



# Creative industries careers: shifting aspirations and pathways from high school to university—a NSW case study

Susan Kerrigan<sup>1</sup> · Kathryn Grushka<sup>2</sup> · Ari Chand<sup>3</sup> · Kristi Street<sup>3</sup> · Jane Shadbolt<sup>3</sup> · Miranda Lawry<sup>4</sup>

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## Abstract

Creative careers are responding rapidly to new creative practices, new audiences, emerging digital platforms and technologies. These careers are well paid, resistant to automation and permeate all aspects of society. Yet students' and teachers' perceptions and attitudes are not in alignment with the reality of a job in Australia's Creative Industries. Research exploring the perceptions of a creative career in high schools showed there was a significant disconnect between perceived jobs and actual jobs, impacting on student aspirations to work in the creative industries. Current narratives in schools need to shift beyond an outdated idea of traditional “Arts” towards the realities of a contemporary creative workforce which combines digital, entrepreneurial and creative skills. A mixed method Australian state case study, was conducted in regional school communities, collecting data from across creative classroom practice, surveys and interviews. The findings point to a limited understanding of creative careers held by specialist teachers, careers advisors and students. This resulted in severely limited advice being provided to high school students in terms of choices of secondary curriculum and educational pathways for a creative career.

**Keywords** Future work · Creative industries · Careers

## Introduction

Educational pathways from high school to university were examined with the aim to inform and improve high school students' and teachers' attitudes towards a career in the creative industries. Curriculum design and subject choices in high school are significant factors influencing participation in higher education (Gore et al., 2015). While the Australian Curriculum presents the “Arts” as containing the

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✉ Susan Kerrigan  
skerrigan@swin.edu.au

Extended author information available on the last page of the article

interdisciplinary skills and understandings foundational to creative career futures, challenges are emerging, which include how the Arts and HASS curriculums are promoted and implemented (MacDonald & Hunter, 2021; NAVA, 2021). A key issue raised by this research is how the term “Arts”, as “Fine Arts”, still carries past assumptions about professional pathways and these continue to dominate curriculum implementation in schools. We argue that while contemporary art practices are studied they represent a narrow band of actual creative practices and careers in contemporary society. Curriculum change for the “Arts” has remained a low priority for many years. The consequences of this has resulted in little reform in curriculum content and classroom practices so our research focussed on presenting a cultural and creative industries showcase to expand high school understandings to meet current creative careers. The expanding creative workforce offers secure, meaningful and well-paid careers which are resistant to automation (Trembath & Fielding, 2020, p. 8; Cunningham et al., 2022, p. 3). Creative jobs abound yet curriculum implementation, with ongoing siloed subject streams; an emphasis on science, technology, engineering and mathematics (STEM) and past narrative assumptions about “Arts” skillsets and traditional jobs will not future-proof the career aspirational pathways of young creatives.

Employment in Australia’s Creative Industries is growing at nearly twice the rate of other industries with creative workforce research dispelling the myth that all creative careers are low paid (Cunningham & McCutcheon, 2018a). It is true that the Arts sector is poorly paid with incomes for the Visual Arts and Publishing jobs described as “not keeping pace with the average earned by the Australian workforce” (Cunningham & McCutcheon, 2018a, 2018b). However, it is important to view the Arts as only one of four sectors that make up the Creative Industries. The Arts sits alongside the media, design and information technology (McIntyre et al., 2019, p. 11) and, when the creative industries are viewed more accurately, as defined by the research literature, then the perception that creative careers are poorly paid is inaccurate.

Unfortunately, traditional job narratives and negative attitudes across the Creative Arts more broadly in high schools and in the broader community prevail. This research was motivated to explore how these misconceptions around the value of a creative career impacts the aspirations of high school students. The research set out to address this idea through two questions: firstly, what knowledge and opportunities are needed in regional high schools to pursue tertiary education for a creative career? (RQ1); secondly, what should be done to improve careers teachers/advisors’ understanding of creative careers? (RQ2).

To improve perceptions of creative careers and educational pathways the *Creative Industries Careers: Re-imagining Regional and Remote Students’ opportunities* was funded in 2016 as part of The Higher Education Participation and Partnerships Programme (HEPPP). The project invited high school students, and career and specialist teachers from Visual Arts, English and Technology subjects to provide their understanding of creative industries careers and the subject pathways that support such aspirations. The study captured 600 participant responses and it was conducted pre-COVID19 in regional New South Wales where future workforce demands in farming, mining, and manufacturing are in decline (Rural Councils Victoria, 2018).

The research also drew on educational research into secondary and tertiary pathways exploring career aspirations and choices of Australian students (Gore et al. 2015; Gore et al., 2018; Naylor et al., 2013).

### **Equity, aspirations and career employment futures**

One of the key principles driving reform in higher education is for improved participation of equity groups so they “match the distribution of such groups in the total population” (Gore et al., 2015, p. 156). A research team at the University of Newcastle, led by Professor Jennifer Gore, explored occupational choices based on socioeconomic status and career aspirations of Australian school students (Gore et al., 2015, 2018). The research identified student backgrounds and how “school-related factors play a key role in shaping and supporting students with aspirations in the arts” (Gore et al., 2018, p. 528). Students’ reasoning for career aspirations were based on a limited understanding of the range of possible careers, for example: Mechanic, Animal Trainer, Sportsperson, Police Officer, School Teacher, Engineer or Doctor (Gore et al., 2018, p. 167). In addition, career advisors identified high school students were being encouraged into the Sciences, paralleling community perceptions and family, with career advisors impacting little on student career choice (Lyons & Quinn, 2010). This research suggested that interventions in high schools around subject choices, focusing on both students and teachers might shift the Science, Technology, Engineering and Mathematics (STEM) policy focus if a deeper link between subjects and a wider range of possible careers were supported by clear reasons for pursuing specific careers (Gore et al., 2018, p. 171).

One significant barrier identified in the career aspirations study showed that historically Arts careers, specifically becoming a visual artist, musician, actor or performer, were not associated with high financial rewards or employment stability. It was this understanding which was found to affect a student’s capacity to aspire to a career in the “Arts” (Gore et al., 2018, p. 520). Over time, these misunderstandings have created a narrative present in schools and community that an “Arts” education results in diminished employment opportunities. Coupled with STEM policy imperatives, creative career pathways out of high school receive little traction either from teachers or career advisors. Our study sought to disrupt such perceptions through creative pedagogical interventions and position Creative Industries as a significant career option.

### **Australia’s creative and cultural workforce**

The Creative Industries workforce is greater than the Arts (McIntyre et al 2019, p. 11). Incomes from the traditional Arts sector are poorly paid and represent only 1.8% of the total creative workforce (Trembath & Fielding, 2020, p. 8). Workforce statistics confirm that above average incomes were earned in other creative areas like advertising and marketing, architecture and design, and software and digital content and make up more than three quarters of the creative workforce (Cunningham & McCutcheon, 2018b, p. 1). Creative jobs like a creative director, graphic designer,

filmmaker or social media marketer earn substantially more. Sharing this knowledge about creative career prospects was a key part of the educational intervention that addressed these long-held misunderstanding in school communities. Uncoupling these perceptions, in the broader community and in high schools, and re-coupling them with subject areas such as English and Technologies would better align with the skills needed for a creative career.

Even with a post-COVID workforce, the growth in creative workforce statistics continues to be positive (Cunningham et al., 2022). Many creative careers in design, media and information technology are digitally focused and were not significantly impacted by COVID. These workers were able to pivot quickly and adjust their workflow allowing them to continue to provide creative services during the pandemic. However, this was not the case for creative content creators and artists, particularly those relying on live performances and large audience gatherings (Trembath & Fielding, 2020, p. 8) who were COVID supported (Australian Government, 2021). It is, though, important to remember that this represents a small percentage of the creative workforce.

Investigating high school perceptions around creative careers prospects was conducted through an educational and experiential intervention called the *Creative Industries Roadshow* (aka Roadshow). Project funding focused on remote and regional schools in New South Wales (NSW) and included access for First Nations students in Tamworth, NSW. The Roadshow offered information sessions about creative careers and educational pathways for students and teachers, as well as student workshops and a screening/exhibition to showcase the creative digital artefacts created by the high school students. A case study methodology was employed to collect evidence of narratives, attitudes and perceptions around creative career pathways in order to answer the research questions.

## Methodology

A qualitative case study adopting a mixed method approach sought to provide delineation as the factors impacting on aspirational careers choices are hard to identify through a single survey approach (Daymon & Holloway, 2011; Yin, 2009). The case study was further informed by the disciplinary fields of ethnography, narrative inquiry, and arts-based ways of knowing (Barone & Eisner, 2012; Jagodzinski & Wallin, 2013; Kerrigan, 2018b; Yin, 2009). The Roadshow team were positioned as participant inquirers (Grushka et al., 2014) as they were actively present and participants throughout all the Roadshow events. By combining participant reflective observations with the collection of traditional surveys, interviews and filmed documentation of high school students' engagement in the creative workshops, the research integrated multiple sources of data. These data provided a descriptive and interpretive understanding of human, organizational, and societal communication and experiences (Daymon & Holloway, 2011).

The authors of this paper designed and delivered the Roadshow. In doing so, they were immersed in a world of creative practice observations, conversations, note taking and analysing student digital learning outcomes as they were formally

and informally assessing the experiences of the research participants (Grushka et al., 2020). The identification of four discrete research methods, described below, embeds the data in multiple participatory and reflective methods which “recognizes the centrality of the phenomenon studied and empowers the voices of the participants within the research” (Netolicky & Barnes, 2018, p. 510). The methods helped to neutralise perceived qualitative “weaknesses of each form of data” that cannot be evidenced well using written and numerical modes (Creswell & Poth, 2018, p. 14). It also ensured that “the researchers continue to interrogate its limits and possibilities for the goals of knowledge production, re-presentation, or deepened understandings of realities” (Netolicky & Barnes, 2018, p. 510).

A pilot of the Roadshow was completed, ensuring one school could host the Roadshow, allowing five more to join in the hub activities. The hub model reduced travel time for students and teachers and allowed eight Roadshows in four months to be delivered to 40 NSW High Schools, across 13 Principal Networks. The regions visited were the Central West, New England, Mid North Coast and the Hunter (see Table 1 for names of participating schools with the first school being the hub school).

Ethical approvals for the surveys, interviews and observations were given through three rounds of ethical protocols with the University (HRCE), Education Department (SERAP) and First Nations National Ethics (NEAF). Four key participant groups were identified: high school students, careers teachers/advisors, university student mentors and university alumni.

The multiple methods were: (1) interviews about creative career pathways with university alumni, high school students and careers teachers/advisors; (2) evaluation of teachers’ and students’ experiences of the Roadshow; (3) focus groups with university student mentors to document ethnographic and critical reflections on the Roadshows and (4) visual observations recorded on film during the fieldwork, showing students’ and teachers’ lived experiences as they participated in the Roadshow. Multiple data sets provide different viewpoints offering “meta” constructs (Fredricks et al., 2004) which gives analytical insights and validation to the research participant’s lived experience, emergent knowledge and qualitative data.

### **Method 1—interview participants pathways to creative careers**

Interviewees were recruited using purposive sampling, where the sample was representative of the target population and were “deliberately selected on the basis of their known attributes” (Denscombe, 2010, p. 35). The target population was divided into two smaller groups: university students and alumni. Both samples intended to capture lived experiences of the participants’ pathway through high school onto university and then into a creative career. There were 19 university students recruited in 2017 who were enrolled across degree programs which align with four Creative Industries areas—Communication (11), Fine Arts and Illustration (4), Visual Communication Design (3) and Information Technology (1). The university students were selected for their openness and willingness to recount personal stories about university life, discuss career aspirations, and share intimate knowledge of

**Table 1** Creative industries roadshow schedule and student participants

Hub	Participating high schools	Workshop male student	Workshop female students	Information session student
Kurri Kurri, June 7th, 2017	Kurri Kurri, Francis Greenway, Maitland Grossmann, Cessnock, Rutherford Technology, Mount View	30	35	42
Port Macquarie August 25th, 2017	Hasting Secondary College – Port Macquarie Campus & Westport Campus, Melville, Camden Haven	37	29	
Dubbo August 28th 2017	Dubbo College Senior Campus, Dubbo College Delroy Campus & South Campus, Gilgandra, Molong	18	25	
Mudgee August 29th 2017	Mudgee High School, Gulgong, Portland Central, Denison College, Blayney	31	21	58
Taree August 31st 2017	Great Lakes Chatham High School, Taree, Wingham, Great Lakes College Tuncurry, Great Lakes Forster, Great Lakes Senior Campus	17	40	
Gunnedah September 6th 2017	Gunnedah High School, St Mary College, Moree Secondary College	33	29	
Merriwa September 7th 2017	Merriwa Central School, Scone, Muswellbrook, Coolah, Central School, Dunedoo Central School	12	31	
Tamworth September 8th, 2017	Gomeroy Gaaynggal Centre (UON), Oxley High School, Cairrossy, Peel, Farrer Memorial Agricultural High, Guyra Central School	26	20	

university degrees and subject choices. These university students became the Mentors who delivered the digital media workshops to high school students. Most Mentors attended four Roadshows and presented their personal educational pathways during the Roadshow's information sessions, with personal profiles placed on the project website.

The second participant sample were six alumni, graduates from the creative industry programs offered at UON (see Table 2). A "descriptive interview" technique (Weerkkody, 2015, p.188) captured their educational pathway from high school to a Creative Industries (CI) degree and into a creative career or business. Key questions included high school subjects and career aspirations, route to university, program of enrolment, subjects studied and Work Integrated Learning whilst at university followed by career development post university. To comply with ethics the filmed interviews were approved by the alumni before being placed on YouTube.

These interviews were recorded and edited to form the series "See what you can be" (Kerrigan, 2018c), which was screened during the Roadshow to the students and careers teachers/advisors. The series was designed to be used post-Roadshow as part of the online program for high school students from Years 7–12.

## Method 2—survey evaluation with teachers' and students' experiences on the CI roadshow

Evaluation surveys were conducted with 53 careers teachers/advisors and 534 high school students, (230 females/204 males). (See Table 1). The majority of high school students selected the workshop themselves, with a small group of students placed by teachers. The 2 hour workshops used mobile digital technologies in filmmaking, animation and virtual reality (VR). Students were able to use virtual reality goggles and pitch a VR idea, or make a film on an iphone, or create a stop frame illustrated animation on an ipad. To replicate industry practices, students were asked to work in small groups. The Roadshow ended with a showcase of the student work revealing various levels of digital literacy, abilities to understand and swiftly implement a creative brief, to share ideas with peers and execute those ideas collaboratively.

The Mentors coordinated the workshops and led the student evaluation sessions by reflecting on their aspirations for the day, including whether they could imagine

**Table 2** "See what you can be" (Kerrigan, 2018b)

	Interviewee	Degree	Video (minutes)
1	Filmmaker Jacob Payne	Communication	8
2	Video Producer/Director Karen Hopkins	Communication	6
3	Web/UX Designer Jemimah Irvin	Visual communication design	9
4	Animator Dan Smith	Visual communication design	10
5	Artist Gillian Bencke	Fine arts	10
6	Artist Ben Kenning	Fine arts	10

a career in the creative industries and what skills they might need to achieve that career.

The specialist and careers teachers attended a professional development information session focused on CI careers and skills required to encourage innovative use of digital technologies for creative careers. There were 41 teachers who participated during the Roadshow, with 11 participating online, through the website. The evaluation asked teachers to provide their initial understanding of creative careers and new understanding of pathways to a creative career after the professional development session. The evaluation comprised 12-questions—nine multiple choice and three open ended—and was delivered online.

### **Method 3—focus group and reflective practice on roadshow delivery**

The strength of this method is that it reflects human interactivity (Creswell & Poth, 2018, pp. 43–44; Schön, 1983) by drawing on teaching research using “an insider–outsider, participant–researcher” approach which defends the collection of data from the researcher’s subjective point of view (Netolicky & Barnes, 2018, p. 506). This permitted the research team to collect and analyze the data while delivering student workshops or professional development session. The research focused on the collecting emergent multiple narratives (Netolicky & Barnes, 2018) captured through participant observations (Yin, 2009) and reflective practices (Schön, 1983). Participant-researcher data were collected from the university student Mentors who were filmed delivering the information sessions and workshops to capture their experiences ethnographically (Kerrigan, 2018b; 2018d). Video testimonials recorded by the Mentors captured personal reflective moments during the Roadshow. Mentor observations were also collected progressively through meeting minutes, diary notes and emails. This feedback loop allowed for continual improvements to be made to the delivery of the Roadshow.

A final focus group was conducted with 11 Mentors when the Roadshows were completed, allowing for a more guided and detailed reflection on the effectiveness of the intervention. The questions focused on high school student engagement, skills and comprehension of CI educational pathways. The Mentors reflected and discussed changes they observed in high school students’ perceptions and possibilities about pathways into a creative career. The focus group transcription was de-identified.

### **Method 4 creative artefacts and visual documentation of roadshow participants**

Documentary filmmaking and photography were used as visual research methods (Kerrigan, 2018b; 2018d) to capture the lived experiences of the students and teachers at each Roadshow. Filmed interviews with Careers Teachers/Advisors and students were conducted using a semi-structured qualitative technique (Creswell & Poth, 2018). The filmed footage from eight Roadshows was edited into the



documentary which provided the opportunity for analysis of key themes. These included building digital mobile literacies and collaborative process skills as students demonstrated that they could connect their natural dispositions and talents to paid CI professions (Fig. 1)

### **Results—knowledge and opportunities needed to pursue a creative career (RQ1)**

The Roadshow activities were designed to emphasise how artistic, performative and creative skills can be developed through educational pathways that can lead to a creative career. The results were drawn from three participant samples representing the three discrete stages of the educational pathway: high school students who participated in the Roadshow, university students as Mentors who delivered the Roadshows and university alumni who featured in the “See what you can be” series screened at the Roadshow. The results from the alumni and Mentors indicate their educational pathway to pursue a creative career were convoluted and required perseverance, persistence and tenacity. They stressed that career opportunities mapped from high school subjects to a university degree to a prospective creative career, were often only presented as subtle connections.

Analysis of the university alumni interviews emphasised subject choice in high school, with no clear reasoning to career aspirations. Two alumni clearly identified creative careers during high school (animator and events planner), another wanted to do forensic science while two others were unsure of their career options. Both subsequently found employment after high school in traditional jobs (administration and the railways).



Fig. 1 CI Roadshow Documentary (Kerrigan et al., 2018a)

The pathway into university was seamless for three of the six alumni, enrolling directly into a creative industry degree from high school, with one taking a gap year. The two participants who found mainstream jobs after high school took years to pursue their creative degrees. The last participant completed two creative degrees, one directly after high school and the other later in life, which allowed her to fulfill her desires to be an artist.

All the participants were satisfied with their careers. One owns and runs a business making commercial and real estate films. Three are employed full-time with corporations and businesses doing strategic and digital marketing, one is a website designer specialising in User Experience and another a 2D animator. The last two participants were not earning enough income to make a living from their creative career in fine arts, and one of these was supplementing their income by working in an Art Gallery.

The Mentors presented their pathways into a university degree in person at the Roadshow. For the Mentors schooling was only three to five years earlier and they reflected on their experiences, journeys and lack of career information about the creative industries during their schooling. One mentor noted,

I'm from a very rural country school, and I know that we didn't have anything in the way of creative industries where I'm from, and I wanted to kind of be able to get out there and show other people in the same sort of situation. Like, give them experiences that I know I didn't have. (Focus Group Mentor C)

Many mentors identified as being the first person in their families to aspire to a university education, often citing this as the motivation for their involvement in the Roadshow.

Interestingly, most Mentors alluded to the soft skillset needed for work in the Creative Industries, skills like collaboration, communication, and practical project-based skills that they felt had developed in tandem with a university degree. They also reflected on regional students' perceptions of potential aspirational careers, noting this was similar to their own experience/pathways into a university. The Roadshow allowed the Mentors to have frank and motivating conversations with students about potential pathways into a university. One mentor recounted a High School student's anxiety around their ATAR result: "And he really appreciated just having us there, talking to him and explaining, 'No, this isn't the only path, like there are other ways if you want to get in'" (Focus Group Mentor B). The Mentors reiterated that their careers advisors had lacked specific understanding about the skill sets and subject choices required for creative industries employment and acknowledged the constraints of the teacher-student relationship within high schools may well limit a student's ability to aspire.

The High School students were the largest participant sample with all students attending the Roadshow workshops, extending and enhancing their digital skills as they all made creative digital artefacts. It was obvious some students possessed media arts abilities (Dezuanni, 2021), while some were being exposed to these media technologies for the first time, particularly with VR. In the workshops the Mentors observed 'positive participation for on-task learning behaviours' with the high school students demonstrating individual and collective initiatives. Students

were observed being persistent, concentrating, paying attention, asking questions, extending skills and contributing to workshop activities.

The survey evaluations with open-ended student responses provided deeper insights into why the students attended the Roadshow with several enjoying “using the technology” and expressing that this was the first opportunity they had to use mobile digital technologies. In terms of addressing career aspirations students were able to name the degrees that would lead them into creative careers such as an animation, design, filmmaking, communication or media degree. The majority of students were able to connect degrees with job titles. Responses included—photographer, actor, support technician, cameraman, game designer, IT pathways, web designer, graphic designer, industrial designer, illustrator, writer, journalist, drone flyer, coder, software engineer, film maker, cinematographer, video editor, producer and animator.

Students became more articulate when later describing creative careers, for example; “a game designer and/or an animator”; “I can imagine a career in game design and coding”; “I can imagine film making ...I would need co-operation skills and work management”. A very honest student said, “I can’t really imagine myself in a creative industry career as I am interested in other areas”. These responses illustrate the effectiveness of the Roadshow as an intervention that succeeded in broadening the career choices presented to students for future creative career pathways. To facilitate the discussion around creative industries with parents most schools promoted the event in their newsletters and Facebook pages and provided links to the project’s website. Local media coverage of the event highlighted the important ways universities impacted and affected high school students’ perceptions of career opportunities within the broader community.

The “CI Roadshow” documentary (Kerrigan et al., 2018a) used visual ethnography to capture the high school student’s knowledge as they participated in the Roadshow opportunities. The Mentors described the speed with which students developed digital skills while using unfamiliar technologies. The success of this pedagogical implementation was confirmed as every student created a digital work. Many students in the animation workshop requested to take home the acetate so that they could continue drawing and making stop-motion animations. The VR workshop attracted gaming students, who had not had access to the VR headsets before. The Mentors explained that VR could be used for more than gaming and film, with applications in other settings like disability and health. Student interviews described their collaboration through teamwork when using animation and short film making. The power of experiential learning was evident, with adaptability being a trait that emerged as part of the creative skill set required to pursue a career in a rapidly changing career landscape.

By capturing the execution of the creative process (Nemiro, 2004), with a focus on the making moments, the ethnographic documentary shows how high school students develop creative, digital and technical skills. Frequently, the achievement of making an artefact with new technology dominates while the creative ideation process is overlooked in preference of technical mastery. The documentary demonstrated the high school students’ engagement in the creative process where technologies and ideation were mixed, such as moving between analogue skills, like planning

and drawing to digital image capture occurring throughout all stages of refinement of their artefact. Soft skills endure and define career potential, and the filming was able to capture the development of creative process skills for a creative career.

## Results—improving careers teachers/advisors understanding of creative careers (RQ2)

The “CI Roadshow” documentary (Kerrigan et al., 2018a) interviewed a rural school’s careers teacher/advisor Jane Heggarty who confirmed the normal career aspirations for rural high school students were farming, mining or small business in the local community. Heggarty emphasised the importance of the Roadshow intervention, as it allowed students to identify that they indeed have a passion for creative learning and that it can connect to paid employment (Kerrigan et al., 2018a, @ 4:20). Heggarty went on to explain that many students may watch TV but not think of it “as a creative industry with a possible position for them” (2018, @4.45). She emphasised that students that did YouTube clips, did not make the connection between that hobby and a paid position as a filmmaker. Heggarty asserted that the workshops provided one way to change career aspirations, to refocus students on a creative career “where they can earn good money” (Kerrigan et al., 2018a @4.50).

Of the 53 careers advisors/teachers who completed the survey, one was Aboriginal and Torres Strait Islander. Nearly half declared they were career advisors (41%), with the remaining teaching subjects that are key for creative industries. The largest teacher cohort being from *Visual Arts* (36%) followed by *Technology—multi-media, software* (11%), *English* (9%) and *Music* (2%).

The teachers’ understanding of the creative industries was initially assessed through the survey with them indicating a clear preference toward traditional career trajectories promoting options such as visual art teaching or graphic design. Surprisingly there were three creative careers amongst the survey results including the first result of *media and advertising* (70%) followed by *Trade* (60%), *Engineering* (58%), *Public Service* (58%), *Design* (58%), *Architecture and Building Construction* (48%), *Farming* (45%), *Medicine or Health Care* (48%), *Mining* (42%), *Retail* (40%) and *Science* (36%).

After viewing the “See What You Can Be” series and interacting with Mentors and academics, the teachers’ preferences shifted significantly. When asked if they had a better understanding of employment and careers a high school student could seek after university study the response was overwhelmingly positive (100%). The highest results were *Animation* (100%), *Graphic Design* (100%), *Filmmaking* (97%), *Digital Media* (88%), *Photo-media* (84%), *Interior Design* (81%) and *Illustration* (81%). Teachers’ probability of recommending a university degree for a career in CI was *extremely likely* (56%), and *very likely* (38%) being the highest responses.

The open-ended responses showed that some careers advisors provide students with information based on the careers the student expresses an interested in: “Generally students only think of trades, retail, nursing, teaching” (Teacher 33). A teacher from Gunnedah, one of the remote communities, said:

This is a rural community and many of our students want to work on the land. They are also influenced by the career paths of their parents which are largely in mining and agriculture. It is difficult to raise their aspirations. (Teacher 32)

The same teacher went on to elaborate on the knowledge they gained from the Roadshow:

This workshop has shown me the potential of combining creativity with more traditional career paths. It has also provided resources that I can adapt to classroom careers lessons to broaden students' perceptions about the importance of creative industries in future employment. (Teacher 32)

The teachers provided positive responses to the short survey questions about how the YouTube series expanded their understanding of possible careers and pathways to creative careers. Two examples were:

The wide range of careers and possible business ideas, the different pathways students take, the trend towards remote self-employed businesses. The need for a range of employability skills. (Teacher 33);

A wider range of industries are involved in creative industries and the future careers are going to be content creation based. (Teacher 41)

A number of the teachers had taken on board the need to bring technology and arts together, and that, pathways will vary for some of the creative careers, as they are responding to creative practices and technologies that are continually emerging. For example:

Jobs of the future are yet to be created. (Teacher 27)

There are many new and merging industries, especially in the areas of Technology and Arts. Many people are not working for others but are starting up their own businesses. The areas that students can get into now are still evolving. Many current Technology based industries will continue to evolve and some jobs have not even existed yet. (Teacher 49)

Teachers perceived the most likely place for a career in the creative industries to be in a major city (65%) or overseas (47%) whereas big regional towns (23%), and rural towns (14%), were low scoring. Most still see NSW TAFE as the main pathway into existing Creative Industries. A few teachers, though, were keen to ensure remote and regional communities were going to be treated equitably:

Many rural and remote students are limited in technology due to costs to maintain up to date resources both hardware and software. (Teacher 50)

Global education is coming faster than what smaller communities think. Global employment availability is not widely known in smaller communities. (Teacher 43)

The teachers were asked how likely it would be for students to have a career in the Creative Industries in the place they live now with the highest response being *somewhat likely* (21%) followed by *not so likely* (18%) with *extremely likely* and *very likely* returning the lowest results (10%).

Careers teachers/advisors indicated creative job titles were more easily identified, pathways to tertiary programs and possible careers were clearer, and creative careers could involve a combination of traditional and creative pathways. However, family and contextual factors may be major influences in a student's career choice. Unsurprisingly, these findings are consistent with the educational research into secondary and tertiary pathways discussed in the literature review.

The Professional Development session gave careers/teachers advisors access to the project website which provided additional information on creative industry careers, including lesson plans to integrate digital technologies into the classroom and information on degree programs. The website was accessed post-Roadshow recording 786 unique visits with 2575 page views, which confirmed when given the right information teachers were proactive in accessing new ideas about how to improve their understanding around creative careers.

## Discussion

The CI Roadshow delivered an experiential intervention that succeeded in assessing past and current high school students' knowledge about pursuing a creative career and how to recognise the educational opportunities to achieve this. The results found interest, perseverance, persistence and tenacity are important factors in ensuring creative skills could be obtained through formal educational pathways leading to meaningful and well-paid creative careers. From a high school student's point of view the pathway to a creative career could be significantly improved by ensuring that careers teachers/advisors have more accurate information about creative career pathways from high school to university. This indicates professional development that can identify: creative skills developed in school subjects and how these underpin creative occupations, job titles, related salaries and potential areas of employment growth.

By focussing on low SES regional and remote students this project delivered a multi-pronged approach, including using a participant–researcher method to connect real life stories to student learning experiences. This approach identified insufficient emphasis on creative problem solving and soft skills development occurring in high schools across subjects. This knowledge gap is significant because it prevents students from connecting their creative aptitudes and talents with a career and consequently prevents them from aspiring or pursuing a creative career at the tertiary level. The Mentors' pathways demonstrated how a creative education could be achieved, but that strong subject connections would have benefited them in their choices. Hearing the mentors' personal stories was a powerful learning moment for both high school students and teachers and it encouraged students to aspire. This was particularly significant as it is likely many of these rural high school students may be the first person in their family to attend university. The Mentors also discussed building skills beyond those attainable in a university setting. Work integrated Learning (WiL) opportunities provided at university for a creative career had proved invaluable for the Mentors' own career aspirations and were attractive to high school students.

The results confirm that careers advisors/teachers in this study had very limited understanding of future creative workforce needs which was problematic for their students. Career advisors recommended narrow pathways for high performing Creative and Performing Arts students, predominately encouraging them into visual arts/music teaching. Most also indicated they are underprepared to explain tertiary pathways that seek to accommodate future creative workforce changes. Teachers did point out the digital infrastructure challenges in rural areas, with poor quality internet making working remotely “from home”, a liability rather than a possibility. It was clear that teachers in subject areas like Art, English, Technology and Design working in remote and regional schools need more information to explain possible creative career pathways. Overall, teachers neglected to see how broader definitions of the Creative Industries including creative services and integration with STEM disciplines could increase creative careers and entrepreneurial possibilities. The lack of information about what is possible beyond an educational setting and what is accessible as examples in regions is another missing link to reshaping current beliefs of students, teachers and parents about possible creative career futures.

A key finding is that school community perceptions about creative career possibilities are slow to shift and more professional development opportunities for Careers Teachers are needed to expanded perceptions and understandings around creative careers. The attitudes and perceptions of creative careers were found to be completely out of step with the creative economic research presented earlier in this paper. Regional employment opportunities also need to move beyond the traditional regional occupations and this intervention showed it was possible to shift perceptions with a focussed campaign on pathways to creative careers. Regional and remote student access to and participation in higher education appears to be diminished because of STEM policy initiatives. The disconnect between university study areas and creative economies requires immediate attention particularly the NSW Creative Arts and Australian curriculum where the Arts study areas, such as media arts are yet to be implemented in classrooms.

The continued emphasis on STEM policy and the siloed nature of subject streaming in high schools has not been addressed and the critiques around the implementation of the national curriculum for the Arts and HASS (MacDonald & Hunter, 2021; NAVA, 2021) continues. The foundations for meaningful interdisciplinary approaches to learning are present in the Australian Curriculum such as the consideration of the General Capabilities (ACARA, 2022). At present the NSW curriculum remains out of step with other states like Victoria and Queensland who have a more progressive presentation of creative and digital media curriculum.

What is clear from these critical debates is that professional development for teachers and career advisors is an immediate imperative and career opportunities need to be urgently updated, linked to the general capabilities and interdisciplinary creative pedagogies adapted across subjects. All teachers need to recognise the benefits of creative pedagogies, the creative processes and skills learnt in and across the Arts curriculum as it links to general capabilities and technologies. Both these capabilities are significant and transferable into broader creative industry occupations such as design (websites, graphics and apps) or to media (photography, filmmaking and social media). Linking the language of Creative Industries and the role

of creatives in future employment is a key strategic outcome of the study. A shift in language and subject connections may go partway to undoing the siloed subject teaching that has been occurring, and could release the bindings of career futures attached to current curriculum perceptions. Arts-based digital creative pedagogies and associated soft skills, demonstrated in the Roadshow, can bring benefits to all curriculum.

## Limitations

The Roadshow could have included music as a subject area. The ethical approval processes prevented the collection of pre-survey data from high school students. Hence specific survey responses were not able to be achieved, so the pre-survey was turned into a post-survey. Future research could be designed with a pre-survey for students and careers advisors/teachers that may provide deeper insights into attitudes around creative career prospects.

## Conclusion

The schools visited were teaching old ideas about pathways to a career in the Arts. Creative industry career pathways and educational research must be used to align the secondary and tertiary policies, curriculums, and teaching programs to provide stronger pedagogical and curriculum connections, which in turn, can lead to more purposeful study pathway for students with aspirations to gain an education that will lead to a creative career. To achieve this significant energies must be put into disrupting and provoking existing narratives in schools, across siloed subjects, teaching and career staff, and in community about viable jobs in the creative sectors and how to develop the appropriate skill set. The schools visited promoted technologies but not related arts processes and pedagogies which offer strong links to soft skills. This targeted intervention was able to shift outdated perceptions of careers teachers/advisors' attitudes away from a narrow understanding, framed through a siloed curriculum, and where pathways to creative careers go beyond traditional art forms such as painting and drawing. Creative industries embrace technologies, communications, and the sciences and such a connection is a more complementary stance towards the highly promoted STEM subjects.

School communities were open to changing their understandings and hopefully this could lead to possible subject re-alignments where traditional arts subjects are matched with technology subjects or even science subjects. It could be possible to disrupt the current rhetoric associated with identifiers like "artists", to be replaced with "creatives". The Arts and its creatives are powering the next generation offering employment opportunities across art-science, media, design and information technologies sectors. The capacity to shift to a contemporary "creative" narrative may require considerable re-shaping of future NSW creative education curriculum, but any curriculum change must be accompanied by professional development. This study has identified that without professional support for teachers and career



advisors such as that offered by the Roadshow, where the creative pedagogies were modelled, workforce change will remain slow and students unsure about their creative employment futures.

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## Declarations

**Ethics approval** University of Newcastle, Human Research Ethics Committee (Approval No. H-2016-0418), Education department – SERAP (2015313) and Indigenous NEAF.

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**Susan Kerrigan** is an Associate Professor in Film and Television, and is a filmmaker and qualitative researcher investigating regional Creative Industries. She has been Chief Investigator on Australian Research Council Linkage Grants examining regional creative industries. See more details on her Swinburne University Research Profile.

**Kathryn Grushka** is a Senior Lecturer in Education and has a background in art curriculum, art/science, arts-education, Arts Health, visual learning and the Creative Industries. Her research draws on empirical and philosophical fields using arts-based methods. See more details on her University of Newcastle Research Profile.

**Ari Chand** is a Lecturer in the Visual Communication Design, he is a Designer/Illustrator and practice-based researcher with experience in Secondary and Tertiary Education, Drawing theory and Practice, Character Design and Concept Art, Design History and Theory, design research. See more details on his University of Newcastle Research Profile.

**Kristi Street** is a Lecturer in Communication and Screen Production with extensive experience in bridging the knowledge divide between students, careers advisors and Creative Industries. Her research focus is on creative systems in action and exploring creative processes.

**Jane Shadbolt** is a Senior Lecturer and a designer and animator. She is the director of the short stop motion animation *The Cartographer*, winner of two awards at the Australian Production Designer Guild Awards, which has screened at numerous international festivals. She has worked as a freelancer on feature and short films. See more details on her University of Newcastle Research Profile.

**Miranda Lawry** is an artist and Arts Health researcher with a conjoint position in the School of Health Sciences at the University of Newcastle. Dr Lawry works in practice led research where her expertise combines photomedia practice with identity and place.

## Authors and Affiliations

Susan Kerrigan<sup>1</sup>  · Kathryn Grushka<sup>2</sup>  · Ari Chand<sup>3</sup>  · Kristi Street<sup>3</sup> · Jane Shadbolt<sup>3</sup>  · Miranda Lawry<sup>4</sup> 

Kathryn Grushka  
Kathryn.Grushka@newcastle.edu.au

Ari Chand  
Ari.Chand@newcastle.edu.au

Kristi Street  
Kristi.Street@uon.edu.au

Jane Shadbolt  
Jane.Shabolt@newcastle.edu.au

Miranda Lawry  
Miranda.Lawry@newcastle.edu.au

<sup>1</sup> Department of Film, Games and Animation, Swinburne University of Technology, Melbourne, VIC, Australia

<sup>2</sup> School of Education, University of Newcastle, Newcastle, NSW, Australia

<sup>3</sup> School of Creative Industries, University of Newcastle, Newcastle, NSW, Australia

<sup>4</sup> School of Health Sciences, University of Newcastle, Newcastle, NSW, Australia