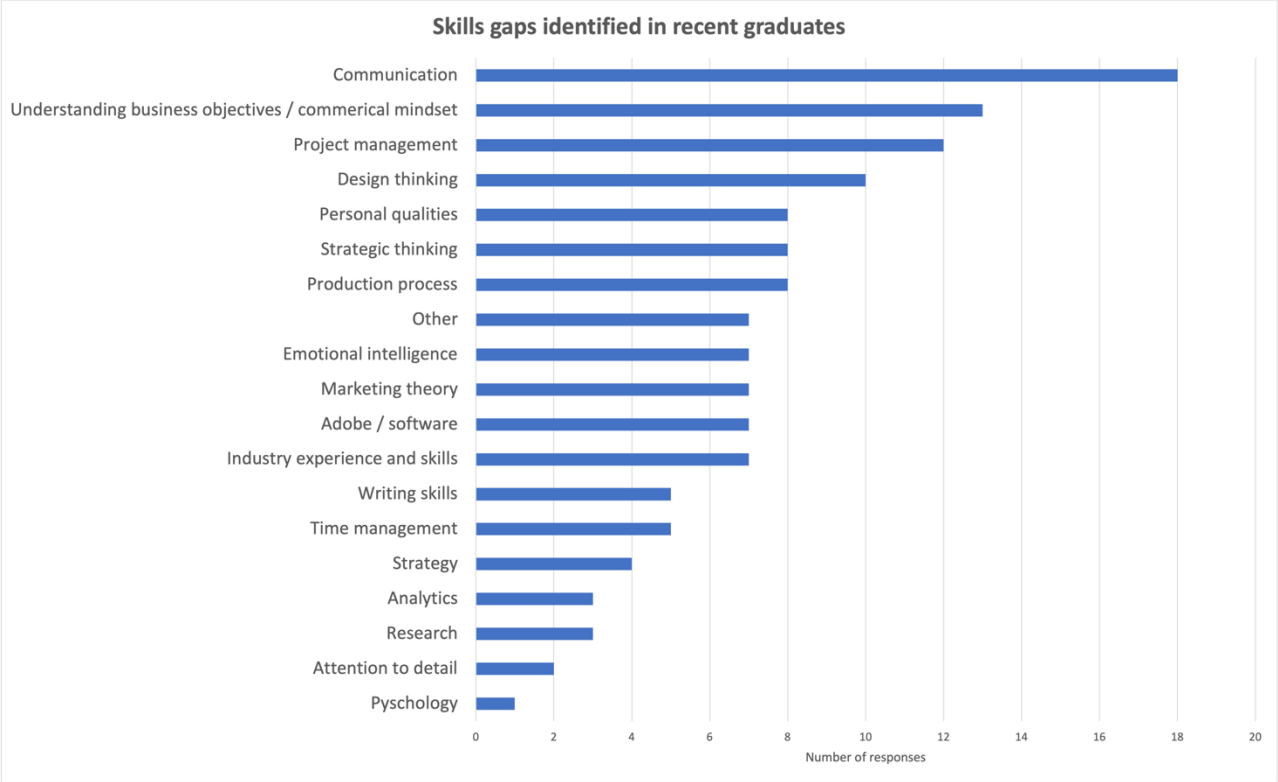

Figure 17: Skills gaps placed into categories based on industry professionals survey responses

The response format for the skills gap survey question was open-ended, with no predefined responses provided. Participants were required to give a minimum of one response and a maximum of five. In total, there were 140 responses to this question. The skills that are shown in Figure 17 are not direct responses from survey participants. Due to the open-ended nature of the question, the responses were placed into categories by the research team for easier analysis. The most common skills gap category was **communication**, with 52% of participants mentioning communication in their answers. The communication category included responses such as presentation skills, critical evaluation and debate skills, and accepting feedback. This was followed by **understanding business objectives / commercial mindset** (38% of participants); this category included understanding business objectives, budget awareness, and how different departments contribute to project pipelines. **Project management** was also identified as a skills gap in graduates, with 35% of participants highlighting this. The final top response was **design thinking**, with 29% of participants considering this a gap in recent graduate skills. In total, 43 responses (31%) of the suggested skills gaps related to soft skills, with the remaining 92 (69%) responses related to a hard skill.

The four most strongly identified skills gaps will now be explored further with reference to industry stakeholder interviews.

Communication

Communication and writing skills were talked about extensively during the interviews. The key aspects of communication included presentation skills, both creative and professional writing skills, storytelling, and how to articulate your design process.

Graduates' ability to articulate their process and justify design decisions was seen as one area that required improvement.

"They've got some lovely work and it's beautifully crafted, but they're not always able to articulate why they've done what they've done, or what benefit there would be to a prospective client who they're designing that work for."
– Senior Graphic Designer

Presentation skills were seen as particularly important client-facing skills for graduates to have. For one participant, presentation skills also included reading the room, using appropriate language (formal vs informal), and having confidence in their social skills.

"If you walk into the room like a lost little lambie, some clients eat you alive and others just won't believe the quality of the work that you've got." – Managing Director, full-service Creative Agency.

Interviewees also touched upon storytelling and a graduate's ability to get their point across in a way that shows the client the benefits of the work being undertaken.

"The ability to be able to sit in front of someone and […] share a piece of data but with context that applies to that person (is very valuable)." – CEO, Marketing and Communications.

The above quote references the importance of being able to create a narrative that is meaningful for the client. The final communication skill was writing skills, which included creative writing, formal writing for tenders or briefs, and choosing the correct language to use depending on the audience. Interviewees also mentioned that attention to detail in terms of grammar, punctuation, and spelling was lacking, this being a critical skill when communicating with clients.

"Being able to write a really beautifully formed and crafted proposal document, to be able to write a tender document that's really to the point but is pleasant to read and not full of jargon (is highly valuable)."
– Managing Director, Advertising Agency.

Understanding business objectives / commercial mindset

There were many aspects that fell under the category of understanding business objectives / commercial mindset. One of the main topics discussed was that graduates lacked the understanding of how work comes into an agency and how it moves through the different teams within a company before it is presented to the client.

"Coming in fresh, I guess, not really even knowing how a brief comes into an agency or the lifecycle of a campaign, that's probably something I noticed straight away, (that) graduates have no idea about that."
– Direct to Studio Director, Advertising Agency

In line with this comment, participants also mentioned that graduates did not necessarily understand the different roles and responsibilities within companies. While referencing job roles, one participant noted the need for

"A bit more education into what an art director or a copywriter does." – *Head of Art*

It was still seen as important to understand the different roles involved over the lifecycle of a project.

Finally, the interviewees also felt that graduates did not understand how to work within budget confines. It was seen as important that graduates understand the practicality of the solutions they are developing.

"Clients will have a budget, and they won't always have the budget that you're hoping for. So you have to be able to be adaptable and think cleverly about how you might use that budget." – *Senior Graphic Designer*

Project Management

One person that selected project management as a skills gap was interviewed. They emphasised the importance of understanding budgeting software such as excel.

"I think if you're paying all of that money for a degree and you can't sit in a job interview and say yes, no worries, I know how to manage a budget, that's just crazy to me." – Managing Director, advertising agency

Project management was discussed in other interviews in relation to the successful execution of a design to a budget or timeline rather than knowing how to manage budget software.

Design thinking

Interviewees discussed the importance of design thinking and specifically, being able to apply critical thinking skills in the real world. They felt that graduates focused more on whether the design looked nice rather than whether it served the client's intended purpose. They felt there was a gap in students being able to articulate the design process they went through to develop the solution. One of the interviewees from a PR agency noted that

"People don't have the tools to [...] develop an idea." – Academy Director

Participants felt that if graduates needed to do more research and apply critical thinking skills to ensure that a client was delivered the best possible solution to their brief.

"It's our role to analyse that and determine whether or not (what we deliver) is the best use of their money or time or effort." – Senior Graphic Designer

"Being able to take a step back and having some of that really divergent thinking is really valuable."
– Academy Director

There was an agreement amongst interviewees that graduate portfolios all look similar and that students were limited in the ways that they responded to supplied briefs. To them, this shows a gap in students' creative responses and challenging of the status quo. They wanted to see designs that went beyond current trends and university-provided briefs. The CEO of a marketing communications company called for the following design thinking skills:
"Basics should include the ability to challenge, to debate, to evaluate, to really learn how to take something that may look very, very structured, unpack it and restructure it another way. Or even not accept the findings."
– CEO, Marketing and Communications

Other top skills gaps

Other skills gaps within the top 10 related to **strategic thinking**, the **production process**, **emotional intelligence**, **marketing theory**, and **Adobe/software**. Software skills, specifically Adobe Creative Suite, were discussed at length in the interviews and first co-design workshop. Educators noted that software was constantly changing, and it was difficult to teach students specific software or platforms due to the range of software used by the industry. One interviewee explained their journey through software education.

"(I) did some really quick courses in what (are) now obsolete programs, but at the time were a requirement."
– Senior Graphic Designer

Industry stakeholders felt that graduates did not know how to use the software quickly and efficiently.

"Designers or creatives, they need to have highly developed skills in Illustrator, InDesign and Photoshop because invariably they're all too slow, because uni on the one hand rightly assesses them for their thinking and their delivery, but the real world rewards you for being fast and accurate." – Managing Director, Full-service Creative Agency

Educators felt that employers were more responsible for teaching specific software packages or tools, and educators should focus more on teaching graduates design basics.

"Education has a responsibility to build the foundation skills in students and create the potential for engaged, curious, creative employees. Industry can grow these skills and then give back" – Feedback from Workshop 2 Participant

Co-design workshop 2- findings

The second co-design workshop investigated how the education and advertising and design sectors could respond to the survey results to address graduate skills gaps. A workshop facilitator shared the survey results with participants at the start of the workshop. Participants were then engaged in responding to three questions in breakout groups.

The first question examined how tertiary educators could respond to the survey results.

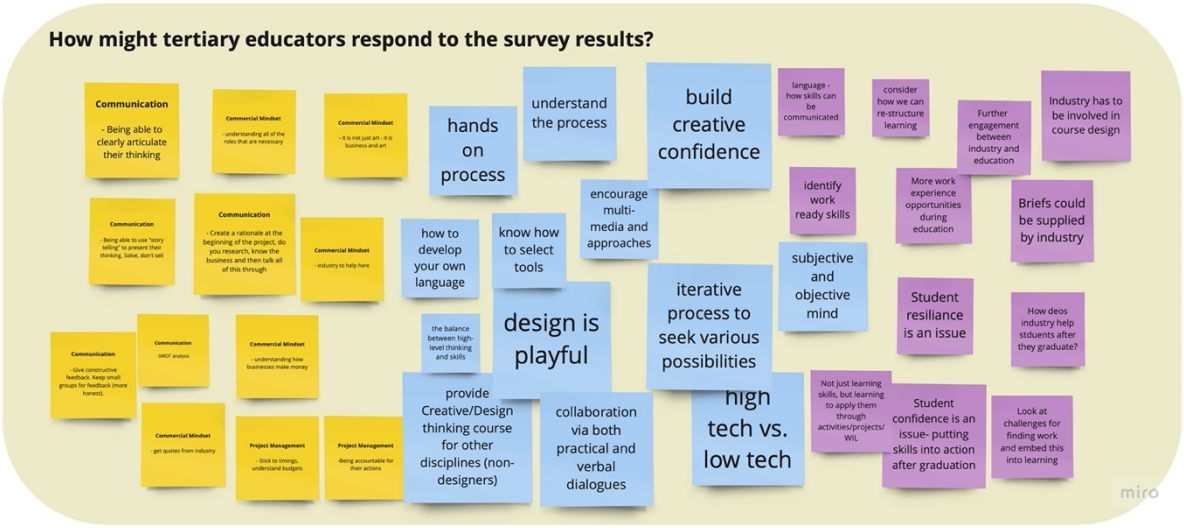

Figure 18: How tertiary educators could respond to current graduate skills gaps.

The most common theme across the three breakout groups was the need for **increased collaboration between the education and professional sector**. Suggestions for increased collaboration included industry participation in course design, providing insight into current industry trends, providing real-world briefs, or offering more work experience opportunities during students' degrees or diplomas. Collaboration between the two sectors was also discussed in relation to other areas needing attention: **creating opportunities for theoretical learnings to be applied in practical projects, improving student confidence, improving verbal and written communication**, and **providing work-ready skills**.

Furthermore, providing graduates with **more information on how to get a job** and **how the industry functions** were seen as an important step to address graduate skills gaps. This included teaching students how to find work, informing students what jobs/careers exist, the different career/education pathways that exist, and how creative agencies work.

The second workshop question asked participants to consider concerns for educators, industry stakeholders and students as they seek to address graduate skills gaps. As shown in Figure 19, the main concerns that were voiced related to student resilience, length of degrees, and the amount of time required from the industry.

Figure 19: Potential concerns related to implementing changes based on survey results

On the former, participants discussed the prevalence of mental health problems among graduates in the wake of Covid-19 and how that has affected graduate resilience. Regarding the length of degrees, one participant noted the difficulty of addressing every skill or software required by industry in a limited time period. The latter point concerned educators' desire for industry stakeholders to invest significant time in working with the education sector to create resources and opportunities. This might include working with students on briefs, providing feedback on assignments, giving guest lectures, or providing printing quotes. Educators were conscious of consuming too many resources from the industry.

The final workshop question asked participants to align the ideas and concerns generated in response to the first two questions with three key stakeholders: Graduates, Educators and Employers.

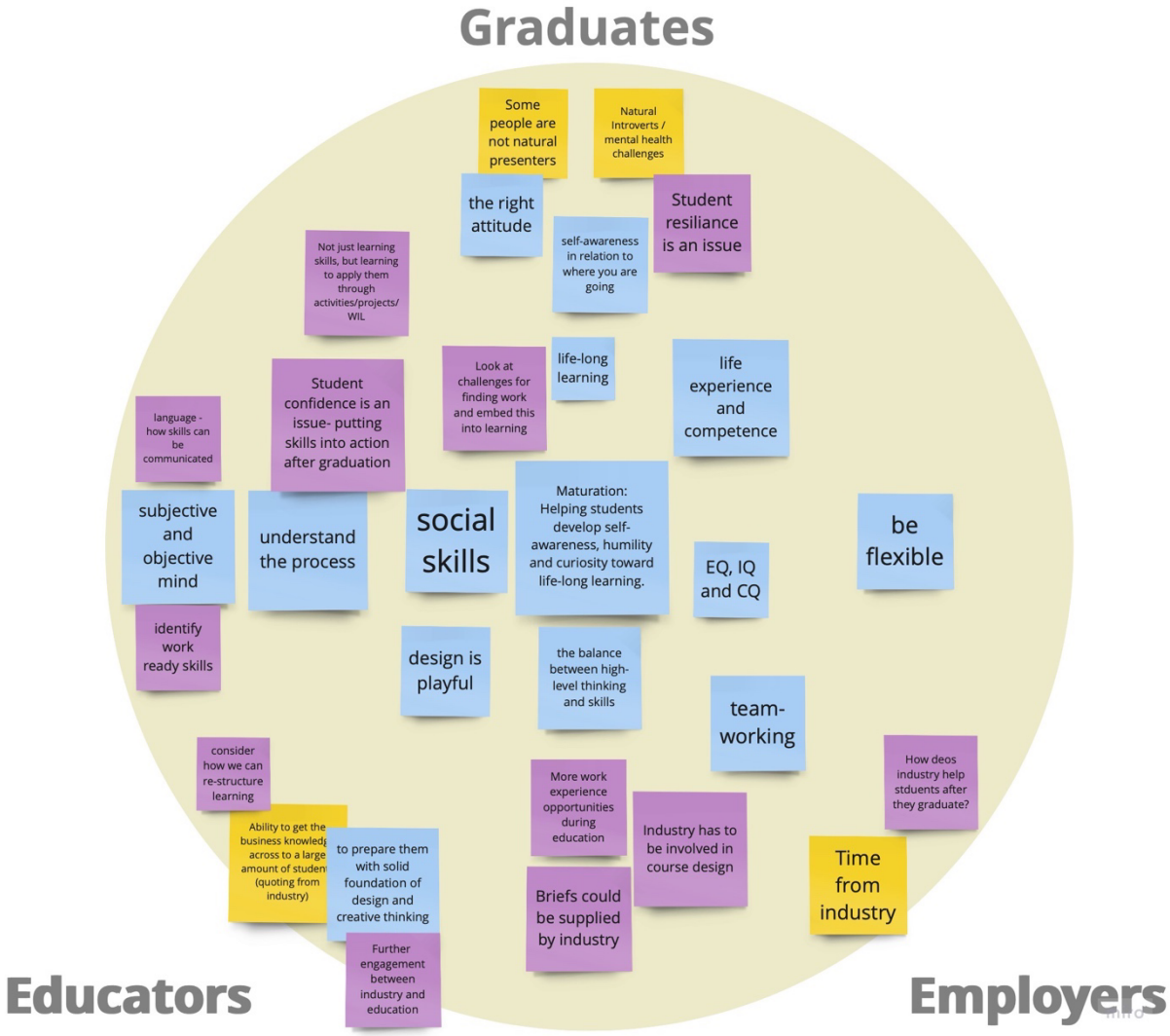

Figure 20: Which stakeholders are affected by changes to education programs

This activity further emphasised educators' desire for industry stakeholders to be more involved in curriculum design and offer more work experience opportunities to students while they are still at university. Other discussions centred around student and industry flexibility and graduate and employer expectations.

DISCUSSION

This section of the report triangulates the results between the quantitative and qualitative data. Comparing the two data sets produces concrete findings in relation to desirable soft skills, hard skills and current skills gaps for graduates.

Desirable Hard skills

There are some discrepancies between the desirable hard skills identified in the job advertisement analysis (Figure 4) and the survey results (Figure 15). The quantitative data identifies very broad skills (for example, **communication design**), while the qualitative data is more granular and calls out specific hard skills (for example, **writing skills**). As such, there appear to be limited direct matches between quantitative and qualitative data.

However, if we do not directly compare keywords or phrases, there are overlaps between the data sets. For example, **communication design** includes hard skills such as **design thinking**, **writing skills**, **visual communication**, and **storytelling,** which are the top desirable hard skills from the survey. Similarly, **digital printing** (quantitative result) includes hard skills such as **understanding print production** and **adobe suite**, which were highlighted in the survey results. Interestingly, the top hard skills from the job advertisement analysis (Figure 4) and the education sector (Figure 7) were heavily focused on **graphic design** and **art knowledge** while conversely, the top-rated hard skills from the survey were more focused on the **effective communication of ideas**. This indicates a potential mismatch between the language used in job descriptions and stakeholder expressions. For this reason, the list of desirable hard skills that appears in this report's conclusion includes the most highly ranked results from both sources of data.

The quantitative data suggests a significant overlap between the top hard skills that appear in job advertisements and in educational program descriptions. Four of the five top skills were an exact match, the only difference being communication design. It should be noted that the quantitative data analysed two courses that majored in communication design. This discrepancy is likely due to the data extraction method.

As **graphic design** is the number one hard skill in that appears in job advertisement and education program descriptions, we would expect graduates to be very competent in this area. This aligns with the views of workshop participants and interviewees, who agreed that graduates did not struggle to produce visually appealing work. This indicates that educational programs are aligned with industry expectations regarding this hard skill.

Desirable Soft skills

When looking at the top five desirable soft skills from the quantitative data (Figure 5) and from the survey (Figure 16), there is only one match: **problem-solving**. However, when looking at the data more broadly, one can note a significant overlap between the two data sets. Eight soft skills are present across both data sources. This suggests a reasonable consensus between job advertisement data and industry stakeholder perceptions.

Several other highly ranked desirable soft skills from the survey are not present in the quantitative data, however, there is some similarity between terms that appear across data sets. For example, **initiative/proactive** (survey soft skill) and **self-management'** (quantitative soft skill) have similar meanings but are not exact matches. Similarly, **attention to detail** could be aligned with soft skills such as **communication** or **professionalism**. It therefore would appear that the two data sources may utilise a different choice of words to describe some skills. The list of highly ranked soft skills that appears in this report's conclusion considers this overlap of terms.

The analysis of overlaps between soft skills identified in job advertisement and in education program descriptions (Table 6) suggests that desirable soft skills are taught in SA programs and courses.

Skills Gaps

Looking at the combined quantitative and qualitative data on identified skills gaps, we note some overlaps, specifically when comparing survey results with the quantitative skills framework analysis method of quantitative analysis. A key graduate skill gap highlighted across both data sets relates to **communication skills.** In the

quantitative data, this appears as communication design; in the qualitative, it appears as 'communication' more broadly. Interestingly, the 6th and 13th most prominent keywords in education programs were oral communication and oral communication participates (Figure 6). Communication was also the 5th most mentioned soft skill in program coverage (Figure 8). This indicates that educational programs are focusing on communication, but that a skills gap in this area remains.

Another skills gap identified in both data sets was design software, such as **Adobe Creative Suite**. Workshop discussions and interview responses on this topic were mainly focused on who (educators, students, employers) was responsible for software education. Educators acknowledged that courses did not heavily focus on teaching students specific software packages, as software is constantly changing in the industry. This meant that educators did not necessarily see the lack of software expertise in graduates as a gap since they believed it was not their role to produce software experts. Industry stakeholders did acknowledge the fast-changing software landscape, but still wanted graduates with the skills to efficiently use software tools.

The quantitative data identified skills gaps that had a very broad area of focus or a very specific software skill. The qualitative data however, was able to dig more deeply into specific skills within job areas. The gaps highlighted in the quantitative data gaps focused mainly on **advertising**, with **advertising photography**, **television advertising**, **exhibition advertising** and **advertising conception** not being present in the top 20 skills covered by education programs. The gaps highlighted in the qualitative data focused mainly on the **design process** and **understanding business objectives**. These included **understanding business objectives**, **project management**, **strategic thinking**, and **design thinking**. This also aligns with the results from the first co-design workshop, where participants talked at length about understanding business objectives and having **a commercial mindset**. Very few graphic design or art-specific gaps were highlighted in the survey results. Again, this indicates that graduates are competent in areas relating to graphic design, which was discussed earlier in the results.

It's important to note that the second most in-demand skill extracted from the job advertisements was communication design, which did not appear in the top 20 for program coverage. However, two degrees were included in the quantitative analysis with majors in communication design. While this suggests that the courses within the degree do not use the specific term communication design in their descriptors, it does not necessarily mean communication design is not being taught.

Regarding the quantitative data, we acknowledge that the direct keywords and phrase comparison method of analysis has some limitations. For example, while a job position may require applicants to use Adobe Creative Suite, it may not be the case that a university and/or TAFE program priorities the teaching of this software across multiple courses. As such, the software does not appear in the top 20 keywords and phrases from programs. Additionally, similar terms can be expressed differently in a job advertisement and an academic course. For example, "Arts" in job demand and "Contemporary art" in program coverage have a high level of similarities.

The research team also acknowledges that the number of educational programs surveyed is not an exhaustive list. Therefore, other educational programs might cover some of the gaps identified.

CONCLUSION AND RECOMMENDATIONS

Returning to the research questions listed in the introduction, we suggest that the most desired hard skills for graduates entering the advertising and design sector based on qualitative data are: **writing skills, design thinking, visual communication, storytelling** and **project management**. Based on the quantitative data, the most desired hard skills are: **graphic design, communication design, two-dimensional design, knowledge of artwork** and **conceptualisation graphic design.** The quantitative hard skills were heavily focused on the technical aspects of design, whereas the qualitative hard skills focused on communication and the process of design.

The most desired soft skills for graduates entering the advertising and design sector based on the quantitative data are: **experience, teamwork, professionalism, self-management** and **problem-solving.** Based on the qualitative data the top desired soft skills are: **attention to detail, communication skills, creativity, initiative/proactive** and **problem-solving/critical thinking.** Initiative/proactive, self-management, and problem-solving were identified across both data sets. The quantitative data showed a complete match between soft skills in job ads and soft skills covered in education programs, indicating that education programs appropriately cover soft skills.

The skills gaps highlighted by the study relate to **communication design, various forms of advertising (photography, television, exhibition)** and **service marketing** (quantitative results), and **communication skills, design thinking** and **understanding business objectives** (qualitative results). The gaps in communication skills in graduates include presentation skills, feedback skills and articulating ideas clearly. Regarding design thinking, following the design thinking process and explaining the journey graduates took to arrive at the solution was seen as a skill graduates lacked. Understanding business objectives was seen as a skills gap as education focuses more on theory and technical aspects of design but does not focus on how creative agencies function, their processes or how they make money. Based on the keywords and phrase analysis, gaps also exist in Adobe Creative Suite; however, educators expressed that creating software experts was not their priority.

Some of these skills gaps can be addressed within the classroom, while others, such as understanding business objectives, may require on-the-job training.

Based on these findings, an increase in collaboration between education providers and advertising and design sector employers is recommended. This recommendation was highlighted as the main takeaway by participants from the second co-design workshop.

"Pathways between industry, educators and students can be created to support the growth of the industry as a whole." – Workshop 2 participant

This 5-month research represents the first step in a larger project to address graduate skills gaps in the South Australian advertising and design sector. The research team acknowledges the limited time frame of the project and the effect of this on the data collected. The next stage might see educators and industry stakeholders respond to these findings so as to address skills gaps in the classroom and workplace, creating value for employers and the broader industry.

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Appendix A – Hard Skill Definitions for Quantitative Analysis (Method 2)

Advertising art: Actively promote and advertise art works or art collections

Advertising conception: The communication strategies intended to persuade or encourage an audience, and the different media which are used to achieve this goal.

Advertising photography: Create aesthetically appealing images to persuade or encourage an audience, and the different media which are used to achieve this goal.

Change Management: Manage development within an organization by anticipating changes and making managerial decisions to ensure that the members involved are as little disturbed as possible.

Communication design: Apply techniques of communication which allow interlocutors to better understand each other and communicate accurately in the transmission of messages.

Conceptualisation graphic design: Apply a variety of visual techniques in order to design graphic material. Combine graphical elements to communicate concepts and ideas.

Digital photography: The technique of using electronic and computing appliances to capture, create, edit and share digital images/photographs

Digital printing: The technique that allows printing a digital-based image directly onto a variety of materials, mostly using inkjet or laser printer.

E-commerce marketing: The marketing techniques used on the web to reach and engage with stakeholders, customers and clients to trade products or services conducted via Internet, e-mail, mobile devices, social media, etc.

Exhibition advertising: To organize, structure and promote an exhibition in a strategic way, making artworks more accessible to the public.

Graphic design: Techniques to create a visual representation of ideas and messages.

Graphic outline: Techniques to arrange ideas into different "levels" by using larger or smaller shapes.

Knowledge Management: The process of collecting, structuring and sharing information and knowledge within an organisation, which allows for a more efficient distribution of expertise and increased collaboration.

Knowledge of art medium: The ability to select and use different art media in a work of art.

Knowledge of artwork: Introduce and discuss the nature and content of artwork, achieved or to be produced with an audience, art directors, catalogue editors, journalists, and other parties of interest.

Management: Coordinate and organise business activities

Marketing advertising PR: Perform public relations (PR) by managing the spread of information between an individual or an organization and the public.

Marketing: The academic discipline and function in an organization that focuses on market research, market development, and the creation of marketing campaigns to raise awareness of a company's services and products.

Multimedia software development: Developed interactive and media rich software applications such as games and mobile applications.

Multimedia web design: Develop website layout and enhance user experience based on provided design concepts.

Online advertising: Techniques to plan and implement a marketing campaign on online ads platforms.

Search engine marketing: The marketing approach that promotes webpage presentation by affecting the specific structures of the website that impact its visibility in unpaid search results.

Service marketing: Advertise intangible transactions that provide value to customers.

Software design: Transpose a series of requirements into a clear and organised software design.

Television advertising: Create television programs to convey a message promoting, and aiming to market, a product or service.

Two-dimensional design: the organisation of visual elements within a two-dimensional plane.

Appendix B- Survey Questions

Q1. Please indicate your area of employment

- Creative Agency
- Design Agency
- Production Company
- PR Agency
- In-House Agency (Marketing)
- Other (please specify)

Q2. What category best describes your role

- Practitioner/Artist
- Supervisor/Operations
- Senior Management
- Other (please specify)

Q3. What are the FIVE industry specific hard skills that you most highly value in graduates? You may select skills from the following list or nominate additional ones by choosing 'other'.

- Understanding of analytics tools
- Understanding of digital advertising
- Understanding of marketing and social media tools
- Design thinking
- Video production and postproduction
- Understanding of print production
- Ability to conduct focus groups/co-design workshops
- Visual communication (semiotics & semantics)
- Writing skills
- Commercial mindset
- Project management
- Other (provide detail)
- Other (provide detail)
- Other (provide detail)
- Other (provide detail)
- Other (provide detail)

Note: A hard skill relates to knowledge or a technical ability required to carry out a specific task whereas a soft skill relates to personal attributes and behaviours.

Q4. What are the FIVE industry specific soft skills that you most highly value in graduates? You may select skills from the following list or nominate additional ones by choosing 'other'.

- Teamwork
- Time management
- Attention to detail
- Presentation skills
- Goal orientated
- Problem solving/critical thinking

- Stakeholder management
- Leadership
- Professionalism
- entrepreneurship/growth mindset
- Networking
- Global mindset
- Cultural awareness
- Empathy
- Stress management
- Resilience
- Self confidence
- Communication skills
- Responds to feedback
- Initiative/proactive
- Adaptability/flexibility
- Open Mindedness
- Passion/enthusiasm
- Imagination
- Self aware/humble
- Convergent and divergent thinking
- Creativity
- Other (provide detail)

Q5. Where are the gaps in terms of contemporary graduate skills and attributes? Please list up to five areas that you believe need to be addressed, in order of importance.

Q6. Would you be willing to participate in a short interview via zoom or another online platform to expand on your answers? YES/NO

If yes, please supply your name, a contact email address and phone number

Appendix C- Interview Questions

1. Tell us about your entry into the sector. What training or previous experience informed your start?
2. What did you find challenging as a new entrant?
3. As a more senior staff member, what additional skills did you require?
4. In the survey, you've listed several graduate skills gaps that you have observed (we will summarise these). Can you tell us more about these?

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V.3 22/04/2023