

ResearchOnline@JCU

This file is part of the following reference:

Gauld, Robin D. (2013) *Photography in higher education and industry in Australia: a mixed methods study to explain the alignment between the sectors*. PhD thesis, James Cook University.

Access to this file is available from:

<http://researchonline.jcu.edu.au/27238/>

The author has certified to JCU that they have made a reasonable effort to gain permission and acknowledge the owner of any third party copyright material included in this document. If you believe that this is not the case, please contact

ResearchOnline@jcu.edu.au and quote <http://researchonline.jcu.edu.au/27238/>

PHOTOGRAPHY IN HIGHER EDUCATION AND INDUSTRY IN AUSTRALIA: A MIXED METHODS STUDY TO EXPLAIN THE ALIGNMENT BETWEEN THE SECTORS

A THESIS

Submitted in fulfilment for the requirements of the award of

Doctor of Philosophy (Arts)

at

James Cook University

by

Robin D. Gauld

B.A. Photography with distinction (RMIT).

Graduate Certificate of Education in Tertiary Teaching (JCU).

Graduate Diploma of Research Methods (JCU).

October 2013

School of Creative Arts.

ABSTRACT

This thesis examines the teaching of photography in Australia at higher education institutions offering the subject and investigates both the commercial and the domestic sectors of the photographic industry from the point of view of professional practitioners. Baseline survey data was collected from responding teachers of photography at Australian higher education institutions offering this area of practice and from 393 practicing professional photographers. This was followed up with case studies of photography teaching in higher education and the professional photography industry. The analysis clearly shows how both education and industry are adapting to the challenges introduced by wide spread technological innovation.

The findings reveal three misalignments between the teaching of photography and the requirements of the photographic industry. While curricula vary, it can be argued that all have some common weaknesses that, in the interests of students' career options, could be addressed. Firstly, the universities and the vocational college in the study provide an education that is broad, includes specialist options, and has a strong vocational focus. While employers may have some misunderstandings about the skill-sets of current graduates they believe many, who present for employment, are poorly prepared for the industry. This discounts the efforts being made by higher education institutions to equip their students with many generic skills regarded as necessary for work. This thesis also analyses which skills are deemed more important than others for a long term successful career in the industry.

The second finding shows business and marketing skills is an area where there were significant differences between intended graduate outcomes and the real world requirements of commerce. Industry recognises the importance of these skills but for various reasons, many higher education providers fail to address this in a relevant and meaningful way. This thesis explains the reasons why many schools find it difficult to engage students in these studies.

The third area of misalignment concerns domestic photography, which includes for example, wedding and portrait photography. While this area of practice offers significant opportunities for graduates in all regions of Australia, higher education providers appear do little to cater for and direct students to this sector. Curricula appears biased towards the commercial/advertising,

photojournalism and art markets and to a large extent ignores the conceivably lucrative but possibly less glamorous domestic sector. This may disadvantage many students who cannot break into other market sectors or who live in regional areas where there are limited opportunities to practise other disciplines. This thesis considers the reasons why curriculum designers generally avoid this career option.

Finally, it is a proposal of this thesis that all sectors of the photographic industry, with the exception of those covered by trade union representation, should consider establishing one major unified representative peak industry body. This is a vision supported in various degrees by most practitioners and organisations but has not been realised. This thesis analyses the many reasons that surround the vexed issues of unification and the advantages it may hold for the industry and education.

DECLARATION

I declare that the material in this thesis does not incorporate, without acknowledgement, anything that has been previously submitted for a degree or diploma at any other university. This thesis does not, to the best of my knowledge, contain anything previously published or written by others that does not have a due reference within the text.

Robin Douglas Gauld.

DECLARATION OF ETHICS

The research presented in this thesis was conducted in accordance with the procedures of the JCU Human Research Ethics Committee and recieved approval Number # H3156 (2008).

STATEMENT OF ACCESS

I, the undersigned, the author of this thesis, understand that James Cook University will make it available for use within the university library by microfilm and other means, and allow access to users in other approved libraries. All users consulting this thesis will have to sign the following statement:

In consulting this thesis I agree not to copy or closely paraphrase it, in whole or in part without the written consent of the author; and to make proper public written acknowledgement for any assistance which I have obtained from it.

Beyond this I do not wish to place any restriction on access to this paper.

Robin Douglas Gauld

ACKNOWLEDGEMENTS

Thanks are due to James Cook University and the School of Creative Arts and in particular the current Head of School Professor Peter Murphy and the former Head of School Professor Ryan Daniel. Particular thanks are due to my principal supervisor Professor Ryan Daniel for his wise guidance and patience throughout this and previous research. He has always shown a sensitivity for the researchers' aims and has provided positive direction with regard to methodology and goals. He has an appreciation of the value of the research and has a fine eye for detail.

Thanks are due to my secondary supervisor Dr. Steven Campbell and associate supervisor Dr. Katja Fleischmann for their valuable assistance preparing this research. Thanks are due to Ms. Rebecca Smith BSc. LLB. LLM. for her skilful text editing. Thanks are also due to all my colleagues and friends who have assisted in the research, either as testers or interviewees. Special thanks are due to former colleague Mr. Clive Hutchison for his continued friendship and support.

Finally, special thanks are due to my family, Elizabeth and James, for their continued support of my Doctoral research, for without it none of this would have been possible. This Doctorate is a major personal goal and it would not have been possible without their patience and love.

STATEMENT OF THE CONTRIBUTION OF OTHERS

Support for the completion of this thesis was obtained through the following sources.

Financial support:

- minium resource funding of \$3000.00 from the School of Creative Arts at James Cook University.
- a Higher Degree by Research Grant (HDRG) of \$2300.00 received in 2010 from the Faculty of Law, Business and Creative Atrs at James Cook University

Editorial support:

- Ms. Rebecca Smith provided assistance with proof reading and editorial corrections.

TABLE OF CONTENTS

ABSTRACT.....	I
DECLARATION.....	III
DECLARATION OF ETHICS.....	III
STATEMENT OF ACCESS.....	IV
ACKNOWLEDGEMENTS.....	V
STATEMENT OF THE CONTRIBUTION OF OTHERS.....	VI
TABLE OF CONTENTS.....	VII
LIST OF TABLES.....	XII
LIST OF FIGURES.....	XIV
APPENDICES.....	XV
Chapter 1.....	1
Introduction.....	1
1.1 Background of the problem.....	1
1.1.1 Key definitions.....	2
1.1.2 Innovation theory as a context for change in the photography industry.....	2
1.1.3 The state of the industry.....	3
1.1.4 Teaching and learning photography.....	4
1.1.5 Introducing entrepreneurship in education.....	5
1.1.6 Quality assurance in higher education.....	6
1.2 Statement of the problem.....	6
1.3 Purpose of the study.....	7
1.4 Assumptions, limitations, scope and delimitations.....	8
1.5 Organisation of the thesis.....	10
Chapter 2.....	12
Literature Review.....	12
2.1 Introducing the context and the discourse.....	12
2.2 The photography discipline: education.....	16
2.2.1 Photography: the historical context of learning the craft.....	16
2.2.2 Evaluation of the texts as they relate to the history of photography education.....	18

2.2.3 The Australian experience	20
2.2.4 A contemporary perspective on the learning of photography	21
2.2.5 Summary	23
2.3 Photography: teaching and learning in higher education	23
2.3.1 Introduction	23
2.3.2 The contemporary discourse on photography education in higher education	24
2.3.3 An Australian perspective	25
2.3.4 Contemporary perspectives: a radical rethink	26
2.3.5 Burnett: A view of the future	29
2.3.6 Summary	30
2.4 A contextual framework of government policy and regulation for the teaching of photography into the future	30
2.4.1 Introduction	30
2.4.2 An Australian perspective	31
2.5 Entrepreneurship education: more than business and marketing	33
2.5.1 Placing entrepreneurship teaching and learning in perspective	33
2.6 Industry research	37
2.6.1 The Australian context	37
2.7 Innovation and long wave theory as a context for understanding the current state of education and the industry	39
2.7.1 Evaluation of the texts	39
2.8 Summary	40
Chapter 3.....	42
The mixed methods model and the quantitative first phase	42
3.1 Paradigm decisions influencing the research methodology	42
3.1.1 The mixed methods approach	44
3.1.2 Mixed methods research questions	44
3.1.2.1 Questions for education	45
3.1.2.2 Questions for industry	46
3.2 Mixed Methods Design	47
3.2.1 Framing the research project (visual model)	47
3.2.2 Data analysis in mixed methods research, an overview	49
3.3 The quantitative research phases	50
3.3.1 The quantitative baseline surveys	50
3.3.2 Survey design, an overview	51
3.3.3 Questionnaire Development: design considerations	53
3.3.4 Pre-testing Survey Questions	55
3.3.5 Questionnaire testing; the pilot stage	56
3.3.6 Cognitive testing	57
3.3.7 Final pre-flight testing	58
3.4 University educators survey design	59
3.4.1 Identifying the sample	59
3.4.2 Education Question Development	59
3.4.3 Survey delivery and data collection	60
3.4.4 Analysing and presenting the data	61
3.5 Industry survey design	62

3.5.1 Identifying the sample	62
3.5.2 Industry question development	64
3.5.3 Survey delivery and collection	65
3.5.4 Issues of bias in non-probability sampling	66
3.5.5 Analysing and presenting the data	68
Chapter 4.....	69
Methodology: the qualitative second phase	69
4.1 Introduction	69
4.1.1 Case study design	69
4.1.2 Tests for validity in case studies	70
4.1.2.1 Construct validity	70
4.1.2.2 Internal validity	71
4.1.2.3 External validity	72
4.1.2.4 Test of reliability	72
4.1.3 Introduction to the protocol design	73
4.1.3.1 Developing the case study questions for interviewees	73
4.1.3.2 Interview style	74
4.1.3.3 Data collection and analysis	76
4.2 Case study of higher education	77
4.2.1 Case study design for higher education	78
4.2.2 Developing the case study questions	79
4.2.3 Case study implementation	80
4.2.3.1 The Proposition	80
4.2.4 Development of higher education interview questions	81
4.3 Case study of the photographic industry	82
4.3.1 Development of case study questions	83
4.3.2 Case study implementation	83
4.3.2.1 The propositions	83
4.3.3 Development of the interview questions	84
4.4 Exploring the alignment of both phases	86
4.5 Conclusion	87
Chapter 5.....	89
Quantitative Analysis: education and industry	89
5.1 Profiling the academic sample	89
5.1.1 Summary	93
5.2 Curriculum and delivery of photography in higher education	93
5.2.1 Summary	102
5.3 Quantitative analysis of industry data	103
5.3.1 Summary	115
5.4 Industry and work experience, education, training	116
5.4.1 Summary	122
5.5 Ongoing professional development	123
5.5.1 Summary	125
5.6 Employment, training and job seeking	126
5.7 Industry survey summary	129

Chapter 6.....	131
Qualitative data analysis: higher education sector	131
6.1 Introduction	131
6.1.1 Profiling the education interviewees	132
6.2 Preparing graduates for their future	133
6.2.1 The core aims of courses	133
6.2.2 Curriculum design and implementation for industry	135
6.2.2.2 The appropriateness of curriculum design	139
6.2.3 Preparing students for work and work integrated learning	141
6.2.4 Business and marketing skills for photography graduates	143
6.2.5 Preparing students for the domestic sector	145
6.2.6 Graduate numbers and employment opportunities	147
6.3 Pedagogy within schools and into the future	150
6.3.1 Conclusions	152
6.3.2 Teaching practical and theoretical subjects	153
6.4 Industry experience of teachers, teacher training and research	154
6.4.1 Teachers industry experience and selection of sessional teachers	154
6.4.2 Attitudes towards teacher training	155
6.4.3 Research involvement of teachers	156
6.4.4 The future of photographic education	158
6.5 Conclusions	159
 Chapter 7.....	 161
Qualitative data analysis: industry sector	161
7.1 Introduction	161
7.2 Demographic summary of the industry informants	162
7.3 Photographers professional skills and attributes	164
7.3.1 How photographers learnt their skills	164
7.3.2 Training in business and marketing	166
7.3.3 Photographers' professional skills and attributes	168
7.4 The effects of digital technology on professional photographers	173
7.5 Issues facing graduates entering the workforce	175
7.5.1 An evaluation of the preparedness of graduates for work	175
7.5.2 Qualities employers look for when choosing a photographic assistant	177
7.6 Issues and attitudes relating to the domestic sector	179
7.7 Attitudes towards photographic organisations	183
7.8 Changes in the industry	187
7.9 The future of professional photography	192
7.10 Conclusions	194
 Chapter 8	 196
Mixing analysis of the four key identified themes	196
8.1 The context for identifying the extent of the alignment	196
8.2 The extent to which graduates are adequately prepared for roles in the professional photographic industry	197
8.2.1 The case for education	197
8.2.2 The case for industry	198

8.2.3 Alignment phenomenon	199
8.2.4 Summary of the proposition	201
8.3 The extent to which curricula reflect the significance of the domestic photographic industry	203
8.3.1 The context for the misalignment	203
8.3.2 The case for education	204
8.3.3 The case for industry	207
8.3.4 The alignment phenomenon	209
8.3.5 Summary of the proposition	209
8.4 The extent to which business and marketing skills (enterprise skills) are necessary in university curricula	210
8.4.1 The context for the alignment	210
8.4.2 The case for education	211
8.4.3 The case for industry	212
8.4.4 The alignment phenomenon	212
8.4.5 Summary of the proposition	213
8.5 The role of the photography industry organisations will be examined with regard to member representation and a support role to higher education	214
8.5.1 The context for the alignment	214
8.5.2 The case for education	214
8.5.3 The case for industry	215
8.5.4 The alignment phenomenon	217
8.5.5 Summary of the proposition	217
8.6 Chapter conclusions	218
Chapter 9.....	220
Conclusions	220
9.1 Introduction	220
9.2 Research outcomes	220
9.2.1 Findings: Locating the research within education and industry	220
9.3 Challenges encountered	225
9.4 Limitations of the research	226
9.5 Implications for further research	227
9.5.1 Further research: higher education	227
9.5.2 Further research: industry	228
9.6 Conclusion	229

LIST OF TABLES

Table 2.1	Literature Overview	14
Table 3.1	The Constituents of a Pragmatic World view. Creswell Plano Clark 2007	43
Table 4.4.1	Analysis procedures: summary	86
Table 5.1.1	Survey respondent's location and school	89
Table 5.1.2	Length of time teaching at university	90
Table 5.1.3	Academic tenure	90
Table 5.1.4	Academic qualifications	91
Table 5.1.5	Formal teaching qualifications	91
Table 5.1.6	Comparison of casual & sessional qualifications & experience compared to the whole sample	92
Table 5.1.7	Research activity of university teachers	92
Table 5.2.1	The status of photography within the undergraduate course	93
Table 5.2.2	Teaching settings used at photography schools	94
Table 5.2.3	Teachers teaching methods	95
Table 5.2.4	Primary driver for selection of teaching method with a break down of the casual/sessional data	96
Table 5.2.5	Encouragement of teaching innovation by key word summary	97
Table 5.2.6	Courses meeting student needs for a photographic career	99
Table 5.2.7	Does the curriculum reflect any regional needs	101
Table 5.3.1	Age distribution of photographers	104
Table 5.3.2	Comparison of gender between sample groups	104
Table 5.3.3	Principal place of residence as a percentage	104
Table 5.3.4	Highest photography qualification	105
Table 5.3.5	Principle employment	110
Table 5.3.6	Principal place/area of work	111
Table 5.3.7	Working role within the industry	111
Table 5.3.8	With what other employment are photographers engaged	112
Table 5.3.9	Desire to work more in the photographic industry	114
Table 5.3.10	Challenges of finding additional work	114
Table 5.4.1	Successful career attributes	116
Table 5.4.2	How photographers acquired their skills	118
Table 5.4.3	Where did photographers obtain their qualification	120
Table 5.4.4	Training for wedding and portrait industry	122
Table 5.5.1	Participation in professional development.	123
Table 5.5.2	The importance of ongoing professional development	124
Table 5.5.3	Engagement with ongoing training options	124
Table 5.5.4	Employee industry training: Organizations	125
Table 5.6.1	Employment of graduates	126
Table 6.1	Demographic information about interviewees	132
Table 6.2	Stated course aims for graduates	133
Table 6.3	Summary of intended core aims of courses teaching photography	135

Table 7.1 Industry informant demographic data	162
Table 7.3 Profile of photographers training and comments	165
Table 7.3 How photographers received their business and marketing training	167
Table 7.4 Photographers professional skills and strengths	169
Table 7.5 Photographers survival skills	172

LIST OF FIGURES

Figure 3.2.1	Visual plan of methodology	48
Figure 5.3.1	Photographers membership of organizations in Australia	107
Figure 5.3.2	Percentage of respondents deriving an income from photograph	108
Figure 5.3.3	Sample averages of self taught and university educated photographers	110
Figure 5.3.4	Combined employment status	111
Figure 5.3.5	Analysis of the time spent between employment in photography and in other employment pursuits	114
Figure 5.4.1	Combined responses to defining photographer attributes	118
Figure 5.4.2	Breakdown of age compared to how respondents learnt their skills	120
Figure 5.4.3	Evaluation of skills learnt in higher education	122
Figure 5.6.1	Average skill levels of employed graduates	128
Figure 5.6.2	The importance of graduate skills	129
Figure 7.8	Changes in the availability of work opportunities	188

APPENDICES

Appendix A: Survey of photography teachers	242
Appendix B: Letter of introduction, teachers	252
Appendix C: Letter of invitation, industry	253
Appendix D: Industry questionnaire	254
Appendix E: Case study questionnaire, teachers	267
Appendix F: Case study questions for industry	285
Appendix G: Case study questions for organizations	296
Appendix H: Comparison of years deriving an income from photography	306
Appendix I: Employment status in industry	307
Appendix J: Photographers participation in other paid work	308
Appendix K: Photographers defining attributes and skills	309
Appendix L: The success of education provided skills	310
Appendix M: How skilled are employed graduates	311
Appendix N: The importance of graduate skills	312
Appendix O: Complete Surveymonkey.com survey data summary of Organizations	313
Appendix P: Complete Surveymonkey.com survey data summary of Industry	334
Appendix Q: Surveymonkey.com survey data summary of Higher Education	355

CHAPTER 1

Introduction

For 175 years photography has been in a continual state of change and evolution. The first decade of the 21st century has seen image making and sharing change again—dramatically. The cause is the widespread adoption of digital techniques and the rapid abandonment of long established analogue work practices. Digital photography is ubiquitous—images are instantly available and can be transferred around the world in seconds. Photography has never been easier and the cost of creating images has never been lower. The innovations that surround digital photography have had profound repercussions on the photographic industry and have challenged photography educators to develop new paradigms that explain the new role and place of the image in a networked digital world.

There are many challenges facing educators and the industry as they manage the evolution of disruptive technological changes. This thesis explores these challenges. It follows two distinct lines of enquiry: an investigation of the teaching of photography in higher education in Australia, and a comprehensive study of the Australian professional photography industry. These two sectors, although mostly independent of one another, do share some common connections; the most relevant being the desire of many photography graduates to establish a career within the photographic industry. To fully understand this, it will be necessary to establish just what the industry is looking for in terms of photography graduates. It is this relationship that is of importance to this research. These two largely independent lines of enquiry will eventually be brought together and analysed with an aim of establishing common points of alignment or misalignment.

1.1 Background of the problem

This section will introduce the main subject areas that will be discussed in detail in the literature review. It provides a brief overview of the issues relevant to this study, identifies gaps in the current research and subsequently introduces the research question. Before exploring these subject areas, two key definitions are presented below in section 1.1.1.

1.1.1 Key definitions

There are two broad sectors of the photography industry that will be considered in this thesis: domestic and commercial photography.

Domestic photography: the term ‘domestic photography’, which is sometimes referred to as retail photography, is used to describe wedding and portrait photography, as well as sports, group and school photography. The photographers working in the domestic sector of the market can be quite specialised but, in many provincial areas of Australia the domestic photographer needs to be a generalist capable of handling most types of work.

Commercial photography: the term ‘commercial photography’ refers to, for example, advertising, architectural, corporate, fashion, food, photojournalism and public relations photography. This is a fairly specialised segment of the market with practitioners often seeking out particular niche areas. This work is largely centred in metropolitan areas.

1.1.2 Innovation theory as a context for change in the photography industry

To understand the changes that have occurred in the photography industry, in the last decade, it is necessary to consider the disruptive effects of technological innovation, given that they regularly ‘transform society, economies and industry’ (Bradfield Moody & Nogrady 2010, p. 7). The disruptive effects of technological innovation are known as ‘long-wave economic theory’ and in many ways sets up a big-picture background that helps contextualize much of what this research seeks to explain. It is an awareness of this theory and its implications that helps to explain the inevitability of the consequences of the digital revolution. These transformations appear as recurring economic cycles of boom and bust and last approximately sixty years.

Austrian-American Joseph Schumpeter named these cycles ‘Kondratiev Waves’, after the Russian economist Nikolai Kondratiev. Economists Chris Freeman and Francisco Louçá (2001) describe the five ‘Kondratiev Waves’ of innovation that have occurred since the Industrial Revolution, finally culminating in the information and communication technology wave we are now experiencing. Freeman and Louçá (2001, p. 3) add some

reality to the concept of change and warn that ‘the very notion of transition is a difficult one, ... change, instability, mutation, and bifurcation are difficult concepts to measure and to assess’.

Long-wave economic theory suggests the changes that have occurred with the introduction of digital technologies in the photographic industry are, in general, predictable. As new technologies have emerged and become dominant others become obsolete. Freeman and Louçá (2001, p. 140) believe the changes that have occurred in the last two and a half centuries are accurately described as ‘successive industrial revolutions’. Therefore the current wave of change cannot be viewed in historic isolation, but as an integral part of natural economic/industrial evolution. This natural economic cycle builds the context for this research which will demonstrate how photographers and educators are responding to the demands of the digital revolution.

1.1.3 The state of the industry

The fact that the photography industry is in decline is not in dispute; this point is in many ways at the core of this study. Industry analyst company Ibisworld, in their May 2012 industry report, *Professional Photography in Australia*, observed that industry revenue has declined in the last five years and they expect it to continue to contract for the next five (Kelly 2012). The report predicts a long term decline in professional photography that is largely due to the widespread adoption of digital technology by consumers and amateur photographers. This effect is being felt in both the commercial and consumer sectors and Ibisworld expect there to be ‘an oversupply of photographers over the next five years’ (Kelly 2012, p. 8). The Ibisworld analysis proposes that the photography industry is in the declining stage of its life cycle, with the only growth expected to come from the natural increase in the Australian population.

The Ibisworld report analyses the current state of Australia’s photography industry but it does not explore the voices of those teaching photography nor those of professional photographers. The purpose of this research is to look behind the Ibisworld data and discover what is currently happening within the professional photography industry. It will also aim to discover what educators are doing in the face of a declining industry, to prepare their students for the future, one which is likely to be very different from today. These are important issues that have previously not been addressed in any serious research

studies in the Australian context.

1.1.4 Teaching and learning photography

There is ample evidence from the literature describing how photography has been learnt and taught since the introduction of the popular daguerreotype process in 1838. Authors including Helmut Gernsheim (1982 & 1988), Robert Hirsch (2000), and Jack Cato (1977), amply illustrate how practitioners learnt their craft, as photography developed and became popular. Initially practitioners were taught by manufacturers' agents or from the instruction manuals manufacturers produced. Clubs and societies were forming in the 1850s and in 1856, King's College, University of London, became the first institution to formally teach photography (Hirsch 2000).

What is less well documented is how photography has been taught in higher education, in fact the 'history of photographic education is yet to be written' (Newbury 2009, p. 118). Literature on this topic is scant, especially in relation to the Australian context, but what is particularly interesting is the number of journal articles that have appeared in recent times from authors including Bainbridge (2009), Edge (2009) Gavin (2009), Newbury (2009), Rubinstein (2009) and others. The themes of this recent discourse, which are particularly relevant to the United Kingdom and generally relevant to other areas, concern resolving questions about teaching photography, graduate outcomes and digital technology. This discourse, in part, questions whether creativity is now subservient to mastering technology. As will be seen in the review of the literature, some authors assert that a radical new approach is needed in education and that the old ways of teaching photography are no longer appropriate to either graduates or society in general. For example Rubenstein (2009) believes that because photography is now so ubiquitous that graduating more photographers would have little effect on industry or society. Others like Newbury (2009, p. 119) believe that the dominant traditions of photography teaching in Britain will, 'continue to shape the photography curriculum.'

In 2009, mainly in Great Britain, views were being expressed exposing divergent positions about the way new technologies were infiltrating photography teaching. These views, formed as new technologies and their teaching were just finding a place in photography curricula, may still be being played out today, even in a greatly matured *new media* environment.

This discourse comes at a time when many institutions are aware that the photography industry is changing. However, they are still over supplying the industry with talented graduates who have just finished studying something they really enjoy (Bainbridge 2009). Many are questioning the vocational nature of courses at universities (Coleman 1989, Newman 2009). Some hold to the philosophical conviction that universities are essentially non-vocational liberal arts institutions (Coleman 1989).

1.1.5 Introducing entrepreneurship in education

Entrepreneurship education is increasingly being seen as an essential part of contemporary creative arts curricula; equipping students with the additional skills that will enable them to successfully apply their core skills in their chosen career path. Many, but not all, graduates with photographic skills will wish to become professional photographers and consequently small business operators. It is well known that it takes a long time to establish a name within the industry (Bainbridge 2012) and in that time, 'the risk of [small business failure] will be high' (Shapter & Volery 2007, p. 90). However, it must be understood that entrepreneurship education is more than providing business skills and start-up training. Jones (2011) describes entrepreneurship education as transformational and a way of developing students' awareness of their potential and capacity to develop future opportunities in life and work. He describes one of the greatest benefits as 'self-confidence' (Jones 2011, p. 34).

There appears to be growing enthusiasm towards the benefits of entrepreneurship education in the creative arts (Beckman 2011), however, as Bridgstock (2012, p. 2) asserts, its implementation in undergraduate courses is 'inconsistent and surprisingly minimal'. Many scholars writing in this area come from backgrounds in music teaching in the United States and include Beckmann (2011), Dempster (2011), Gustafson (2011) and McGucken (2011). They agree that entrepreneurship education must be developed within a particular school and crafted to integrate with the learning outcomes of students. In relation to photography, Williams sees the provision of entrepreneurial skills as essential because students are, in many cases, ill-prepared for the transition into work, and says that for too long, the emphasis has been on producing graduates with strong creative skills 'without giving them the strategies to capitalise on it' (Williams 2009, p. 127). In addition, the traditional model of handing entrepreneurship training to business schools is not considered satisfactory by many (Beckman 2011). But there are other problems,

in that many teachers still find entrepreneurship skills anathema to the purity of art education, and as Wetherspoon (2009) discovered there is often hostility towards the term entrepreneurship by some academics.

1.1.6 Quality assurance in higher education

Government policy, as it relates to the future direction of higher education, also has some implications for the photography industry. In a response to the Bradley report (*Review of Australian in Higher Education, Discussion Paper, 2008*), the Commonwealth Department of Education, Employment, and Workplace Relations, released their report entitled *Transforming Australia's Higher Education System (2009)*. One of the report's tenets is that higher education reform will enlarge Australia's economic potential and offer higher education opportunities to the next generation of Australian students. It states that 'by 2025, 40 per cent of all 25 to 34 year olds will hold a qualification at bachelor level or above' (Australian Government 2009, p. 12). This has obvious implications for the number of students wishing to study photography. A part of this report revealed details of the Tertiary Education Quality and Standards Agency (TEQSA). The purpose of this new agency is to make the performance of higher education institutions and the courses they offer measurable and transparent to students, and to ensure that taxpayers have confidence that their higher education money is being spent in the national (economic) interest (DEEWR 2009).

This research will look at implications arising from higher education institutions offering photography courses that are complying with the National Framework Standards for TEQSA. One of the TEQSA requirements is that course providers use valid feedback from external stakeholders. This research will examine professional photography industry representative organisations in Australia. It will try and explain why there is no peak body that can for example, provide nationally significant feedback to higher education providers offering photography courses.

1.2 Statement of the problem

To understand the relationships that exist between the teaching of photography in higher education and the needs of the professional photographic industry's working practitioners,

it is necessary to have a thorough understanding of how and why photography is being taught in higher education and the complexities of the professional photographic industry in Australia. The problem is, as well as can be determined—there has been no significant Australian study done in this area before. Consequently there is very little academic literature available on the teaching of photography in higher education and the current state of the professional photographic industry. This exposes a large gap in the current knowledge of these two areas.

An additional gap in the knowledge arises from the recent interest in entrepreneurship education (EE) in the United States, Great Britain and Australia. Many scholars, particularly in the creative arts, are questioning whether graduates need more than their core creative educational skills to succeed both commercially and socially. To this end teachers are creating new curriculum options specifically to support their core curricula and stated student learning outcomes. The intent here would be to scaffold the transition between school and work—an alignment issue. Not all agree, for example Beckman and Nie (2011) cite examples of how EE is not accepted in arts schools. Additionally some academics see EE as a 'business topic' (Beckman 2011, p. 28) best dealt with in business schools. However, many have a positive view of EE. Beckman (2011, p. xii) states 'entrepreneurship and arts are inseparable' and explains that creating appropriate course material, resourcing its development, and implementing it into existing courses becomes the challenge. There is much work to do in this area, and government policy may initiate a greater imperative to have this type of education included in contemporary photography curriculum.

Therefore, finding alignments between photographic teaching and learning in higher education and the needs of a changing professional photographic industry involves a deep understanding of what is happening in both sectors. This includes an understanding of how these sectors interact for their mutual benefit and particularly for the advantage of graduates entering the industry.

1.3 Purpose of the study

Formally stated the research question is: what is the alignment between the outcomes of photography teaching in Australian higher education and the needs of the photography industry? The purpose of this thesis is to answer the research question with the ultimate aim of explaining the alignment phenomena; which is identifying and explaining the

relationships that exist between higher education and industry.

This thesis has two distinct streams of inquiry and at the outset it was decided to split the investigation into two unique stages: education and industry, and two separate phases: a quantitative phase followed by an explanatory qualitative phase. This research model is identified as a mixed methods model. As Punch (2009) points out, it is important that the research methods chosen flow from and support the research questions being asked. This methodology is considered the best way to build a comprehensive picture of both sectors and then ask questions that will help resolve the research question and other emerging issues.

The ultimate purpose is to provide educators and interested people within the industry, with a comprehensive picture of the state of both sectors and some explanation about the relationships that exist between the two. This thesis will reveal the existence of close associations working in both directions between higher education and the photography industry. This research will also consolidate the relevant literature which will indicate the depth of the knowledge as well as its deficiencies. Ultimately this thesis will open up areas for further research arising from the major emergent themes, indeed it cannot examine every issue relevant to photography teaching in higher education nor the photography industry.

1.4 Assumptions, limitations, scope and delimitations

There are some assumptions that need to be identified concerning the qualitative and quantitative research phases. In each phase it can be assumed that both the teachers and photographers were qualified to answer the questions put to them, and that they answer truthfully and accurately. Limitations that apply to the quantitative research are those of which the researcher has no control. This included respondents' availability and willingness to complete a survey. With the quantitative survey of teachers, it was certain who received and answered the questionnaire but this was not the case for the survey of industry which was more random in nature. In the qualitative case studies, interviewees were chosen because of their expertise and it can be assumed that their opinions are knowledgeable and valid.

Punch (2009) identifies a need to control a researcher's and participant's bias and subjectivity. Great care was exercised, for example, in the drafting of the survey and interview questions. Testing protocols were implemented so that any bias was removed or reduced (Dillman 2009). But ultimately Dillman (2009, p. 128) points out that, in the end, in order to get an opinion, 'true balance may be extremely difficult to achieve'.

The scope of the qualitative research was to some extent constrained by cost and the logistical limitations of the time available to travel to different destinations to conduct interviews. While it would have been ideal to conduct interviews in all major capital cities and several regional areas, this was not possible. It would also have been desirable to interview as great a diversity of professional photographers as possible, for example, to include people working in the scientific and medical areas, but again this was not logistically achievable. Regardless of these limitations on the scope of the study, it is not considered likely to affect the generalization of the findings.

There are several delimitations imposed by the researcher. Much photography education is now conducted within the broader realms of a creative arts degree, however the research's main focus is photography. At an industry level it is not considered necessary to study the equipment wholesale or retail markets nor the photo-finishing sectors. It is not considered within the scope of the research to study photography stock picture agencies, although it could be argued that they have been undergoing great change and this has had an effect on the industry. It is also not considered within the scope of this research to examine the few large corporate portrait photography businesses that exist within Australia.

It is not within the scope of this thesis to discuss the widespread use of digital photographic technologies by other professions, for example architects and engineers. Many professions will have adopted digital photography where they may have previously employed a professional photographer. Many professions will see digital photographic processes as an asset to their businesses providing them with advantages that were previously unavailable.

Social media has become a major publisher of photography; anecdotally Facebook is now the largest repository of photographs in the world (Beaver 2008). Although social media may have an affect on the industry it is a large area of potential research and was considered outside the scope of this study.

There are many excellent books written on teaching and learning in higher education. This literature will be referred to where appropriate but it is beyond the scope of this research to review this field of literature.

1.5 Organisation of the thesis

This thesis is structured as follows:

- Chapter 1 introduces the problem and the purpose of the study. It identifies key areas of study and their relevance to the research.
- Chapter 2 identifies and explores the literature that is of importance to the research. The literature is divided into key topics and includes:
 - › the historical context of teaching photography and its part in growth of the industry
 - › photography teaching and learning in higher education
 - › government policy and regulation of higher education and its implications on photography teaching in Australia
 - › entrepreneurship education and its relevance for graduates
 - › economic long wave theory and its relevance to the changing photography industry.
- Chapter 3 presents the methodological model that guides this research. It explains the design of the two separate stages and phases of the mixed methods plan. It explains the development testing and delivery of the baseline surveys and the collection of the data.
- Chapter 4 explains the qualitative phases of the methodology including the development of the case study protocols, the development and testing of the questionnaires to be used when interviewing participants from education, industry and organisations.
- Chapter 5 presents the analysis of the quantitative data from the surveys of education and industry.
- Chapter 6 presents the analysis of the qualitative

data collected from interviews and other sources in the case study of education.

- Chapter 7 presents the analysis of the qualitative data collected from interviews and other sources in the case study of industry and the representative organisations.
- Chapter 8 presents the mixing analysis of the key emergent themes that arose from the quantitative and qualitative phases. In this chapter four key outcomes will be presented that answer the major research question.
- Chapter 9 discusses the research outcomes, challenges and implications for further research.

The aim of this research is to draw together the findings of two distinct studies and to find meaningful patterns that explain the major research question—the alignment between education and industry. To quote an often cited aphorism, you cannot make sense of the present without understanding the past, and to this end, this study puts into context the changes that have occurred in recent times in education and industry. This historical context is not only interesting but it serves to highlight the unique nature of this research and the gap that exists in the knowledge.

CHAPTER 2

Literature Review

2.1 Introducing the context and the discourse

While there are many texts that have an important bearing on the understanding of the topic under investigation it is fair to state that there are obvious and significant gaps in the literature. The section on teaching and learning of photography in higher education is somewhat scant of publications, particularly emanating from Australian scholars. Some recent articles Williams (2009), Rubinstein (2009) and Bainbridge (2012) do illustrate that photography education is changing. The contemporary discourse revolves around the nature of change and its continued relevance to education. This includes curriculum design and philosophy, and its interface and alignment with industry.

There are ample texts available describing the history, theory and practice of photography. Literature searches for scholarly writing on photography reveals a broad gamut of topics from art practice to applied science. The literature has many fine texts on the history of photography including, for example, the seminal *The Origins of Photography* and *The Rise of Photography 1850-1880* by Helmut Gernsheim (1982, 1988); these texts and others are relevant as they add some important context to the origins of the teaching of photography.

Government policy towards higher education is considered, particularly with regard to the recent introduction of the Tertiary Education Quality and Standards Agency. This becomes relevant to this research because under the Act,¹ course providers are required to consult key industry stakeholders in order to fulfil threshold standards requirements. The drive to implement transparent standards across all Australian higher education institutions is part of a long-term government plan to direct higher education towards a more prescribed role of providing the skills that are believed necessary to drive economic growth.

¹ *Tertiary Education Quality and Standards Agency Act 2011*. 'The purpose of the legislative instrument is to make the Threshold Standards. The Threshold Standards which comprise a core component of the Higher Education Standards Framework are integral to the regulatory framework in which TEQSA will operate. The Threshold Standards are crucial to ensuring that the entry gateway to the higher education sector is sufficiently high and provides a solid basis of performance from which all providers can build excellence and diversity.' (Commonwealth of Australia, 2011).

Entrepreneurship education (EE) is a growing field of study as related to the creative arts in higher education. It is increasingly being seen as an important way of equipping graduates with a set of skills that will improve their chances of life long success in their chosen career. While many authors, for example Beckman (2011), come from the discipline of music the broad principles are increasingly being migrated to creative arts curricula (Bridgstock 2012, Jones 2012). EE is considered an interface between core student educational outcomes and the realities of graduate career expectations. It is seen by many as going far beyond the teaching of business and marketing skills. EE's relevance to photography learning outcomes and career opportunities is seen as high.

The photographic industry in Australia is a key area of study but relevant literature is rare. Industry analyst company Ibisworld (Kelly 2012) publishes an annual report on the photography industry that contains much relevant data, analysis and opinion. The Australian Bureau of Statistics (ABS) is another key source of statistical data, albeit with limitations. The ABS includes photography with broader classifications that may include, for example, grouping photography in with statistics on hobby and leisure activities, making analysis of relevant data difficult at times.

Innovation wave theory is looked at briefly as a way of contextualizing and explaining the current state of the photography industry. This theory adds historical perspective to many of the upheavals and changes that have recently occurred. Significant technological innovations have altered the way industrial practices are performed and who is doing the work. Innovation wave theory demonstrates that, out of the chaos of wide spread change, new opportunities always exist, and that includes opportunities for graduating students. This topic connects photography education and the photography industry to the real world of new media and commerce. These topics must not be considered in isolation as they are now inexorably and permanently linked to an expanding networked world. We really do, as Marshall McLuhan stated in 1967 'now live in a global village' (Shaw 2008, p. 31).

There are many excellent books written on pedagogy in higher education, for example, *Teaching for Effective Learning in Higher Education* by Nira Hativa (2000), *Learning to Teach in Higher Education*, second edition, by Paul Ramsden (2003), and *Teaching for Quality Learning at University* by John Biggs (2003). This writing will be referenced where appropriate but it is beyond the scope of this research to review this field of literature. Only texts that have a specific relevance to photography education will be reviewed.

Table 2.1 is an overview of the most significant literature with reference to the research question. The literature will be analysed in sections that follow the order of the table. The texts are listed by section in alphabetical order of authors' last names.

Table 2.1 Literature Overview						
Discipline	Topic	Examples of author/s	Title	Year	Publication	Relevance
Photography	History	Campbell, B.	Exploring Photography	1978	BBC	Medium
		Cato, J.	The story of the camera in Australia, 2nd edn	1977	Institute of Australian Photography	High
		Frizot, M.	A New History of Photography	1998	Könemann	High
		Gernsheim, H.	The Origins of Photography	1982	Thames & Hudson	High
		Gernsheim, H.	The Rise of Photography 1850-1880	1988	Thames & Hudson	High
		Hirsch, R.	Seizing the Light: A History of Photography	2000	McGraw Hill Higher Education	High
		McWilliams, M.	The Historical Antecedents of Contemporary Photography Education	2009	Photographies	Medium
		Newton, G.	Silver & Grey: Fifty years of Australian Photography	1980	Angus & Robinson	Low
		Parr, M. & Badger, G.	The Photobook: A history, Vol. 1 & 2	2008	Phaidon	Low
		Pollack, P.	The Picture History of Photography	1977	Thames & Hudson	Medium
		Stuart, M.	The History of Photographic Education in Rochester, New York 1960-1980	2005	State University of New York	Medium
Photography	Teaching in higher education	Bainbridge, S.	Lessons to be Learned	2012	British Journal of Photography	Medium
		Coleman, A. D.	Identity Crisis: The State of Photographic Education	1988	Photo review	Medium
		Edge, S.	Photography, Higher Education and the Skills Agenda	2009	Photographies	High
		Gavin, M.	Higher State	2011	British Journal of Photography	Medium
		Grundberg, A. & Smigrod, C.	A New Curriculum for a New Generation	2009	Exposure	Medium
		McWilliams, M.	The Historical Antecedents of Contemporary Photography Education: A British Case Study, 1966-79	2009	Photographies, Routledge	High
		Newbury, D.	Image, Theory, Practice. Reflections on the past, present and future of photographic education	2009	Photographies	Medium
		Rubinstein, D.	Towards Photographic Education	2009	Photographies	Medium
		Wennrich, M.	25 Years of working towards excellence in Photo Education at RMIT	1998	Paper PIEA	High
		Williams, A.	Identity Crisis	2009	Photographies, Routledge	High

Table 2.1 Literature Overview						
Discipline	Topic	Examples of author/s	Title	Year	Publication	Relevance
Higher Education	Policy	Australian Workplace and Productivity Agency	Review of Australian Higher Education	2008	Government report	High
		Chris Evans, Minister for Tertiary Education	Higher Education Standards Framework (Threshold Standards)	2011	Tertiary Education Quality and Standards Agency Act 2011	High
		Commonwealth of Australia	Tertiary Education Quality and Standards Agency Act	2011	Commonwealth of Australia	High
		Commonwealth of Australia	Tertiary Education Quality and Standards Agency Act 2011: Explanatory Statement	2011	Commonwealth of Australia	High
		Commonwealth of Australia	Review of Australian Higher Education, Discussion Paper	2008	Commonwealth of Australia	High
		Department of Education, Employment and Workplace Relations	Transforming Australia's Higher Education System	2009	Government Report	High
		Grattan Institute	Mapping Australian higher education	2012	Grattan Institute	High
		Hare, J.	Learning the art of landing a job	2011	The Australian	Medium
		Karmel, T, Mlotkowski, P, Awodeyi, T.	Is VET vocational? The relevance of training to the occupations of vocational education and training graduates	2008	NCVER	Medium
		Pratt, J, Pratt, G	Reforming Australian Higher Education: From Crisis to Excellence?	2003	4th. MAAOE Conference, 2003	Medium
Entrepreneurship, inc. Business and marketing	EE	Beckman, G. D.	"Adventuring" Arts Entrepreneurship Curricula in Higher Education: An Examination of Present Efforts, Obstacles, and Best Practices	2007	The Journal of Arts Management, Law, and Society	High
		Beckman, G. D.	Disciplining the Arts	2011	Rowman & Littlefield Education	High
		Bridgstock, R.	Not a dirty word: Arts entrepreneurship and higher education	2012	Arts and Humanities in Higher Education	High
		Henry, C.	Entrepreneurship in the creative industries	2007	Edward Elgar Publishing	Medium
		Jones, C.	Teaching Entrepreneurship to Undergraduates	2011	Edward Elgar	High

Table 2.1 Literature Overview						
Discipline	Topic	Examples of author/s	Title	Year	Publication	Relevance
		Raffo, C, Lovatt, A, Banks, M, O'Connor, J.	Teaching and learning entrepreneurship for micro and small businesses in the cultural industries sector	2000	Education and Training Vol 42	High
		Shapter, M, Volery, T.	Entrepreneurship and Small Business	2007	John Wiley & Sons	Medium
		Weatherspoon, D.	Nascent Entrepreneurship and Music Students. Learning and the Creative Industries	2009	The Higher Education Academy	medium
Photography	Industry Analysis	Kelly, A.	Professional Photography in Australia	2012	Ibisworld	High
Innovation Theory	Long wave economic theory	Freeman, C, Louca, F.	As Time Goes By	2011	Oxford University Press	High
		Goldstein, J.S.	Kondratieff Waves as War Cycles	1985	Journal for international studies	Low
		Bradfield-Moodie, J. Nogrady, B.	The Sixth Wave	2010	Vintage	Medium

2.2 The photography discipline: education

2.2.1 Photography: the historical context of learning the craft

The early history of photography (1838-1880) shows the rapid development and evolution of many methods of capturing a photographic image, perhaps surprisingly, some of which are in current usage. Instruction in operating methods began with the early manufacturers of techniques and cameras, who provided teaching manuals when they sold their products (Gernsheim, 1982). Manufacturers' agents were soon providing tutorials to assist sales and it was not long before formal tuition was available to keen photographers (Pollack, 1977).

There have been many books written about the history of photography; few are as authoritative as *The Origins Of Photography* and *The Rise of Photography 1850–1880* by Helmut Gernsheim (1982, 1988). These books only cover the first fifty or so years of photography but do so in great detail. These books chronicle many of the ways pioneering photographers learnt their trade and the spread of photography throughout the world. These texts are impressive not only for their scholarship of the pre and early history of image creation but also for the quality of their plates.

Another important authority is *A New History of Photography*, edited by Michel Frizot (1998). This work was commissioned by the Commission for the Arts of the Centre National du Livre and comprehensively investigates the history of photography embracing the French perspective. Its essays cover photography not only chronologically but also in terms of its sociological effects, ethnology, artistic movements and technology. Frizot (1998, p. 91) points out that 'unlike the histories of other media used in art, photography has gone through a number of phases or stages, each corresponding roughly to a development in technique or the way in which images are produced.' This book has a European focus on the influences and development of photography, for example, The Berlin School of Applied Arts in the late 1920s (New Objectivity) and others at Essen, Munich, Stuttgart, the Bauhaus (Frizot 1998). Frizot (1998) also chronicles the popularity of technical magazines in Britain and Europe in the mid 1850s and the influence of photography clubs in the late nineteenth century.

Seizing the Light, (Robert Hirsch 2000) examines the history of photography until recent times and takes a particularly American-centric view of that history. Where Gernsheim (1982, 1988) left off, Hirsch is able to connect the history of photography with its intellectual development. He contextualizes the developments in photography both commercially and artistically with the need for education. Hirsch explains how photography clubs and societies, schools and universities, magazines and journals developed out of a growing need of photographers to learn and exchange ideas.

In two magnificent volumes of *The Photobook: A History*, Martin Parr and Gerry Badger present a compelling case for the importance of the photo book as a fundamental means of 'expression and dissemination' of photographic information in the nineteenth century (2010, p. 9). In fact they call photography in that period 'basically book related' (2010, p.9). While this book establishes the importance, influence and popularity of the photo book, other forms of reproduction were at least as important.

The early years of photography in Australia are captured by Jack Cato in his book *The Story of the Camera in Australia* (1977). This work covers the first 100 of photography in Australia and identifies the pioneers, including where and how they worked, learnt and passed on their skills.

2.2.2 Evaluation of the texts as they relate to the history of photography education

All authors from the previous summary mention the many ways that early photographers and inventors learnt their skills and disseminated their knowledge. Gernsheim (1982) describes how people were learning the art of photography in the very beginning by reading manuals and journals and by viewing demonstrations. Louis-Jacques-Mandé Daguerre initially demonstrated his Daguerrotype process in Paris in 1838 to ‘wild acclaim’ (Gernsheim 1982, p. 43). While Daguerre did not invent photography he is important because he developed a technique that worked and became hugely popular. Shortly after the Paris debut, M. de St. Croix gave the first Daguerreotype process demonstration in London in 1839, followed by the release of an English translation of Daguerre's manual (Gernsheim 1982). The French government authorised Daguerreotype manuals to be produced in six languages and it ran to twenty-nine editions. Due to the widespread demand for the manual it can be assumed that many of the earliest practitioners were self-taught.

In October 1839 an exhibition of the Daguerreotypes went on show at the Hotel François on Broadway. This created enormous interest and produced the first catalogue of photographic works (Gernsheim 1982). Early in 1840 a ‘description of the daguerreotype process’ was published in Boston (Gernsheim 1982, p. 103). In the same period in England progress was also rapid. In May 1841 Robert Hunt published the first general treatise on photography on metal, paper, and glass (Herschel’s process) (Gernsheim 1982).

Gernsheim (1982) and Frizot (1998) show that many early photographers were keen to display their work for commercial reasons. These photographers began forming clubs and showing their work in salons and soirées. For example, in 1847 the London Photographic Club was formed (Gernsheim 1982). The club comprised a dozen amateur members who met once or twice a month to discuss the Calotype (paper) process. Five years later the first photographic society was formed in France, the ‘Société Française Héliographique’ (Frizot 1998, p. 93). Gernsheim (1982) also presents evidence of the first photographic journals, *La Lumière* (1851), *The Daguerreian* (1850) and *The Photographic Art Journal* (1851), the latter two both published in New York.

Prof. Samuel F. B. Morse² was instrumental in introducing the Daguerreotype process

² The inventor of Morse code.

to the United States (Pollack 1977). By the mid-1840s he was operating a portrait studio built on the roof of New York University (Pollack 1977). In this studio Morse taught photography to many students, some of whom became pioneer photographers across the United States (Pollack 1977). Notwithstanding Pollack's observations, other commentary suggests early United States photographic instruction appeared on the west coast at the California College of Photography and on the east coast at Teachers' College at Columbia University in the early years of the 20th century (Stuart 2005).

As photography progressed and new techniques were introduced, making it easier to produce images, demand grew and large numbers of amateurs began purchasing the necessary equipment. By the start of 1860 there were 'at least twenty four photographic societies in Great Britain' (Hirsch 2000, p. 123).

Hirsch (2000) also describes the importance of photographic classes, photography clubs, and photography magazines. There was a growing and significant demand for photographic education and in 1856, Kings College, at the University of London became the first institution to formally teach photography. Clubs grew rapidly between the 1850s and the beginning of the 20th century in Great Britain and in the United States of America. By the turn of the century twelve photographically illustrated magazines were in circulation in America (Hirsch 2000).

Clubs were seen as 'educational, providing how-to-do articles, exhibition reviews, and round-ups of photo related activities' (Hirsch 2000, p. 176). Newton (1980) describes an Australian example where, in 1892, photographic supply companies were the first to publish magazines and journals, with the obvious intent of advertising their products.

Hirsch (2000) describes the public's disenchantment with photography in the 1880s which has important parallels to the introduction of digital photography. By the 1880s much of the skill and equipment needed to take a photograph had been replaced by better techniques and smaller hand-held cameras. The professional portrait business was also in decline as amateurs were able to make portraits for themselves. To counteract this the Photographers Association of American was formed (1880) to 'reach out beyond the chemistry, optics, art, and mechanics of our art-science, and take hold of the morals of the craft' (Hirsch 2000, p. 185). As a consequence schools such as the Chicago College of Photography opened to 'validate a photographer's skills by offering certificate courses in photography. A graduate would presumably "possess the arts, character, and tone" of a knowledgeable professional

photographer and thus command a higher remuneration' (Hirsch 2000, p. 186).

Hirsch (2000) explains how photographic education was evolving from the traditional commercial schools and apprenticeship models in Europe and the United States in the early 20th century to schools with a different philosophy to photography. Clarence White's School of Photography (1914) liberated generations of photographers by teaching photography as an art (Hirsch 2000). Social change in the 1960s was reflected in photography education in universities. This saw the establishment of the Society for Photographic Education in the United States (Hirsch 2000). In the 1970s photography was moving into high schools and colleges and expanding into universities that were offering fine arts degrees in photography including Masters degrees. Hirsch (2000) also describes the 1970s as a time where photography teachers were able to break away from traditional methods and develop stimulating new ones that were based on a broadening intellectual base.

2.2.3 The Australian experience

Jack (John) Cato (1977) traces the early history of photography in Australia in the *Story of the Camera in Australia*. Cato (1977) believes that an anonymous Frenchman produced Australia's first Daguerreotype in Sydney on the 15th May, 1841. Far more than other authors Cato chronicles the early training of business owners and apprentices as they pioneered portrait and later landscape photography.

Cato begins with Mr. Goodman, Australia's first commercial photographer and his journeys throughout the colonies amassing his fortune. On 31 January 1843, the Sydney Morning Herald announced that, '[M]r Goodman now takes full-length portraits and also groups, and states that he intends leaving Sydney in a few weeks for Hobart Town' (Cato 1977, p. 3). In the years that followed Goodman travelled from Hobart to Melbourne, Adelaide and returned to Sydney. In 1847 he announced that he was leaving the country (with his fortune) and had sold his lucrative business to Mr Isaac Pollack. Pollack had worked in Goodman's business for three years prior to the sale and Goodman considered him to be as competent as himself to carry on the daguerreotype business at 21 Castlereagh Street North (Cato 1977). This, from the very earliest practitioner in the colonies, established a very common way of training photographers and establishing businesses.

The apprenticeship model, as Cato (1977) points out, was quite common from the outset. Nicholas John Caire, a highly respected Melbourne photographer learned his craft from Townsend Duryea one of the pioneers of Melbourne portrait photography. Tom Roberts, founder of the Australian Impressionism painting movement, spent 12 years apprenticed to Richard Stewart's photography studio in Bourke Street Melbourne. He finally became a senior camera operator for the business (Cato 1977).

Cato (1977) describes how many early photographers were taught their skills. For example, Hubert Newman was born in Sydney in 1830 but became interested in photography when touring in Europe. He took a course of photographic lessons in Paris and returned to Sydney in 1863 where he opened a series of studios. John Kauffman launched the pictorialism movement in Australia in 1898 (Newton 1988). Prior to that he trained as an architect before moving to England where he started showing his amateur photographs in the Linked Ring Salon (Newton 1980). He then travelled to Europe and eventually enrolled as a student in the Imperial Research Institute for Photography and Illustrative Processes under Prof. Elder in Vienna (Cato 1977).

Cato's contribution to document Australian photographic history is significant. He depicts the growth of the craft in human terms, and of significance to this study, he describes how many of the pioneers of photography established their businesses, mastered their craft and passed on their skills. The history of photography parallels the growth of the nation as photographers travelled to all major centres following the new prosperity, which included the gold rushes! In Australia as in other parts of the world there were many common models of learning the craft. Just as there were apprentices, and photographers who learned their craft at school, there were many who taught themselves.

2.2.4 A contemporary perspective on the learning of photography

While many texts previously mentioned present photography education in the context of the overall history of photography, Nancy M. Stuart (2005) makes a detailed study of two of the United States' most prestigious photography schools. In her dissertation, *The History of Photographic Education in Rochester, New York 1960-1980* (Stuart 2005), she describes the development of teaching programmes at the Visual Studies Workshop (VSW) and the Rochester Institute of Technology's School of Photographic Arts and Sciences (RIT) in a period of increasing student demand. 'Both programs were founded in Rochester, N Y and

have had a major impact on the field of photography' (Stuart 2005, p. XIII). However, both schools were distinctly different in faculty culture, including hiring practices (Stuart 2005).

Stuart's (2005) thesis investigates what was being taught at each school, the relationship of the schools to the local industry and how that affected curriculum design. Stuart (2005) also provides a timeline of the significant developments of photographic education in the United States from the beginning of the twentieth century, including the influential personalities that shaped and directed photographic education, including, László Moholy Nagy, Henry Holmes Smith, Ansel Adams and Minor White.

Stuart (2005) describes how both institutions, (RIT & VSW) provided high quality and innovative programs. Rochester provided a more technical, vocational, education supported by extremely high quality facilities, but it did offer both applied and fine arts programs. The Visual Studies Workshop was 'an internally focused group of individuals passionately involved in their own artistic development' (Stuart 2005, p. 126). The 'program was founded on the broadest concept of photographic studies and included all related media' (Stuart 2005, p. 133). It was one where 'students entered the programme as novices and graduated as professional photographers' (Stuart 2005, p. 159). Both institutions represent different models of photographic education and different philosophies in the ways students interact with their schools. This is the only such study that examines photographic education in this detail. While it is limited to two institutions, in close proximity, it provides a great insight into photographic education in a period of great student interest in the discipline at the end of the twentieth century.

Along similar lines as Stuart's thesis is *The Historical Antecedents of Contemporary Photography Education: a British case study, 1966-1979* by May McWilliams (2009). This paper looks at a period of great change in photography education in Great Britain. It examines the 'debates, struggles, and opportunities within British photography education during the 1960s and 1970s (McWilliams 2009, p. 251). In this period of change photography was coming of age and being recognised as an art in its own right. In the growing number of schools teaching photography, teachers were creating new curricula and conceptual frameworks, 'frameworks which have stood the test of time and continue to underpin much of photography education today' (McWilliams 2009, p. 252). As was the case at RIT and the VSW in the USA, the leaders in this period in the UK, the Guildford College of Art and the Royal College of Art were instrumental in shaping photography education in Britain. Photography education in Britain was freed from the narrow confines of vocational

training, new technological approaches were added and photography became a separate and autonomous discipline (McWilliams 2009).

2.2.5 Summary

From the very beginning of photography many photographers were self taught, and learnt the craft, art, and the business of photography with the help of manuals, brochures and books. Some were apprenticed to working photographers in studios, or took lessons at established institutions. Authors like Hirsch (2000) and Frizot (1998), in particular, acknowledge the importance of institutions in the development of not only the techniques of photography but also in the way it has grown as an intellectual pursuit within society. Also of significance and of great relevance for this research, is the possibility that the methods of learning photography, in its first fifty years, could still be largely in use today.

2.3 Photography: teaching and learning in higher education

2.3.1 Introduction

As the history of photography education has not been fully researched and written (Newbury 2009), contemporary issues related to photographic education are best discovered in journals such as, the *British Journal of Photography*, *Photographies* and *Exposure*. As a rule, these journals do not often carry articles directly focused upon photographic education as their traditional content relates more to photographic practice, culture and personalities. However, 2009 seems to have been a watershed year with many journals running articles discussing the history and future of photographic education particularly in the United Kingdom (UK). The introduction of digital techniques and the demands to educate students towards vocational outcomes were making educators nervous as they struggled to contextualize these issues into increasingly expensive and diverse course offerings.

2.3.2 The contemporary discourse on photography education in higher education

A paper written by A.D. Coleman (1987)³ titled *Identity Crisis: Photography Education Today*, is in many ways as significant today as it was when it was first written. Coleman contextualizes many of the themes in this area of the research. His thesis hinges upon the comment by one of his higher education photography students, that his education had not equipped him with ‘employable skills that he could easily convert to a job in today’s labor (sic) market ... [m]y immediate response was that not only was this true but that it was as it should be—and that, if he’d expected otherwise, he was, like Humphrey Bogart in *Casablanca* “misinformed”’ (Coleman 1987, p. 1). Coleman (1987, p. 1) argues that vocational training was never the role of universities, ‘it has never been the function of universities, fine-arts programs, or undergraduate departments to *train* students in any practical skill that would automatically render them employable upon graduation.’

Coleman (1987, p. 3) discusses the original role of the university as ‘interdisciplinary community of scholars’, a place to study the philosophies and the liberal arts, the formation of trade guilds and their transformation into learning academies. He identifies the development of the polytechnics in France after the French Revolution, where the pursuit of archaic and speculative subjects, so loved by the aristocracy, were replaced by practical subjects like science and engineering. Coleman (1987, p. 11) states, ‘the thrust of the polytechnic posture was practical rather than pragmatic ... [i]n the arts, this meant the emphasis on architecture, industrial design, and other forms of applied art.’

Coleman (1987) concludes his discussion on the history of higher education by identifying the three principal contexts in which photography is taught today: the college or university, the art academy, and the polytechnic institute. Perhaps surprisingly, after his examination of higher education Coleman (1987, p. 12) still believes that ‘there is no formal course of study of photography today that offers the experiential intensity and craft grounding of the long-term master-apprentice relation.’ He believes that even the best polytechnics are failing to provide an adequate education.

Coleman’s (1987) conclusion is that photography educators are confused because educators

³ Originally a speech delivered at the Second Annual Photography Congress of the Maine Photographic Workshops in Rockport, Maine, Monday, August 17, 1987.

have lost sight of the true intent of their institutions as ‘the demands of vocational training are increasingly being put upon university, art-academy, even junior-college and adult-education programs’, with no benefit to anyone involved (Coleman 1987, p. 13). Coleman (1987, p. 12) states that photographic education is in a bad state and getting worse; ‘[t]hose few who are truly educated in photography actually *earned* the education by piecing it together themselves.’ James Ian Nie (2011) offers a way forward in suggesting educators move beyond the outdated liberal arts agenda and embrace concepts and theories of practical application to the 21st century.

As early as 1987, Coleman is clear, higher education has a role which is at odds with the highly vocational nature of many courses. Almost 20 years later scholars like Williams (2009) reiterate some of Coleman’s arguments when discussing photography education, at a point when the realities of digital technologies are threatening to overwhelm traditional photographic sensibilities.

2.3.3 An Australian perspective

In the 1970s Michael Wennrich, a respected photography educator, identified a need to change photography education in Australia. He took a world view of the role of the technical photographer and implemented a strategy to teach world best practice. In a paper presented to the Photo Imaging Education Association (PIEA)⁴ titled *25 Years Working Towards Excellence in Photo Education at RMIT*, in 1998, Wennrich described the motivation and implementation of his new programme, which was at the outset, at least, vocationally based. Wennrich joined the staff of the Royal Melbourne Institute of Technology in 1972 and became course coordinator in 1973. He began a 25 year plan to increase the number of graduates employed in the industry. Wennrich improved student’s readiness for work by bringing students to an industry proficient standard of competence and creativity. Prior to Wennrich photography education lacked ‘real life experience and a hands on involvement’ (Wennrich, 1998). To this end Wennrich built a team to bridge the gap between the classroom and the industry, particularly in advertising and commercial illustrative photography.

In the following decade the team grew to represent an integrated group of teachers that

⁴ PIEA conference papers were never peer reviewed and are unavailable (personal communication with Alex Syndikas), and are now ‘defunct’ in Australia (personal communication with Clive Huchison)

embodied many aspects of the commercial industry and gradually graduates began to succeed, including overseas⁵. By the beginning of the 1980s Wennrich recognised that the industry was changing and that a new approach was called for, one that replaced a formalised commercial/advertising look—the RMIT look, with an approach that encouraged a different, more individual approach. In the 1980s new staff were employed and a new approach to the course was introduced which included broader approaches to photography outside the strict commercial oriented boundaries. By the beginning of the 1990s ‘things were back on track’ (Wennrich 1998). Wennrich’s paper is significant because it is the only paper this researcher could locate addressing teaching and learning of photography in Australian Higher Education. The paper is largely an opinion piece with little evidence being offered to support his views other than a list of successful graduates, but due to his high reputation within academia his views have merit.

2.3.4 Contemporary perspectives: a radical rethink

In 2009 the discourse on photography education became very active, partially in Great Britain. Photography educators were generally concerned with the place of photographic education in universities and ‘the modes and practices of photography and its transformation in a network digital world, the politics of education, and the contemporary challenges faced not just by educators but also by students and graduates’ (Newbury 2009, p. 117). The key questions addressed are the purposes of photography education and the impact of new technologies. Rubinstein (2009) suggests that photographic education has no answers to new media culture and believes that photographic education is clinging to irrelevant historic models. Rubinstein believes that the teaching, making and interpretation of photographs has ‘never seemed more redundant and obsolete than in the present moment’ (2009, p. 135).

Rubinstein’s comment may have provided the answer to the question of, why there was an outbreak of published material in 2009. After a decade of digital technology many were questioning the whole notion of digital media and its relevance to photography. New curricula were being developed in many schools in different parts of the world, for example the Corcoran College of Art + Design in the USA. Their aim was to help students who may become photographers, designers or fine artists, develop a sensibility about ‘the traditions, processes and contemporary practices of photography and its allied media’

⁵ Wennrich includes a long list of successful students many of whom have had overseas success.

(Grundberg & Smigrod 2009, p. 33).

Williams (2009), Bainbridge (2009) and Gavin (2011) all express concerns for photography graduates' preparation for the industry as is exemplified in the Williams (2009, p. 127) quotation:

[r]elations between industry and photographic education are somewhat troubled it would seem. We produce too many would-be photographers and they are ill-prepared for careers in the industry ... graduates are often ill-prepared to make the transition into their future careers of whatever kind and or too long we assumed that producing interesting practice is enough without giving them the strategies to capitalise on it.

However true that view may be, it is not new, '[t]here have always been more people wanting to be photographers than there are jobs for photographers and an academic qualification has never been a ticket for a job' stated John Tarrant (2009, p. 10) in a letter of reply in the 15 April 2009 issue of the British Journal of Photography. Even so, Williams (2009, p. 129) believes arts photography students and others,

... are as in need of a "vocational" element to their education as commercial photographers. In all cases, they need a realistic set of strategies to make their way in a chosen career, whether it is through business advice, internships and assisting, entering competitions and awards, or applying for bursaries and residencies.

The face of photography education is changing in the UK. An increasing number of alternative courses are now being offered that are shorter than university degrees (Gavin 2011). Universities now offer the vocationally based Foundational Degree in Arts (FDA) which is a two year qualification of 'academic and work-based learning through close cooperation between employers and program providers' (Gavin 2011, p. 82). The FDA programme can also embrace a paid internship opportunity, while the apprenticeship model is becoming a popular choice, furthered by Skillsets support. In recent years, Skillsets have redeveloped its advanced apprenticeships in Photo Imaging for young people.

What may now be under challenge is how universities see their place in the world of new media and the creative industries. Newbury identifies the four dominant British philosophical photography paradigms. He believes that four dominant traditions 'continue to shape the photography curriculum in Britain.' These are:

the creative tradition, with its basis in romantic landscape photography; the photo-theory tradition, based initially in London; the documentary tradition,

... and the commercial photographic training tradition, which largely turned its back on theory and remained in the many diploma courses which had until that point dominated photographic education (2009, p. 119).

Newbury (2009) is optimistic about the future so long as educators realise that photography is now, more than ever, mass culture. Any attempts to build protective walls around the concept of professional photography are doomed to fail.

Williams (2009) discusses the implications of teaching digital techniques at a stage when she is still considering the ramifications of moving courses away from analogue practice. The dilemma is to retain the traditions of the *photographic* while developing 'theoretical models that allow us to address the mutability of the photograph in digital culture' (Williams 2009, p. 131). The aim should be to prepare students for the inevitability of technological change and whether this means retaining specialisms or merging courses and media.

Rubinstein (2009) does not believe traditional models, as described by Newbury and Williams (2009), have any relevance at all to new media for example, the digital culture. Rubinstein (2009) does not have confidence that there is any future in clinging to those historic models asserting that photography is now in the hands of everybody and that 'nothing will change in the world of knowledge if there are no more photography graduates' (2009, p. 136). He argues his contentious view, asserting that 'photography education has a different goal which is to educate in the creative use of the medium, to provide a critical framework for the interpretation of creative images and to further visual literacy' (Rubinstein 2009, p. 136).

Rubinstein (2009) is very critical of the way educators have embraced digital technology. He believes educators have to reinvent curricula into what he calls the 'emerging culture of image studies' (Rubinstein 2009, p. 138). He is scathing in his view and sees that the digital image is elusive and constantly open to change, and that all criticism based on past methodologies are no longer appropriate. Rubinstein (2009) feels that educators have misinterpreted the digital image and reduced it to a study of technology and believes that photography education today is an 'anachronism, [that] can no longer offer a platform from which photography can be correctly accounted for' (Rubinstein 2009, p. 138).

Rubinstein (2009) sees the future of photography education breaking away from the concept of the photograph and adopting the culture of *new media*. This entails the engagement of image creators and users with the ways and ideologies in which images are made,

interpreted, distributed and stored.

2.3.5 Burnett: A view of the future

In 2009, the watershed year for the publication of photography education papers Ron Burnett takes a critical look at the future of art schools⁶, many of which would conceivably contain photography programmes. This, in many ways, summarises many of the themes raised by previous authors. In the opening of Burnett's European League of Institutes of the Arts (ELIA) proceedings paper (2009) titled *Art Schools, Culture and Cultural Change*, he describes art and design schools in the twenty first century as places where '[t]he creation, study and communication of culture and cultural forms' (Burnett 2009, p. 32) are the central reason for their existence. He contrasts this to the practices of the latter part of the twentieth century where schools were focused on craft based vocational skills. The author characterizes modern art and design schools as having transformed into multi-discipline clusters offering broad based courses that prepare students for active roles in the creative sector.

Burnett (2009) points out that these new schools, offering a diverse range of cultural activities, are now seen as catering to the needs of what are described as the cultural industries. Burnett prefers the term cultural industries as it explains possible benefits of a creative culture to society but he questions if there is any natural link between the creative culture and industry. While he acknowledges artists create works, and that there may be subsequent benefits, he does not see this as a necessary part of creative work or its output.

One important benefit Burnett (2009, p. 33) sees in the adoption of the term 'cultural (creative) industry', is the notion that research is critical to the artist, and the benefits extend to a wide range of human activities. He contends that artists and designers are 'perhaps among the most sophisticated researchers that our society produces' (2009, p. 33). But again, Burnett warns against equating learning in the creative industries with an economic benefit or believing that creativity and some measurable output are joined.

Burnett (2009) argues that art schools were never created to provide a career that satisfied the needs of industry. Artists have always provided a critical perspective on society and culture and that has been highly valued. The adoption of terms like cultural industries reflects the state's views that funding should be measured against learning that can be

⁶ Not specific to one country.

‘categorised and valued’... so much so that curricula are being designed to follow the ‘trends and directions of the economy’ (Burnett 2009, p. 33).

Burnett concludes his paper by stating that he is convinced that most schools of the arts are conservative places where technique and craft are often favoured ahead of critical analysis. This reflects Rubinstein’s (2009) criticism of the relevance of traditional photography teaching under the new paradigm of digital technologies. It is also aligned with Coleman’s (1987) view that the university is more than a vocational training institution.

2.3.6 Summary

Papers by Rubinstein (2009), Newbury (2009), Williams (2009) and Burnett (2009), among others, bear testimony to the wide variety of opinion that surfaced mainly in the latter part of the first decade of the 21st century; the decade that saw innovative digital technologies emerge and become the dominant platform for photography. Perspectives varied widely between the extremes of a largely traditional approach (Newbury 2009) and creating a new curricula or possibly none at all (Rubinstein 2009). This process is ongoing as digital photography and its teaching continues to evolve and tries to find a comfortable place in the creative industries and higher education curricula.

2.4 A contextual framework of government policy and regulation for the teaching of photography into the future

2.4.1 Introduction

Government and university policies and regulations will exert a stronger bearing upon curriculum design and help shape the direction of higher education in Australia into the future. This is because government policy increasingly links the skills that are required to develop the nation’s progress and prosperity with funding. It is necessary to review some recent literature that addresses the future direction of higher education in Australia so as to better understand how this impacts upon decisions being made in arts education generally and on photography education specifically.

2.4.2 An Australian perspective

In 2002 there was a ground swell of academic opinion that higher education was in crisis (Pratt & Pratt 2002). This was attributed to government funding reductions in the 1980s and 1990s. In a recent report for the Grattan Institute titled *Mapping Australian Higher Education*, Norton (2012, p. 63) shows that this view prevails among academics:

[m]any academics believe that ‘academic standards’ are in decline—that courses are being ‘dumbed down’, or that it is becoming easier to pass or get high grades. In a recent survey, just under half of academics surveyed agreed with the proposition that ‘academic standards at my university aren’t what they used to be.

Norton (2012, p. 63) proceeds to challenge that perception arguing, ‘[there is] little published non-anecdotal evidence on academic standards’ and argues that quantifying standards has been quite difficult. He suggests standards are arguably not in decline.

In 2009 the Commonwealth Department of Education, Employment, and Workplace Relations (DEEWR) released a report titled *Transforming Australia’s Higher Education System (2009)*. This report is a response to the Bradley Review, and describes future funding and direction of higher education. The report states that,

[t]he tertiary education revolution will change and enlarge Australia’s economic potential ... [t]he government is proposing a landmark reform agenda for higher education and research that will transform the scale, potential and quality of the nation’s universities and open the doors of higher education to a new generation of Australians (Commonwealth of Australia 2009, p. 5).

The report also indicates the government’s intention to see growth in the number of 25 to 35 year old students qualifying with a bachelor or above level qualification rise to 40% by the year 2025; this will mean an additional 217,000 graduates (Commonwealth of Australia 2009).

Significantly, this report provides details about the implementation of a quality assurance and regulation framework for higher education, which is known as the Tertiary Education Quality and Standards Agency (TEQSA). TEQSA was established to provide a regulatory standards framework after persistent requests for a mechanism to demonstrate the quality of Australian degrees (Bradley 2008). The basic charter of TEQSA is to ‘ensure that domestic

and international students have better information about how our higher education institutions are performing and that taxpayers can see whether value for money is being delivered and the national interest is being well served' (DEEWR 2009, p 31).

TEQSA functions as a single national regulatory and quality assurance agency for higher education. The agency is responsible for the registration, performance and evaluation of standards of all higher education providers in Australia. These standards will be measured against Higher Education Standards Frameworks and all providers must meet the Threshold Standards to have their courses accredited. The *Tertiary Education Quality and Standards Agency Act, Explanatory Statement 2011*, states:

[t]he objective is to have a single regulatory body to register and evaluate the performance of every provider in Australia against the same set of standards. This will ensure consistency across the sector so that students can be satisfied that they will receive a high level of education at any Australian higher education institution (Explanatory Statement 2011, p. 22).

This of course applies to the creative arts programmes teaching photography.

One of the TEQSA criteria for accreditation of a course, with regard to such things as student learning outcomes, is that providers compare their performance with other providers and use 'regular, valid and reliable feedback from internal and external stakeholders to improve its higher education oppessions' (Threshold Standards 2011, p. 5).

The Australian Learning and Teaching Council (ALTC) was, in 2010, commissioned by the Australian Government to devise appropriate standards (for the TEQSA standards framework) for graduates in bachelor and masters by course work degrees in: creative writing, dance, drama, performance, music, sound, screen, media and visual arts including photography. The specific aim was 'to define minimum discipline-based learning outcomes as part of the development of Learning and Teaching Academic Standards' (Holmes 2010, p. 3). To this end a government funded project enabled the ATLC to,

define minimum discipline-based learning outcomes...designed to ensure that discipline communities would define and take responsibility for implementing academic standards within the academic traditions of collegiality, peer review, pre-eminence of disciplines and academic autonomy (Holmes 2010, p. 3).

One important aspect of the TEQSA benchmarking process was the referencing of academic standards that have been in operation for some time in the creative and performing arts

in North America, Europe and the United Kingdom.

In a report on the future of higher education in Australia by Ernst and Young titled *Higher Education and the Power of Choice* (Rohan & Bokor 2011), the authors predict that Australian universities of the future will face new challenges if they wish to survive. They state that the higher education sector will need to restructure and focus on their strengths as the paradigm of providing a wide range of products (courses & programmes) is replaced by a demand driven model, where institutions with the strongest brands will take market share (students) from others. Rohan and Bokor (2011) stress that universities will need to become increasingly aware of their core strengths and their target markets as they face increasing competition for students in a global market with increasingly well resourced OECD standard institutions. They suggest that merging and restructuring or divesting some capabilities and assets may be necessary for some institutions to continue.

There is no professional accreditation for photography courses in Australian higher education, as is the case, for example, in medicine and engineering. The literature shows that photography education within higher education will be more rigorously scrutinised in the future and that funding for undergraduate education may be more closely linked to the skills needs of industry. TEQSA standards will make course offerings more comparable across Australia. The Ernst and Young report (2011) points out that universities will need to change and create marketable niches in order to survive. This may affect photography education in the university sector.

2.5 Entrepreneurship education: more than business and marketing

2.5.1 Placing entrepreneurship teaching and learning in perspective

Entrepreneurship education is increasingly seen as a way of better preparing students for their life beyond graduation. It is likely that many photography graduate will wish to become freelance small business operators (Bainbridge 2012). The road to success is risky, and many will fail (Peacock 2000). Success, if it is to come, will not be over night and the success of small businesses in the short to medium term is frighteningly low.

Entrepreneurship and Small Business (Shapter and Volery 2007) is an authoritative manual that covers many topics and is written ostensibly for small business operators. The book is a good example of many similar texts and uses a very broad definition of entrepreneurship; that of individuals identifying an opportunity and commercialising it. Henry (2007) in *Entrepreneurship in creative industries: An international perspective*, addresses entrepreneurship as it concerns the poorly defined creative industries and includes case studies that address macro entrepreneurship on a global scale. Importantly this text addresses the value of embedding entrepreneurship into higher education curricula in the United Kingdom. On a similar theme, a paper by Raffo, Lovatt, Banks and O'Connor (2000) *Teaching and learning entrepreneurship for micro and small businesses in the cultural industries sector*, investigates micro entrepreneurship as applied to providing skills to small business owners in the cultural industries in the United Kingdom.

Relevant to EE in higher education in general is *Teaching Entrepreneurship to Undergraduates* (Jones 2011). While generic in nature, Jones approaches the subject from the desire of empowering students to take control of their learning and develop their skills as entrepreneurs. Jones is alert to the difficulties of implementing EE in institutions, as it is seen by some educators and administrators as a threat to existing orthodoxies. Jones' book is open ended and non-prescriptive. While it suggests many concrete approaches to EE Jones (2011) places the success of this emerging teaching and learning squarely at the feet of individual educators concerned about student outcomes and graduate career opportunities.

Entrepreneurship education's traditional home has been in business schools and has its roots in the United States in the 1970s (Jones 2011). It then migrated to the United Kingdom, Europe and other countries including Australia. Jones (2011) points out that there are great variations in approaches to EE and these tend to be by institution rather than by country. More recently authors like Bridgstock (2012) and Beckman (2007) are developing an EE discourse for the creative arts. While there are many generic learning outcomes attributed to EE, Jones' survey of educators revealed that the purpose of EE was that of preparing graduates for what lies beyond their university studies (Jones 2011).

Jones (2011) is encouraging educators to create their own EE curricula that are unique to their own teaching setting, for example photography. Bridgstock (2012) and Beckman (2007) also believe that EE in the arts is different to that of business because artists have different aims. Bridgstock (2012) argues that the differences in the needs of artists and

business graduates mean that entrepreneurship curricula cannot simply be imported from business schools.

Elliot McGucken (2011, p. xiii) say that '[a]rts entrepreneurship is for those seeking to make their passions their professions.' How then does EE fit into diverse higher education curricula? Without discussing particular disciplines, research at the University of Tasmania, (Jones 2011) into the value of EE, shows that graduates' greatest benefit was *self confidence*. Dempster (2011, p. 9) characterises entrepreneurship as a 'disposition that is adventuresome, risk taking, self motivated, un-rule-bound, visionary, and optimistic'; these are certainly attributes that would lead to self-confidence.

Dempster (2011, p. 9) states that EE should be included in the curriculum in a way that 'inculcates and exercises students' entrepreneurial skills and attitudes rather than layering on just another "indispensable" skill'. However, Beckman (2011, p. 25) warns that EE has yet to 'develop effective language to support our efforts—much less articulate outcomes.' So while Jones is developing some empirical evidence about some outcomes at his university, this may not be the case elsewhere. In fact, outside of business schools, EE is still in development stages across many arts disciplines and there is no evidence of any specific EE curricula being designed for photography education—yet. In fact, Bridgstock (2012) does not see much evidence of EE being implemented in Australian higher education.

Key scholar Gary D. Beckman edited *Disciplining the Arts: Teaching Entrepreneurship in Context*, where the premise that 'entrepreneurship and the arts are inseparable', (McGucken 2011, p. xii) is firmly established at the outset. While Beckman (2011) acknowledges a nexus with business schools, he importantly identifies that arts educators need to identify the social and economic environments where graduates will seek employment. He also warns against the fading ideas of arts entrepreneurship as a vocational model.

Arguably a need exists to inculcate EE into photography students' skills set. Williams (2009) sums up the dilemma facing many graduates by arguing that it is not enough to provide students with interesting curriculum options without giving them the strategies to capitalize on their learnt skills. But it is more than a dilemma for students. Ralph Brown (2007, p. 126) points to the 2003 *Lambert Review of Business-University Collaboration in the United Kingdom* which showed that employers from the creative industries were 'particularly concerned' about the quality of courses and whether 'they were properly equipping students for careers in the creative industries.' Brown (2007, p. 126) points out

that most arts students will be self employed and that, as students, most of the generic enterprise teaching material they encounter is aimed at business students and is ‘not relevant to the work they want to do.’

Many of the themes discussed in the foregoing references are brought together in *Not a dirty word: Arts entrepreneurship and higher education*, (Bridgstock, 2012) and “*Adventuring*” *Arts Entrepreneurship Curricula in Higher Education: An Examination of Present Efforts, Obstacles, and Best Practices*, (Beckman, 2007). Both authors premise is familiar; creative arts students, who mostly become self employed freelance artists, are poorly served with EE which is still hindered by educators confusion and well established traditional ties with business schools. Bridgstock (2012) identifies three stages of scaffolded EE. The first stage identifies students’ core career interests, abilities and values and coupled these with learning experiences relevant to their intended professions and preferably in authentic industry settings. The second phase involves learning about all the enterprises opportunities that exist in their areas of interest. These could be commercial, social or cultural in nature, and then the students are taught how to pursue them. Finally students are assisted by staff and mentors in projects of their own that reflect real world career experiences.

Beckman (2007) has interviewed many EE teachers and found that many favour experiential education and often involve students in controlled entrepreneurial simulations. He advocates a context based curriculum which;

encompasses both skill-set acquisition (for-profit, nonprofit, basic business and communication literacy, and idiosyncratic professional development methods) and the contextualization of those skill sets through an understanding of arts policy, arts culture, arts management, and experiential opportunities’ (Beckman 2007, p. 98).

Beckman, like Jones (2011) believes that this approach will empower students in whatever direction their careers may take.

Bridgstock (2012) points out that artists’ career paths can be diverse and identifying entrepreneurial pathways at an early stage can be an advantage. EE in the arts is in its infancy but many scholars see it as essential for the long term success of graduates as they seek to contribute to society and fulfil their personal dreams. Photographers like most artists take time to establish a career, few would find employment upon graduating (Bainbridge 2012). The aim of EE is to, among other things, make those formidable first five years as productive as possible. With knowledge of entrepreneurial skills, students

are better prepared and have more confidence to take the initiative in creating work for themselves and in managing their own creative output (Brown 2007).

Not everyone believes there is a place in arts education for EE. This point is made by some authors including Gustafson (2011, p. 71) who emphasises the perceived dilemma by faculty ‘who sternly oppose the commercial debasement of their students’ pure and lofty preoccupations’. This is taken even further by Weatherson (2009, p. 51) who describes a disconnect between the core theories of entrepreneurship and the teaching of enterprise and professional development and to ‘hostility towards the term “entrepreneurship” by many academic colleagues.’ Similarly Nie (2011, p. 133) identifies the ‘innate suspicions’ that exists in the arts (and higher education) between a “pure” artist and an enterprising, entrepreneurial artist. These points illustrating misunderstanding of EE must be confronted in all contemporary EE discourse.

2.6 Industry research

2.6.1 The Australian context

The Ibisworld *Industry Report on Professional Photography in Australia* (Kelly, 2012) takes a comprehensive look at all aspects of the professional photography industry. The report identifies the main industry sectors and charts their growth against the performance of the Australian GDP. The report identifies the effects of the Global Financial Crisis and the reduced expenditure on professional photography as businesses sought to ‘minimize non-essential expenditure’ (Kelly 2012, p. 13). The report sites ‘a pronounced dip in the industry revenue, which is estimated to contract by an annualized 3.5% over the five years through 2011-12 to total \$800 million, down by 3% in the current year’ (Kelly 2012, p. 4). It quantifies the decline in the industry and identifies that,

the long-term demand for professional photography has been eroded by the widespread adoption of digital camera technology by consumers and amateur photographers ... [t]he advent of digital imaging technology has dramatically changed the way the industry operates, increasing the quality, value and range of services provided, but also exposing the industry to greater competition or substitution by amateur photographers (Kelly 2012, pp. 4,5).

This point is repeated throughout the report.

Of particular interest is Ibisworld forecasts of an oversupply of photographers for at least the next five years. This prediction will be particularly noticeable in the domestic sector as hobbyists and amateurs continue to have an impact on that sector. Ibisworld cites the ABS that the number of people who took up photography as a hobby doubled between 2004 and 2007, to 638,600 persons (Kelly 2012, p. 6). The report also suggests that this trend has continued over the last five years and there will be an oversupply of photographers over the next five years, 'particularly at the retail end of the market' (Kelly 2012, p. 8). Ibisworld predicts that prices for high-quality digital SLR cameras will continue to fall to meet the needs of amateur photographers and this will in turn reduce the demand for professional photography services as the perception grows that amateurs with little training can produce acceptable photographs (Kelly 2012). The report also states that amateur photographers are facing competition from 'a significant number of new photography graduates who come into the market each year' (Kelly 2012, p. 6). It is likely that the opposite perspective is a better description of what is really happening, but both scenarios are contributing to the over supply of photographers.

The Ibisworld report (Kelly 2012, p. 18) identifies seven key factors for success in the professional photography industry, these are:

- the ability to offer digital services and video as well as still photography
- having a well-designed website and using social media
- finding a niche market
- operating in new urban centres where there is likely to be a high demand for wedding photography
- having a full range of quality equipment
- providing a high quality product
- having good communication abilities.

Many of these key factors identify an important justification for the introduction of EE into photography curricula. For example the report identifies a need for marketing skills which could include a web site and social media presence.

The only reference to tertiary education in the report, other than graduate numbers, refers to the fact that having an outstanding portfolio is regarded by industry as more important than qualifications (Kelly 2012). Kelly (2012) claims that many wedding photographers are qualified photographers who left their previous employment in order to start their own practice, but this is somewhat ambiguous and the basis of this supposition is unknown.

Overall the Ibisworld report is an excellent resource to obtain key insights into the

Australian photography industry while making the findings relevant to the wider Australian economy. There are however many comments within this report that, while plausible, are not supported by evidence. Some comments appear anecdotal and are possibly derived from one of their acknowledged sources, the Australian Institute of Professional Photographers. Nevertheless this report will act as a high-quality source in cases where claims are supported by empirical data and which can be used to validate the wider findings of this research.

2.7 Innovation and long wave theory as a context for understanding the current state of education and the industry

2.7.1 Evaluation of the texts

Innovation theory is studied briefly so that the significant developments in technology that have brought photography into the digital age can be assessed historically in an economic context. It is by understanding the theory that explains the great industrial waves of change that the present innovations in photographic technology can be put into context. Bradfield Moody & Nogrady (2010, p. 7) note that the ‘tide of progress’ has progressed in wave-like cycles since the Industrial Revolution. The ebbing and flowing of these waves are known as ‘long waves’ of innovation. These long waves of innovation transform societies and economies ‘almost beyond recognition’ in half-century cycles of ‘disruption and opportunity’ followed by saturation and downturn (2010, p. 7). It is not a coincidence that the changes to imaging technology are causing significant changes within the photography industry and in photography education.

Three works were considered for this review: *Kondratieff Waves as War Cycles* by Joshua S. Goldstein (1985), the authoritative *As Time Goes By*, by economists Chris Freeman and Francisco Louçá (2001) and *The Sixth Wave* by James Bradfield Moody and Bianca Nogrady (2010). *As Time Goes By* begins with economic theory however, in the second part the theory of long wave theory is developed along side a fascinating history of industrial and societal development since the Industrial Revolution. Goldstein⁷ (1985) confirms the existence of these 50 year cycles but traces them back to the 16th and 17th centuries. He also prefers the waves to be identified as political-economic in nature because of the

⁷ Goldstein identifies the existence of four similar theories describing similar economic cycles.

effects of wars between nations.

Bradfield Moody and Nogrady (2010) identify the five major waves:

- 1 Innovations in cotton and iron production and improvements to water power between 1780 and 1815.
- 2 Railways, steam power and mechanization between 1848 and 1873.
- 3 Steel, heavy engineering and electrification and chemical industries between 1895 and 1918.
- 4 Oil, cars and mass production between 1941 and 1973.
- 5 The information and communication technology wave which began in the 1980s⁸. All the periods of innovation are described within in a context of economic and social change.

Of great relevance to this research is Freeman and Louçá's (2001, p. 238) observation, one that summarises the innovation wave effect on societies generally but mirrors the effects of digital technology on the photography industry and the provision of skilled imaging professionals:

[t]he recurrent effect is a pervasive pattern of structural change, but the industries and occupations most affected will be different in each case. Obviously also, the new industries will be quite different. All this means that increased structural unemployment is likely to be a major change in the conditions of employment. A mismatch in the skills profile is likely to be widespread ... institutional change, technological change, transition, and crisis: this is what real-life economics is all about.

As described by Freeman and Louçá (2001) a mis-match of skills, unemployment and crisis in the industry are significant elements within the context of this research. Long wave innovation theory sets up a valid explanation and context for the disruptive effects of digital technology innovation on industry and society. It is possible that the industry has almost passed through the stages of disruption and frenzy and is in a period of increasing equilibrium, but certainly not one of full maturity.

2.8 Summary

This review of literature demonstrates that people have learnt photography in similar ways since its inception and with each innovation photography has become easier and more accessible to users. This is illustrated in many of the excellent texts that have been written

⁸ Goldstein is sceptical about the nature of the post world war two waves.

on the history of photography. Just as clearly is the obvious lack of material describing, in any detail, how photography was actually taught, particularly in recent times. It is only in the last few years that scholars have begun critically analysing the teaching of photography in higher education.⁹ The majority of cited articles were written in or about 2009, which appears to be the pinnacle of confusion about what direction photography education should take and it was impossible to separate the state of the industry and the discourse within higher education.

Digital photography has changed photography forever and photography is now more popular and accessible than ever before. Consequently the Ibisworld report into the photographic industry in Australia shows an industry in decline. In this context EE has attracted growing interest. The authors are in agreement that entrepreneurship skills are now necessary to enable graduates to make the most of their education in employment in a challenging market place. Entrepreneurship education is an emerging field of study and the authors believe that its introduction into curricula of creative arts and photography education is difficult and must be tailored to meet many competing criteria. While not all teachers believe there is a place for EE in creative arts curricula, there are now some scholars who are developing models relevant to their own disciplines.

Government agencies are requiring higher education policy to reflect new quality assurance standards based on TEQSA framework guidelines. How this will affect photography education is as yet unknown. While individual schools will wish to maintain their autonomy and unique perspectives on student learning and their relationship to the industry it is possible that funding may be tied to skills required for economic growth. This means creative art schools teaching photography may have to justify which and how graduate skills are developed in terms of national workplace skills requirements. In future schools may no longer be able to justify graduating photographers where no demand exists.

The means of creating an electronic image has become almost frighteningly (for professional photographers) or delightfully easy (consumers). Educators have a challenge to remain relevant to an evolving industry. Some may wish to perpetuate former paradigms, including the rich pedagogical philosophy of higher education. However others will strive to remain relevant in other ways as they respond to the needs of industry. Ultimately the most important outcome is ensuring graduates are well equipped to exploit all possible opportunities and can therefore find fulfilling employment and a valued place in society.

⁹ D.A. Coleman is a notable exception.

CHAPTER 3

The mixed methods model and the quantitative first phase

3.1 Paradigm decisions influencing the research methodology

Before discussing the methodology in detail it is necessary to mention the underlying philosophical framework that forms the foundation of this research¹. Researchers including Creswell and Plano Clark (2007) describe this as a *world view* or a *paradigm*. Mackenzie and Knipe (2006, p.2) state that '[w]ithout nominating a paradigm as the first step, there is no basis for subsequent choices regarding methodology, methods, literature or research design.' As Punch (2009) suggests, this is the theory about methodology and not the substantive nature of the enquiry. There are many definitions of a paradigm/world view that relate to the foundations of an enquiry so the following definition is chosen as a good working example as it is not overly simplistic nor complex; 'assumptions a researcher makes about reality, how knowledge is obtained and the methods of gaining knowledge' (Cresswell & Plano Clark 2007, p. 21).

Four notable world views or paradigms exist as frameworks with which to view research. It must be understood that these are not rigid but are constantly evolving. These are, according to Creswell and Plano Clark (2007): Postpositivism, Constructivism, Advocacy and Participatory, and Pragmatism. Punch (2009) suggests that some scholars now prefer two main paradigms: positivism and either interpretivism or constructivism. Each of these paradigms take a different stance on many of the fundamental constituents of the research and its methods. This research will adopt a *pragmatic* world view, a position that is well suited to mixed methods research (Creswell & Plano Clark, 2007). The particular constituents of the pragmatic worldview are summarised in Table 3.1.

¹ This underlies both the qualitative and quantitative methodologies.

Table 3.1 The Constituents of a Pragmatic World view. From Creswell Plano Clark 2007.

World view element	Pragmatism
Ontology (what is the nature of reality?)	Singular and multiple realities (e.g. researchers test hypotheses and provide multiple perspectives)
Epistemology (what is the relationship between the researcher and that being researched?)	Practicality (e.g. the researcher collects data by “what works” to address the question)
Axiology (what is the role of values?)	Multiple stances (e.g. researchers present both biased and unbiased stances)
Methodology (what is the process of research?)	Combining (e.g. researchers collect both quantitative and qualitative data and mix them)
Rhetoric (what is the language of research?)	Formal or informal (e.g. researchers may employ both formal and informal writing styles)

The overarching world view of this research is pragmatism, the *what-works* approach where substantive issues are the priority, not the methods used (Punch 2009). Pragmatism is now a widely accepted paradigm in mixed methods research, (Creswell and Plano Clark 2007 & Bryman 2007) and Punch (2009, p. 291) believes ‘it is the main one.’ The pragmatic approach prescribes that the research question ‘is of primary importance’ (Creswell & Plano Clark, 2007, p. 26) and should drive the research into whatever areas seem most appropriate and by what ever means. This is reflected in the epistemology element referred to above, that recommends the pragmatic method of data collection—the most appropriate method needed to collect the data required. For example, this research will employ different data gathering methods in the quantitative and qualitative phases.

There are some minor qualifications that need to be made about this researcher’s standpoint on the pragmatic paradigm as it relates to axiology. There are many opinions and values revealed in this study and all display some degree of bias. Importantly this was a concern when conducting the interviews in the qualitative phases. To better understand those biases it was necessary to place them within their appropriate context. Discovering an unbiased stance or value was more difficult as interviewees’ opinions and views on the world and on the choices they make are influenced by the context with which they are placed. Separating opinion from context, i.e. bias, was difficult therefore, the presentation of opinions that represent a wide variety of stances was important to gain a full understanding of the phenomena under investigation. However, carefully designed survey and interview questions helped reduce the unintended effects of bias.

3.1.1 The mixed methods approach

Mixed methods research combines the collection and analysis of both quantitative and qualitative data into one empirical study. Mixed methods research integrates the strengths and minimizes the weaknesses of both qualitative and quantitative methods. For example, Creswell and Plano Clark (2007) suggest quantitative research may be weak in understanding the contexts and situations in which people respond to questions about certain phenomenon, and as quantitative research is primarily about numbers, participants' explanations are not heard. Qualitative research may be seen as deficient because personal interpretation may introduce some interviewer bias and it may be difficult to generalize small samples to larger population groups. Mixing research methods is seen as a way of improving some research outcomes as it 'provides a better understanding of research problems than either approach alone' (Cresswell & Plano Clark 2007, p. 5).

Historically there have been many different names given to studies which combine both quantitative and qualitative research methods. Punch (2009) suggests that recently there has been agreement on the use of the term mixed methods as an overarching expression that describes the many ways of combining, linking and integrating various methods. However, mixed method research is now seen as a distinct and increasingly popular form of research (Punch, 2009). Creswell and Plano Clark (2007), also explain that there has been much discussion about the names given to mixing methods of research over the last 50 years but today it is commonly known as mixed methods research.

3.1.2 Mixed methods research questions

The overarching question that informs this research is: what is the alignment between photography teaching in higher education and the photography industry in Australia? This question was addressed from within the framework of a mixed methods design. That framework is connected at all stages by questions that address the overall research design.

Mixed methods research requires the adoption of specific mixed methods research questions '[b]ecause both quantitative and qualitative data collection are part of mixed methods studies, a specific question related to the mixing of the data can be useful (Creswell

& Plano Clark 2007, p. 105). As this research model is ultimately explanatory², the mixed methods questions address the connection and outcomes of the two-stages of analysis so that explanation building is developed in a logical and sequential way. The mixed methods questions go beyond the research question[s] and directed the resolution of the final data mixing and analysis. Without them there would not be a clear and logical path to the final mixing phase. These are examples of the mixed methods questions that were considered when designing the methodology:

- 1 To what extent did the case study findings support the quantitative analysis of graduate outcomes and work ready skills?
- 2 To what extent did the quantitative analysis of photography curricula in higher education reflect the case study investigation of the domestic photographic industry?
- 3 To what extent did the case study analysis of the importance of business and marketing skills reflect the quantitative analysis of higher education's attitudes towards these skills?
- 4 How did the views of survey respondents to the value of photography education align with the views of case study interviewees?

Connections must always be made between the data collecting phases so that the final mixing analysis can be logically addressed and integrated.

3.1.2.1 Questions for education

The question of why photographic educators teach photography the way they do is at the heart of the quantitative study of photography education in higher education in Australia. For example, are curricula designed for purely vocational outcomes or do they have deeper philosophical considerations related to the broader purpose of university education? The quantitative phase discovered the demographic information of who was teaching photography in Australia, including their range of experience. Questions were asked about the core aims of curricula, why photography is taught in a particular way and what is influencing teaching and learning and curriculum decisions. The study also established what teaching settings were being used, why certain pedagogies are chosen and whether teachers believe that the courses are meeting the needs of students wishing to enter the photography industry. Of particular interest was to discover if curricula

² The first two phases can be seen as exploratory in nature in many respects.

are designed to meet specific regional needs. The aim in this section was to explore the relationship between proposed educational outcomes of photography teaching in higher education and the needs of the professional photography industry.

While the majority of the questions developed for the survey of photography educators used closed-ended scalar types, there were also some open-ended questions. The open-ended questions were included when a more descriptive or elaborative response was deemed necessary or when an *other* numerical response was required.

3.1.2.2 Questions for industry

The theory to be explored in this section, and the one that goes to the core of the major research question, is based on the broader area of enquiry: to what extent do curricula in photography in Australian higher education meet the needs of students seeking a career in the professional photography industry? And, what are the major defining attributes, features and skills of a professional photographer? Those questions distil down to this overarching line of enquiry: are teaching and learning outcomes in higher education providing graduates with the skills that they need for a career in the photography industry? Is the relationship between success in industry and graduate outcomes inexorably linked? In other words, the broader research questions in the quantitative baseline stage of industry were aimed at discovering its current state, who was working in the industry and what challenges they faced—which include the introduction of digital technologies. It established in what sectors photographers were working, how they learned their skills and what they consider are the most important attributes to their success in the industry. Professional photographers were asked if they thought their education prepared them for the industry and if current graduates were adequately prepared to enter the industry. They were also questioned about their business and management skills and how they acquired those skills.

Domestic photography is a major part of the Australian industry and it is imperative to have a better understanding about this sector of the industry, so that it can be compared and contrasted with the curriculum offerings of photography schools. The study of domestic photography includes how people in this sector learnt their skills, the challenges they are now facing, and the attitudes of people in other sectors towards the domestic industry.

All photographers surveyed were asked about their involvement with professional

photography industry bodies. The aim was to gain a better understanding of their perspective towards organizations that purport to represent and assist them. Of particular interest was to gain an understanding of photographers' attitudes to the issue of the amalgamation of many of the seemingly fragmented organizations into one or two large representative peak industry bodies. Industry bodies already have an ongoing role in educating their members and this could well extend into an advisory role for curriculum designers in the future.

3.2 Mixed Methods Design

This section will introduce and explain the mixed methods design in further detail. There will be a discussion of both the qualitative and quantitative methods³ and their use in combination. Essentially, this research uses research questions to direct the collection of data, mostly by surveys and interviews. The collected data are then mixed or combined to produce evidence that assists in producing explanations and conclusions about each individual sector and about how the expectations of one aligns with the requirements of the other. In his introduction to research methods in education Punch (2009) stresses the importance of the methods chosen, flowing from and supporting the research questions being asked. Thus the dogmatic arguments about one method being superior to another are subsumed by the notion that the questions come first and then the best way to collect the data to prove or explain the question will follow naturally: section 3.2 will explain this assumption.

3.2.1 Framing the research project (visual model)

Figure 3.2.1 illustrates the mixed methods model as it is applied to this research. The model shows the two distinct symmetrical stages of the research and the two phases of each stage. Each stage begins with the collection and analysis of predominantly quantitative data, this is followed up by the collection of mainly qualitative data that arises from and is connected to the first phase data. This type of mixed methods design is called the *follow-up explanation* model 'where the researcher identifies specific quantitative findings that need additional explanation' (Creswell & Plano Clark 2007, p. 72). A final stage involves a descriptive mixing analysis that interprets and explains the analysis of the data from the two stages.

³ The qualitative methodology will be fully explained in chapter 4.

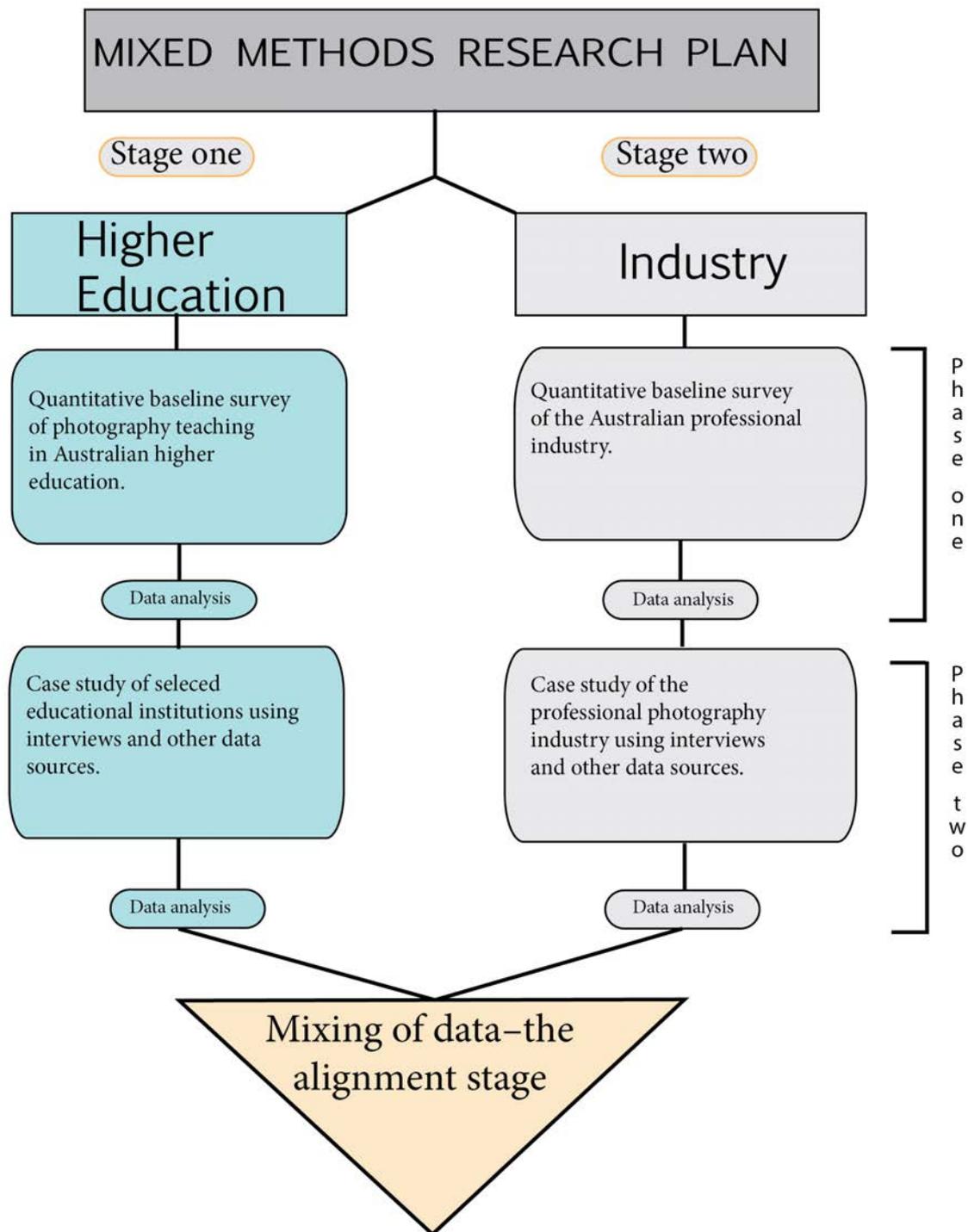


Figure 3.2.1 Visual plan of methodology.

In the first phase (education and industry), questionnaires seeking predominantly quantitative, explorative information were developed and sent to teachers of photography at Australian universities and to industry professionals within Australia. When analysed the collected data presented a basic picture of both sectors, but that data alone was unlikely to be sufficient to answer and explain the way the two sectors interrelate. Consequently in the second follow-up qualitative phase, case studies were developed around education and industry.

The second phase of stage one was a case study of photography teaching in Australian higher education. In this phase, predominantly semi-structured interviews were used in a case study using multiple embedded units of analysis (the teachers). The sampling procedure adopted in this phase was *purposeful sampling* (Cresswell & Plano Clark 2007) whereby participants were chosen who could provide insights into the key concepts being investigated.

The second phase of stage two was a case study of the photographic industry in Australia. It employed predominantly semi-structured interviews with volunteers identified in study of organizations and industry (plus others if a broader sample was necessary or other perspectives required). Interviewees were chosen who could provide insights into the key concepts being investigated. Interviewing was necessary because verification and more detailed information about participants' real life experiences at work and their attitudes to the value and role of education was required.

3.2.2 Data analysis in mixed methods research, an overview

Data collection in this study uses a sequential approach (Creswell & Plano Clark, 2007) where data was collected in stages and where the quantitative and qualitative data were related and not independent of each other. Greater weighting (emphasis) was given to the qualitative explanatory phases of the study and this emphasis will be apparent to some extent in the mixing chapter. This was a pragmatic decision (Creswell & Plano Clark, 2007) and was made because it was felt that this phase would yield the explanations necessary to make valid comparisons across the two stages of inquiry. The first quantitative phase informed the second qualitative phase and the analysis was used to address the research questions. The weighting decision should be determined by the research questions and the goals (Creswell & Plano Clark, 2007) and in this research explanations are major goals.

One of the key questions in a sequential design was deciding what results from the first phase would form the follow-up questions in the next phase; the case study interviews. The follow-up questions were designed by identifying such things as outlier and extreme cases, significant and nonsignificant results, demographic or geographic indicators or groups for comparison. These are examples and only by analysing the quantitative results were the set of follow-up options identified.

Regardless of the type of data (quantitative or qualitative) analysis included the following steps: preparing the data for analysis by presenting appropriate displays, exploring the data and identifying its relevance to the research question, analysing the data and identifying the emerging themes, representing the data analysis as answers to the research question and developing the emergent themes and validating the data (Creswell & Plano Clark 2007).

Data validation⁴ in sequential mixed method designs has its own set of issues. Of significance is the ability to draw meaningful and precise conclusions from the data in the study (Creswell & Plano Clark 2007). This is the inference quality, the ability to make inductive and deductive conclusions about the study. Some of the issues raised that are relevant to this study, and have been addressed in the design are: the selection of the same people for both phases of the study, the use of a large quantitative study and a small qualitative study, and choosing people in the qualitative phase who explained significant results.

3.3 The quantitative research phases

This section will explain the formative first phases of both research stages; the baseline surveys. Where necessary the section will describe the relationships that exist between each phase in each stage of the research. Each quantitative phase will be described in specific detail.

3.3.1 The quantitative baseline surveys

Each phase-one quantitative survey included an on-line, self administered questionnaire and thus there was no researcher present to assist and guide the respondent. Self-completion

⁴ Creswell and Plano Clark (2007, p. 146) consider validity and inference quality to be the best terms to use in mixed method design as it transcends both individual methods.

questionnaires offer an inexpensive method of gathering data—both in time and cost. This is a huge advantage over conducting labour intensive formal structures interviews (Sapsford 2007); this fits in well with the strategy of the phase one/two research design. It was therefore essential that both questions and the method of response were crafted to induce an accurate response and that respondents were actively encouraged to answer all questions.

In the stage one first phase, survey data was initially gathered from photography teachers in Australia universities. A survey describes a population; it counts and describes what is out there (Sapsford 2007). As the number of photography teachers at Australian universities is relatively small, a survey of the whole population is feasible. Then, by definition this survey could be called a census as it would include all known members of the population. Despite the relatively low numbers in the population, provided that the response rate was high enough the sample should have the validity to infer that the data will ‘give an accurate representation of the population it is supposed to represent’ (Sapsford 2007, p. 11); this is known as ‘population validity’.⁵ However, with this sample and the sample of professional photographers it is worth remembering samples do not have to be perfect to be usable (Blair, Czaja & Blair 2014).

The stage two phase one industry survey collects data on professional photography in Australia and concentrated on work practices and skills of professional photographers.⁶ The sample of professional photographers was taken from volunteering members of industry organizations and selected photographers from the Yellow Pages online directory for all states and territories. The James Cook University Human Research Ethics Committee authorised all surveys and interviews.⁷

3.3.2 Survey design, an overview

The survey design was guided by the *Tailored Survey Design* by Dillman, Smyth and Christian (2009). This design theory ensured that all the key aspects of the survey were planned from the start to suit the population to be sampled. The tailored method of survey

5 Comparisons can be made at this stage between the teaching methods chosen by different universities and if those choices are determined by the school or the teacher.

6 Comparisons at this phase of the study will be made between people working in different fields of photography. Comparisons can be made between their attitude to photography education. Importantly comparisons can be made between the learning outcomes attributed to curricula, and the reality of industry practitioners.

7 JCU Human Ethics approval No. H3156, 29-11-2008.

design is a scientific method having three distinct aims, described by Dillman, Smyth and Christian (2009, p. 16) as:

- 1 Reducing where possible total survey error (coverage, sampling, non-response and measurement error).
- 2 Developing an integrated set of procedures that encourage people to respond.
- 3 Promoting a positive social exchange.

There was one survey planned for the first phase of education but because of the requirement to reach as many professional photographers as possible, several identical surveys were planned for the photographic industry. The sample frames for industry included members of photography organizations, representatives of photographic organizations and photographers who advertise in the Australian Yellow Pages.

Despite differences in sample groups, the surveys shared many design characteristics recommended by Dillman, Smyth & Christian (2009). Strategies for reducing total survey error included carefully considered questionnaire design and implementation. Coverage error was reduced by implementing a survey that covered an adequate proportion of the survey population. Minimizing sampling error was achieved by choosing a large enough sample of the entire survey population. Reducing non-response rates was achieved by designing and implementing a survey that encouraged and made it easy for people to make a response. A well designed questionnaire provides quality data and reduces measurement error. In discussing the reduction of response error (Blair, Czaja & Blair 2014, p. 172) state:

[a] survey question contributes to response error when the respondent does not understand it as intended or when respondents do not interpret the question the same way. A well-written question should clearly and unambiguously communicate the information request to the respondent.

Social exchange framework theory (Dillman, Smyth & Christian, 2009), plays an important role in the design of the initial invitation to participate in the survey, and in subsequent follow-up contacts. Asking for *help* was one way of encouraging a response as people possibly felt a sense of reward by completing a questionnaire. This was reinforced by the feeling that respondents were members of a group who may benefit in some way by participating. The introductory letter and subsequent follow-up contacts emphasised the rewards to which respondents may be attracted. It also emphasised that the questionnaire did not take up too much of their time. Finally trust was established in a number of ways:

- 1 By stating that no names were be published in any document.
- 2 All electronic responses were encrypted to secure the data transfer.
- 3 The survey was part of a university study and had ethics approval.
- 4 The researcher had experience in the areas they work within.

Establishing trust is important as people are less likely to participate if they had any doubts about the authenticity of the study and the use of the data in subsequent publications. People were reassured that the survey had a positive function and was not just prying on their practice.

The *social exchange* aspects of tailored survey design ‘posits that people’s voluntary actions are motivated by the return these actions are expected to ... bring from others’ (Dillman, Smyth & Christian 2009, p. 22). This cost-benefit equation is not to be confused with an economic exchange where an economic reward is promised. Rather the social reward may be one envisioned by the respondent and be less tangible than a monetary reward, but never-the-less of value. When designing a survey to maximise quality responses the respondent should be able to see some benefit they will receive in the future, they must be persuaded that their time (the cost factor) invested in responding is worth it and this equation, cost/benefit is reinforced by establishing trust in the survey sponsor.

There are a range of social exchange strategies that can be used in a survey design and each needs to be considered in relation to the survey mode(s) chosen. In this research two self-administered surveys were designed and the effect of each design element that encouraged a social (cost/benefit) exchange need to be considered. The primary aim of implementing successful social exchange strategies into a tailored survey design is to bring the focus onto the needs of the respondent because the increasing use of the internet as a surveying tool is being offset by ‘...the growing problem of decreasing response rates and their effect on response error ...’ (Dillman, Smyth & Christian 2009, p. 40).

3.3.3 Questionnaire Development: design considerations

One of the major advantages of self-completion survey questionnaires is that they are a totally standardized measuring instrument because the questions are always put in exactly the same way for each respondent (Sapsford 2007). The phase one baseline surveys were primarily designed to gather facts rather than opinions so most of the questions were

closed-ended types with specific response options provided. Additionally, an occasional *other* options box was provided where it was thought respondents may wish to provide supplementary clarifying information. This gave participants the opportunity to enter a response that was not specified. Closed-ended questions are more likely to be answered than open-ended questions in self administered questionnaires (Dillman, Smyth & Christian, 2009). Most of the closed-ended questions were designed to encourage respondents to choose a response from a range of categories with no particular order, which is known as a nominal scalar response (Dillman, Smyth & Christian 2009). In all cases respondents were able to choose from multiple answer choices where the response was not just *yes* or *no*.

Closed-ended questions have their own set of design requirements that must be considered if the research is to produce quality data. In the quantitative phase many closed-ended questions were developed to measure such things as demographic information, teaching experience, and industry practice. Dillman, Smyth & Christian (2009), discuss some of the many design considerations in choosing this type of question; the most relevant are summarised below:

- When a question is included that forces a response to an *either/or* question make sure that both sides of the question are put. If that does not occur then there may be strong bias to the one side that was mentioned.
- When constructing lists ensure the answers are mutually exclusive.
- Asking respondents to rank long lists can be confusing; the longer the list the more confusing and the higher is the possibility of respondents skipping or avoiding answering.

These and other design recommendations were carefully considered when designing the questionnaires. These design considerations did, in many ways, make the design a simpler process as it added logic to asking questions that required answers amenable to being analysed.

Where occasional open-ended questions were used they are designed to let the respondent provide additional information beyond what may be possible if an ordinal scale was used on its own. Dillman Smyth and Christian (2009) suggest that people provide better answers to open-ended questions in the on-line environment than in traditional pen and paper surveys.

In order for a survey question to be successful it must be designed so that every person who is required to answer it can make a valid attempt at doing so, which may mean

simplification to the basic yes or no response on some occasions. To maximise response rates questions must be easily understood and not double-barrelled in nature, that is, there must be only one issue addressed in each question. If issues and concepts are referred to it is necessary to ensure they are simply worded and explained in complete sentences (Dillman & Smyth 2009).

All the above design points were intended to encourage the respondent to answer all the questions with non-ambiguous information. This was a process of refinement that continue through the development process and into the questionnaire testing phases.

How a survey looks has an effect on the quality of response rates. Visual design and layout affects respondents as they work through questionnaire information (Dillman Smyth & Christian 2009). The online survey company chosen for this research, Surveymonkey.com, provides a range of professionally designed layout templates incorporating engaging graphic design. The abundant platform templates are easy to custom design and include basic elements such as font style and layout. Surveymonkey.com also provide over twenty types of question formats from multiple choice and rating scales to open ended text. In this research a basic clean style was chosen for all surveys as the researcher was keen to avoid busy and possibly distracting design elements.

Surveymonkey.com was chosen because in past research on Problem Based-Learning (Gauld 2008) this media was proven to be successful and in sync with modern expectations of communication (Blair, Czaja & Blair 2014). A further advantage is that responses are delivered instantly to the researcher.

3.3.4 Pre-testing Survey Questions

The success of a questionnaire is measured by the response/completion rate to questions and the quality of the data collected. It is reasonable to assume that the better the question the better will be the data obtained from it. Blair, Czaja & Blair (2014, p. 175) advise that '[e]ach stage of the response process can potentially contribute to inaccuracy.' The process of pretesting survey questions in a close-to final draft form helped to identify problems that were not apparent to the question designer. Pretesting is, therefore considered one of the most important components of a survey (Blair, Czaja & Blair 2014). Dillman, Smyth and Christian (2009) consider that a variety of people be consulted and that these people should come from diverse of backgrounds. While this approach may be suitable for a

general survey this researcher considers it to be inappropriate for this survey because of the specialised nature of the subject. It was therefore considered more appropriate to field test the questionnaire using people with expertise in the subject areas.

Pre-testing should aim at identifying and clarifying the following potential problems:

- Respondents understanding of the meaning of each question.
- The clarity of the wording and sentence structure.
- The clarity of instructions to respondents.
- The adequacy of response options.
- The logic of the order of sections and questions.
- Design elements that may confuse respondents.

Pretesting procedures for both surveys varied in minor ways and these will be discussed in the following sections.

3.3.5 Questionnaire testing; the pilot stage

Pilot testing of the education and industry questionnaires was similarly designed to make the questions as robust as possible. A small number of teachers and photographers from various schools and industry were selected and asked to supply feedback on the questionnaires. The testers included experienced teachers and photographers of both genders from various locations. Three testers from each sector were fully briefed about the intent of the questionnaire but not coached into answering the questions in a particular way. The testers were supplied a PDF high level replica of the online questionnaire and asked to work their way through it at their own pace and record comments. In addition to selected testers the management committee of each of the industry representative bodies was sent the questionnaire and asked for comments and to suggest questions for inclusion in the final questionnaire.

Comments and suggestions made by the testers included the following indicative examples:

- The document is fine, I see no problems, the questions are in plain English, easy to read, and the options more than adequate.
- The only thing I could suggest is you could add a question about how many new student photographers are likely to be employed each year (it should be compared with the number of graduates).
- Define what it is to be a professional photographer.
- Percentage of time spent on photography and other employment.
- The numbering system is annoying.

- If you have tertiary qualifications have they been of benefit in the photographic industry?

These are just some of the suggestions that were offered and all were considered. Many were incorporated into the surveys either in whole or in part. This first stage of testing identified possible places where final participants may have encountered difficulties and the researcher collected useful suggestions for questions.

3.3.6 Cognitive testing

After pilot testing was completed and corrections and additions had been made cognitive testing was commenced. Cognitive testing is currently the most important way of testing questions and questionnaires (Dillman 2009). This testing was carried out by the researcher with two local professional photographers working in different fields and with two local photography teachers. Cognitive⁸ question testing is designed to determine whether respondents understand the questions and can answer accurately. An understanding is thus gained about how respondents think about the questions as they are going through the process of formulating their answers. Blair, Czaja and Blair (2014, p. 266) suggest it 'also has the potential to identify problems in other phases of the response process, for example, performance tasks, such as recall, or using response options.' Listed below are some of the processes of cognitive testing from a model developed by Torangeau in 1984 (Noël and Prizeman, 2010, p. 3):

- 1 Comprehension of the question.
- 2 Retrieval of relevant information from memory.
- 3 Judgement of information needed (using judgemental heuristics).
- 4 Formatting and editing of the response.

By listening to and observing testers the researcher discovered which questions were confusing and poorly understood, where formatting caused confusion and what questions were inappropriate in some way, for example patronising or irrelevant. Further cognitive testing exposed the tendency of respondents to supply a quick answer they thought was likely to please the researcher rather than investing time in thinking and supplying a quality answer; this is termed 'satisficing'.

⁸ Cognition is defined as 'the action or faculty of knowing; knowledge, consciousness', *The Shorter Oxford dictionary* (1992, p. 363).

Noël and Prizeman (2010) suggest two ways of conducting cognitive testing; the think-aloud method and the verbal probing at the end of the questionnaire method. The first method is considered to be the most difficult for respondents as they may not be proficient at verbalising their thought processes. The second method requires responders to have a good memory of all question and response options after the completion of the questionnaire. As with Noël and Prizeman (2010) this researcher chose to adopt a combination of both techniques.

Cognitive test evaluation sheets were designed to record testers' comments and an introductory explanatory letter was also read to them before questioning began. The chosen testers are considered experts⁹ in their field. Experts help identify inadequate questions and inappropriate response options, and comment on the possible lack of coverage of certain issues. Firstly testers were asked one or two practice questions to get them used to thinking aloud. For example, *how many cars have you owned?* Then they were asked to read the introduction letter and work their way through the questionnaire on a computer screen in a way that would simulate the final experience. At the end of each question testers were asked probing questions specific to the survey items with care taken not to push testers out of their comfort zone. The questions asked sought to follow up the testers' responses and also to confirm that the question achieved, in the mind of the tester, was that intended by the researcher. At the completion of the sessions the testers were asked questions related to the meaning and design of the questionnaire as a whole.

All testers were able to follow all questions and response options with ease. Considering that the questionnaires had already been well developed and tested, this stage finally confirmed the questionnaires readiness to be delivered to the sample groups.

3.3.7 Final pre-flight testing

This phase of testing required sending the hyperlink of the SurveyMonkey.com questionnaire to various people who were known to use different computer platforms, operating systems and browsers. For example, people were chosen who worked on Mac and PC platforms and who used different versions of operating system and different web browsers. Eight people were found and they were asked to test the link and report the results to the researcher. Past experience (Gauld 2008) suggests that there is unlikely to

⁹ Expert is defined as 'experienced, trained by practice, skilled', *The Shorter Oxford dictionary* (1992, p. 706).

be a problem for respondents accessing the questionnaire and no issues were discovered when testing this questionnaire.

3.4 University educators survey design

3.4.1 Identifying the sample

The aim of this phase is to survey as many teachers of photography at Australian universities as possible. Locating potential participants for the survey was achieved by searching university web sites. This is an extremely time consuming process as all sites varied in their layout and relevant information is often difficult to locate. However, this was considered to be the most efficient way of locating qualified participants and gathering their contact information. The teachers who were invited to participate in the survey were those shown as being directly involved with teaching photography. The final count identified 57 teachers at 15 universities for the survey (see Table 5.1.1).

3.4.2 Education Question Development

Broad question areas were designed to develop a comprehensive picture of the participants and schools in the Australian photography higher education sector, these were developed from the research question and then from the broad mixed methods question framework; these include;

- 1 Who is teaching photography.
- 2 Where it is being taught.
- 3 The context of the course.
- 4 The teaching methods and settings.
- 5 The aims of the course.

The questionnaire sought to qualify respondents demographically and to seek and identify what teaching methods and settings were used. Teachers were asked about the context of their choice of teaching methods. Finally, teachers were asked to comment upon whether the course they were involved with equipped students for a career in photography and whether

they identified particular needs that were relevant to their region. The questionnaire can be viewed as Appendix A.

3.4.3 Survey delivery and data collection

This section describes the methodology used in designing the survey delivered to the education sector which is broadly identical to methods used in the industry surveys and hence not repeated in that section.¹⁰

The methodology for the management of the survey's implementation was directed broadly by the work of Dillman, Smyth and Christian (2009), and Geff de Baux (2008) from the ABS. It is also similar in most respects to the self-administered internet survey model proposed by Blair, Czaja and Blair (2014). These methods are in broad agreement as to the necessity to carefully manage the contacts with potential survey participants so as to maximise response rates. Both methods require a researcher to send strategically timed and worded letters and postcards, or emails to a sample group. The intention is to introduce the research and its importance to the sample group and to prompt them to respond. The strategy includes a pre-approach letter, a letter of introduction with the questionnaire and a series of follow-up reminders. This strategy was broadly adopted in this survey but modified to reflect the electronic nature of the survey. However, as the survey population is small there was an opportunity to implement a hybrid design that included an electronic invitation and both electronic, post and telephone follow-up strategies. Only electronic methods were used in the survey of industry and organizations.

The broad method and timing of the contacts with the survey population was as follow:

- Week 1: Email letter of invitation with the link to the questionnaire.
- Week 2: Reminder by personal email.
- Week 4: Follow-up letter with a paper copy of the questionnaire.
- Week 6: Reminder phone call.
- Week 8: Final phone or email reminder.

This method combined the pre-approach letter and the letter of introduction, and was sent to all teachers as an email, this can be viewed as Appendix B. The *clickable* link to the Surveymonkey.com questionnaire was embedded in the email and clearly identified. The subject line clearly identified the nature of the email. In week two a follow-up email

¹⁰ Delivery dates will vary.

reminder was sent to non-respondents¹¹. This letter was brief and encouraged teachers to respond. Again it had a clickable link to the questionnaire. Dillman, Smyth and Christian (2009) show that with mail surveys a reminder post card will lift the response rate by 8%. Although they do not present evidence for a reminder sent by email, it can be assumed it will help in similar ways. In practice some difficulties were detected. Some emails bounced, which were resent after checking the address, while two respondents could not open the link. This problem was rectified by posting the respondents paper/hard copy versions, which were completed and returned.

The next reminder to all non-responders was sent in week three. This letter was based on the general example provided by de Baux (2008), which in his case included a paper copy of the questionnaire and a post-paid return envelope. There were two final attempts to get responses by telephone and email.¹² It is considered that most people eventually received the survey invitation and all had the opportunity to complete the questionnaire. Ultimately a total of fifty seven teachers were sent an invitation to participate in the survey and 30 responded, giving a response rate of 52.6 percent.

3.4.4 Analysing and presenting the data

The data from the survey responses were downloaded from SurveyMonkey.com website. Data are presented in two formats: the summary PDF and the detailed spreadsheet. The summary data is beneficial for establishing an overview of the data collected, such as number of respondents to individual questions, questionnaire completions and respondents names. The spreadsheets contain all the data including the responses to the open ended questions. These data can be imported into NVivo qualitative data analysis software to assist evaluation.

Charts and tables are used to display the data; they are the simplest way of representing data and are easily understood. Tables are used to display more complex data to enable apparent and actual associations to be determined (Sapsford 2007). That is when answers to several questions can be presented in one table to more simply display certain interesting associations. This may include showing associations by filtering answers to questions to reveal less obvious phenomenon. Answers to open ended questions will be analysed and

11 In the education survey names were known but in the industry surveys reminders were sent to all organizations and individuals.

12 The telephone was tried but intended recipients were indifferent to the research. Messages were left at four numbers, eleven numbers did not answer, there was one wrong number and only two attempts were personally answered by the intended teacher.

presented where appropriate.

As the respondents to the survey (census) of teachers represent over 50% of the survey population it is assumed generalisations should be reliable. However, overall numbers are low and there will need to be consideration given to this with each question ie. does the sample mean represent the population mean? These data will be displayed on all charts. The analysis and presentation of the data will be presented in chapter five.

3.5 Industry survey design

3.5.1 Identifying the sample

The *survey population* for which the results of this survey wish to generalise are the professional photographers in Australia. This includes all photographers deriving some income from photography and working in all fields. The ABS indicates 7696 people identified themselves as having the occupation of photographer in the 2006 census of Population and Housing (ABS 2006). The ABS figure for the 2001 census, using the same method, was 6845 (ABS 2006). It is interesting to note that in 2001, the ABS reported a substantial increase in people who defined themselves as photographers. The increase was 98% between 1993 and 2001 (ABS 2001). These figures show a substantial increase in (self-described photographers) correlating to the introduction of (widespread) digital photography.

The 2010 Australian Yellow Pages online directory lists 9136 entries for photographers in Australia and it can be assumed many photographers will have multiple listings for different areas of activity. The ABS figure is outdated and the Yellow Pages totals are confusing. Ibisworld (Kelly 2010) identifies 8330 *enterprises* involved in professional photography in 2009-10 falling to 6000 *enterprises* in 2011-12 (Kelly 2012). The exact number of participants is difficult to determine accurately because the definition of 'professional' is problematic and this will bias certain data bases.

To reduce sampling errors and to build response rates, two identical parallel surveys were conducted in this phase. As Sapsford (2007) explains sampling is conducted with the aim of obtaining valid generalizations to the larger population under investigation.

At the outset of this research it was considered that the best way to reach the greatest number of professional photographers was to approach the industry representative organizations and ask for their support. This was considered a far more efficient method than locating photographers individually. Also, by gaining the support of the industry organizations it would help to legitimize the survey in the eyes of the participants. This survey is known as the *survey of organizations*. The *survey of organizations* was later expanded to include the second *survey of industry* where the sample was drawn from the online version of the Australian Yellow Pages.

The following organizations were identified and subsequently approached:

- 1 The Institute of Photographic Technology (IPT), representing scientific other specialist photographers (membership numbers not supplied).
- 2 The Australian Institute of Professional Photographers (AIPP), representing a broad cross section of professional photographers including wedding, portrait, commercial and industrial photographers (approximately 3000 members).
- 3 The Australian Commercial and Media Photographers (ACMP), representing advertising photographers (approximately 200 members).
- 4 Free Radical, representing a broad cross section of photographers interested in photography as a creative art and not necessarily professional photographers (818 members).
- 5 The Media, Entertainment and Arts Alliance (MEAA), representing photojournalists (actual numbers/ members are not recorded as photographers).
- 6 The Australian Photographic Society (APS), representing photographic enthusiasts both amateur and professional (small organization did not participate).

The members of these organizations represent an extremely broad cross section of all working photographers in Australia. People represented include those working in photojournalism with newspapers and magazines, wedding and portrait photographers, advertising, commercial and industrial photographers, scientific and medical photographers and people practicing photography as a fine art. Notwithstanding the above estimates of the population of photographers in Australia, obtaining an accurate response rate to the survey of organizations is not possible. This is because membership numbers of some organizations were not available. However the total responses from organizations and industry surveys

can be measured against the estimates of the total number of photographers in Australia.

Letters were sent to the selected organizations with a request for assistance running a survey of their members. The letter explained the purpose of the research and the value it would be to industry; see example as Appendix C. The letter invited the organization to suggest questions for inclusion in the questionnaire. It was thought that this might identify lines of enquiry that had not previously been considered. A copy of the draft questionnaire was included. After considering the request for assistance the APS was the only organization that declined to help, stating they were only a small group.

There are many photographers who do not belong to an industry organization. Opinions from these photographers were considered important and their views were sought in a separate survey of industry. There are many reasons why a photographer may not wish to belong to an industry organization but regardless, as a group they represent a broad cross section of industry skills and locations. In fact, because organizations are to some extent special interest groups, the broad survey of industry may be a more representative sample. The analysis of data from both groups does show great similarities in responses between all organizations and the broad industry survey. The participants in the survey of industry were identified by searching online Yellow Pages directories in all states. A direct request to participate in the survey was then sent to 216 photographers, the questionnaire used was identical to that used for organizations.

3.5.2 Industry question development

The four broad areas of enquiry are:

- 1 Information about the respondent and their work practice.
- 2 The respondent's work experience.
- 3 Information about the respondent's education and training.
- 4 Information on graduate skills and attributes needed to succeed in the industry.

These broad question areas are designed to present a comprehensive picture of the participants in the Australian photography industry but excluding commercial information. Collecting commercial information was considered unnecessary and a likely source of

participants' anxiety and non-response. The social exchange strategies used in devising the questionnaire were identical to those used in the education section. These broad headings will provide the scope to open up the research questions, develop themes and direct the formulation of the interview questions to be used in the case study interviews. The final questionnaire in the SurveyMonkey.com format can be viewed as Appendix D.

3.5.3 Survey delivery and collection

The first sample frame, the list from which the sample was drawn, are the members of the major representative bodies of professional photographers in Australia. This is the *survey of organizations*. This survey gives all members of the population the opportunity to participate and all volunteers were accepted (Routio 2007).

In the first instance email letters were sent to the major representative organizations in Australia asking for support. Following acceptance, a formal email letter of introduction was sent to the contact person in the organisation (secretary, treasurer, president etc.) who was then asked to contact their members in the method best suited to their communication protocols. Web-site notifications were reliant on interested members logging on and choosing to complete the survey. The reminder protocol was modified from the model used in the survey of teachers as it was thought more that one reminder would be imposing too much upon the good will of the organizations. Organizations used the following methods to contact their members:

- Australian Institute of Professional Photographers (AIPP); notification on web site.
- Australian Commercial and Media Photographers (ACMP); notification on web site.
- Free Radical: notification in members electronic news letter.
- Media, Entertainment and Arts Alliance (MEAA); notification in members' news letter.
- Institute of Photographic Technology (IPT); direct to members in convenor's email.

Publishing the request to complete the survey was a staggered process and the sudden rise in responses received reflected the time when each organisation went 'live'. Within one week of the initial invitation the response rate had markedly reduced.

The second sample frame of professional photographers were all those who could be

identified through the on-line Yellow Pages directory. This was the *survey of industry* and while it may have included some people who belonged to organizations this could not be avoided and in any case it was considered unlikely anyone would bother to respond to the survey twice. Participants were identified and contacted directly, by using Yellow Pages contact information.¹³ They were sent an email of invitation, including a link to a questionnaire identical to the one sent to members of organizations but at a differently named Surveymonkey.com address. The invitations went sent out in batches over two weeks as the various job categories were searched and photographers identified. One reminder was sent out to all in the survey three weeks after the final batch of invitations were sent.

The final number of responses from the survey of organizations was 299. A response/ completion rate cannot be calculated because accurate figures on membership numbers are not available and in one case, not known. The MEAA does not break down their members' roles within the industry when they compile membership totals.

There were 94 responses to the Yellow Pages survey of industry from 216 invitations to participate; a response rate of 44%. There was a fast response to this survey as the invitations went out over one week. Several people in this survey replied by email and expressed their concerns with the state of the industry. This was encouraging as it confirmed a need for this research. After three weeks, with the total at 72 all photographers in the survey of industry were sent a reminder to complete the survey.

3.5.4 Issues of bias in non-probability sampling

In the surveys of organizations and industry it was difficult to detect participant bias, but running two identical surveys over two similar groups helped to mitigate the effects because sample numbers are greater. The *survey of industry* was a sample of a population sub-set of all photographers who advertised in the Yellow Pages on-line directory and made their email addresses available. This did not represent the entire population of photographers because many did not make themselves visible in this way.

In discussing non-probability samples Sapsford (2007 p. 90) states;

[p]roviding the nature of the sampling is made clear, the reader can make his or her own judgement of the extent to which the statistics are appropriate and useful as a guide to the population. Schofield (1993:99-100) suggests that [In

¹³ This usually meant locating and searching a photographer's web site to find an email address.

presenting standard errors in circumstances such as this, researchers are in fact saying: 'OK, I know I know I haven't got a random sample and so can't [sic] estimate sampling error. But this is the best I could do].

By running the same survey on two sub-sets of the sample population there is a greater chance of getting a significant result and reducing the effects of bias.

The sample profile of the non-random groups in the *survey of organizations* was determined largely by the organizations that elected to support the survey. Some groups are quite specialised while others have very diverse memberships. It is important to sample members from industry's representative groups for two reasons:

- 1 These groups include photographers who may not appear in a sample selected from the Yellow Pages. These groups will include employed photographers who do not need to advertise their services. It is considered that these people are essential inclusions in this survey and this methods seems like the most practical way of reaching them.
- 2 Members from these groups presented views to the study that were unique because they choose to belong to an organization for reasons that are explored in the case study explanatory follow-up.

It is important to recognise that this group represents a biased sample, only because the participants belong to organizations. It will however stand as a valuable resource of opinion from committed industry professionals. The data from this group have been compared to the data from the *survey of industry* for validity and comparison.

Coverage error is described (Dillman, Smyth & Christian 2009) as every person who is in the survey population as having a known non-zero chance of inclusion in the sample. The survey population of the *survey of industry* gave everyone on the list an equal chance of being included; a non-zero chance of being included. The *survey of industry* did however have a zero chance of including photographers who did not advertise their services in the on-line directory or make their email addresses available. Nevertheless this survey provided rich data with which to contrast, compare and combine with the *survey of organizations*.

The coverage error in the *survey of organizations* included professional and other photographers who belonged to the organizations that volunteered to support the research. It also included any people on the organizations' lists that could not be contacted by email or did not visit the organization's web site and volunteer themselves to participate.

Both surveys have validity despite neither having a non-zero chance of reaching all photographers. Comparative analysis helped to validate data and replication methodology ensured that the surveys could be reliably repeated in the future by surveying the same sample frames and analysing the data collected. As Sapsford (2007) explains for a survey to be valid it must be measured in a reliable way, reliability is crucial for validity.

3.5.5 Analysing and presenting the data

Although the data analysis and presentation for this phase is similar to the stage one quantitative phase there is a difference in this phase which is the existence of two samples, that were surveyed using identical questionnaires. Both samples were subsets of the population of Australian professional photographers. Analysing the data involved two approaches; firstly differences between the data were measured and secondly the data was combined.

Identifying differences in the data helped to explain possible biases between the two groups. Median values and their standard deviations among data are likely to be different across many questions and calculating these values identified the differences. Few statistics are known of the population of Australian photographers so it was difficult to make comparisons and show deviations by referencing a larger population.

CHAPTER 4

Methodology: the qualitative second phase

4.1 Introduction

Case studies have been used in the two second phases to explain and verify the data and explore theories that were raised in the quantitative phases. The second phase in stage one employs a single case study of Australian higher education institutions that teach photography. The second phase in stage two employs a single case study of the photographic industry. Each study has multiple embedded units of analysis (Yin 2009). The case studies complement each other and will add significant new data which allows further development of the explanations of the themes that emerged in phase one of the study. This will ultimately lead to the final mixing analysis of the quantitative and qualitative data.

4.1.1 Case study design

Case study protocol is the design management methodology that in many ways distinguishes a case study from a survey. A case study 'is more than a questionnaire or instrument' (Yin 2009, p. 79) and the protocol contains the instrument as well as general rules and working frameworks. The protocol has the purpose of increasing the reliability of the study especially if multiple case studies are used—in this research there are two. Both case studies will be essentially identical in design and are described as single-case designs with embedded units of analysis. For example, photography teaching in higher education represents the 'case' and the 'embedded units of analysis' are the individual schools who are represented by the teachers. In the study of the photography industry the industry is the 'case' and the 'embedded units of analysis' include the individual photography businesses, represented by the photographers.

In addition to interviews, other evidence relevant to each case is used, for example, published

course material from schools and industry analysis data. Also included in the industry case is input from photography representative organizations. Each case uses the same case study protocol and each case design will be described in its own section. The design protocol will be based on methodology designed by Yin (2009) which includes: an introduction to the case study and the purpose of the protocol, case study questions and evaluation data collection procedures including the development of interview questions and the methods of analysis. The major components of the case study protocol will be examined in the following sections but not repeated in the individual case descriptions.

4.1.2 Tests for validity in case studies

There are four tests that are commonly used to judge the quality of empirical research in the social sciences (Yin 2009). These tests are relevant to case studies protocols and will be discussed in following sections.

4.1.2.1 Construct validity

Construct validity is the first test and establishes functional methods of studying the particular research topic. In the data collection, this includes searching for diverse sources of evidence, establishing a logical sequence of evidence gathering and subsequently have respondents check for authenticity. In this instance some interviewees were asked to check transcripts for authenticity.

In this study there are multiple sources of evidence presented. The literature relevant to the case studies include texts on teaching and learning of a general nature and texts specific to teaching and learning in photography. Documentary evidence was sought that is relevant to policy, objectives, teaching and learning at the schools being studied. Supportive evidence was sought that added to the data collected by interview, which included statistical data on the industry.

Interviews at selected schools and from professional photographers and other industry professionals formed the major source of evidence. The interview questions for interviewees were developed from the research questions and guided by the information gathered in

first phases. It is quite proper to ‘surface’ these questions ‘after the survey or archival data has been analysed and the selection of the cases might come from the pool of those surveyed...’ (Yin 2009, p. 174). The interviews were guided conversations rather than structured queries (Yin 2009).

The reason for using multiple sources of evidence is to facilitate the convergence of analysis so that conclusions can be made about the phenomenon being examined; this helped to strengthen the construct validity. Maintaining a clear chain of evidence is vital to establishing a strong and reliable set of data. The chain of evidence allows the reader to understand where the evidence is derived and how it informs the case study at all levels. The chain of evidence does, in all cases, lead back to a case study database that contains the actual evidence as well as detail pertaining to the provenance of the evidence.

4.1.2.2 Internal validity

Internal validity is a series of tests that occur only in the data collection stage of the case study. As this is an explanatory study it is necessary to carefully examine causal relationships. If a conclusion is made that a (for example education) caused y (for example graduate outcome) without being aware of the effect of z (for example industry phenomenon), then the internal validity may be in question.

Another consideration when planning a case study is the practice of making inferences. The researcher must ensure that when something is inferred to have happened as a result of an occurrence, the possibility that, another unknown occurrence caused the event, must be considered. Both these considerations of the analysis of data require certain logic to be observed. In the first instance the research questions and proposition should assist in identifying relevant data and eliminating less useful data. In this research the analysed quantitative data from the first phases is used in the interview phases that are set in individual schools and the industry. The case studies will have deliberately used both quantitative and qualitative data.

Another tactic that was employed to maintain internal validity was to use pattern matching in the mixing analysis stage. The particular type of pattern matching used is called *explanation building*. Yin (2009, p. 141) says phenomena is ‘explained’ by stipulating the

presumed causal links as to ‘how’ and ‘why’ something happened. The difficulty in this research was the causal links could sometimes be difficult to identify. For example, it may be difficult to measure whether certain curricula choices lead to certain student outcomes in the long or short term, but there may be a strong theoretical reason that would help to verify and explain the phenomenon. The explanation building process occurred across both case studies and mixed analysis helped to explain and build emerging themes and ultimately answer the research questions. It can be possible to predict a pattern that could follow from a research question and compare it with the empirical evidence.

4.1.2.3 External validity

External validity refers to the ability for generalizing case study results ‘beyond the immediate case study’ (Yin 2009, p. 43). Therefore it should be possible to suggest that other schools not studied and the industry as a whole share some of the results from the case studies. Generalization is not automatic (Yin 2009) and care must always be exercised when inferring generalizations. But where findings share common themes across different units of analysis it will make inferring generalizations more reliable. A range of theories and explanations have been examined and it is the replication of this testing with different interviewees that helps support broader generalizations.

4.1.2.4 Test of reliability

The objective of a reliability test is to minimize errors in the study so that if someone were to repeat the case study using the same procedures similar findings and conclusions could be reached. This test is built into the design of the data collecting stage. The method followed here is to document each stage of the case study procedure. Reliability testing can only be realised if all the documentation from the original investigation is available. The aim of this test is to minimize biases and errors in the study. In this study all attempts have been made to document every stage of the investigation and a data base has been kept of all:

- Development stages.
- Test procedures and what was learned at each stage.
- Reasons for making case and participant choices.
- Logistical considerations.
- Analysis choices.

Yin's (2009) suggestion on this point is to proceed as if an auditor was going to repeat the study and would be able to replicate the results.

4.1.3 Introduction to the protocol design

The quantitative data analysis assisted in determining the selection of the embedded units of analysis within the cases. Schools were purposefully selected for different reasons including location (regional or metropolitan), course design and availability. When a school was chosen, teachers who responded to the survey were asked to participate in an interview. Professionals photographers and representatives from organizations were purposefully chosen to represent different areas of practice, location, experience as well as availability. Invitations to participate were initially sent to photographers who responded to the survey and indicated a willingness to participate in the research.

Replication logic is used in the design of the case study questions for interviewees in each stage; whereby all participants, in each phase, were asked the same basic questions. That is, all teachers were asked the same education base questions and all photographers were asked the same industry base questions. This ensured that the answers could be compared and analysed for common patterns. A theoretical framework was developed to produce literal and theoretical replications. Literal replications are conducted under such conditions where particular phenomena is likely to be found while theoretical replications are conducted in conditions where it is unlikely to be found (Yin 2009). For example literal could mean choosing a regional school where photography is taught only as a major to see if their curriculum prepares students for employment in a regional work environment.

4.1.3.1 Developing the case study questions for interviewees

The format of the case study questions for interviewees were guided conversation rather than structured queries. The guided conversation has to tread two paths: firstly, following the line of enquiry dictated by the case study protocol questions (different to the interview questions) and secondly, asking conversational interview questions that may be guided by a minor prompt question. What is actually happening is that two levels of enquiry are being addressed simultaneously within the design of the interview questions. In practice

there was no difference in the actual manifestation of the questions, it is just that the aim is always to explain the case study questions by gathering the evidence with interviews.

When asking questions about why certain things occurred Yin (2009) suggests that it is better to pose the *why* question as a *how* question. Posing *how* questions is seen as less confrontational than *why* questions. For example instead of asking ‘why is your business performing poorly?’ it may be better to ask ‘please explain how the course of your business has changed in the last five years?’.

The case study interviews were long guided conversations where the interviewees could express their own opinions and suggest new avenues of enquiry. The interviews did, however, remain focused on the case study protocol questions. Many people, who responded to the stage one surveys indicated a willingness to be interviewed. These respondents have, it would seem, an opinion that they want to share. Indeed, the researcher received direct email from several industry respondents expressing strongly held views. There was no shortage of opinion within both sectors and a variety of strong themes emerged.

One function of the interviews was to provide verification to answers provided in the quantitative stages. This was an important function that strengthened the evidence and can be as simple as corroborating a fact. Yin (2009, p. 107) warns that questions relating to already established evidence should appear ‘as naive about the topic’ so that the *informant* can express a fresh opinion. It is also important to test the corroboration of facts with several *informants*.

New lines of enquiry emerged as the interview schedule progressed generating new questions to take up on these new ideas. It is unlikely that every possible question can be thought of before the first interviews are conducted; the questioning needs to evolve throughout the interview process. It is possible, even desirable, that an interview could spiral off at tangents and if this was well controlled it could add interesting new data.

4.1.3.2 Interview style

Yin (2009) suggests that the interview style with case study questions for interviewees is far more open ended than can be expected with typical survey questionnaires. Question

design was substantially guided by the principles already discussed in the quantitative design phases but was adapted for a semi-structured, open-ended format that was personally delivered. The most common type of open question is the descriptive type (Dillman et al 2009) for example:

- Q 62: What do you perceive to be the most important skills a photographer needs today?
 - › Probes: Have these skills changes in the last ten years?

This type of question was used in the case studies as they gave the interviewee the greatest chance to provide an informative answer. The biggest difference between the case study questions for interviewees and the open ended questions used in self administered questionnaires is that the interviewer is present to guide the process. This can be advantageous because the interviewer can follow up on points of interest raised by the interviewee, adding to the quality of the data.

Yin (2009) warns that bias avoidance must be built into the case study method. He states that case study investigators 'may have selected the case study method to enable you (wrongly) to pursue or (worse yet) advocate particular issues' (Yin 2009, p. 72). He suggests that the researcher must be open to contrary findings. To test for this possibility, preliminary data should be reported to critical colleagues who should try and offer alternative explanations; this is the quest for a contrary view and should be identified if it exists.

The logistics of arranging the interview schedule was significant. Most interviewees were at locations a great distance from the researcher's home. It was likely that interviewees would be busy with work and their availability could be limited. Because many locations were so far away, coordinating a series of interviews in the shortest possible time was important in keeping travel and accommodation costs within budget.

Pilot testing case study questions for interviewees was substantially similar to testing the quantitative survey questionnaires for robustness. The selection of pilot interview participants, for reasons of geographical convenience, was at the researcher's university and with local professional photographers. The pilot tests were conducted in exactly the same format it was envisioned the real interviews would be conducted. The data from the pilot testing was analysed to determine whether the research questions were being addressed and if any patterns were developing. Questions were modified where necessary,

for example, additional prompt follow-up questions were added if the pilot showed an unanticipated line of enquiry developing.

4.1.3.3 Data collection and analysis

Analysing case study evidence is difficult because the analytic techniques are not yet well-defined. Yin (2009) overcomes this problem by conducting case study analysis after conducting a general analytic strategy to define priorities of what to analyse and why. The goal of data analysis is to facilitate reliable empirically based conclusions.

The four general strategies Yin (2009, p. 126) suggests are:

- 1 Relying on the developed theoretical positions.
- 2 Developing case descriptions.
- 3 Using both quantitative and qualitative research data.
- 4 Examining the rival case descriptions, if they exist.

These strategies were used with the methods of analysis already identified; pattern matching and explanation building. Regardless of the methods of analysis, all the evidence is displayed in an appropriate form and separate from interpretation. However, Yin (2009, p. 127) laments that there ‘...are few fixed formulas or cookbook to guide ... much depends on an investigator’s own style of rigorous empirical thinking, along with the sufficient presentation of evidence and careful consideration of alternative interpretations.’

When the researcher had completed transcribing the interviews, the interview transcripts from both stages were coded under labels¹ (Sapsford 2007) in QSR’s NVivo qualitative data analysis software. NVivo software facilitates deep analysis of data using powerful search, query and visualization tools. Because the data from the interviews were answers to open ended questions, categories defining phenomenon/themes were devised and codes allocated. Coding categories were developed sequentially building from the research questions and developed into a logical hierarchy that follows the questioning strategies and the major emerging themes. This was a process of evolution that was developed as more data were entered and the analysis progressed.

¹ Hierarchical headings.

To assist in the final analysis all interview questions from interviewees were allocated unique numbers and identical questions appearing in different question booklets carried the same number. NVivo data processing can identify all questions with unique numbers from within all transcripts and group them together under unique code headings. This greatly assisted in pattern matching analysis.

Sapsford (2007) contends that the unscientific approach to arbitrarily assigning codes on the basis of just one researcher's criteria may be problematic and suggests at least one other person collaborate on this process. That should eliminate some bias. On that basis coding was undertaken after a review of interview transcripts and the coding process was reviewed by the researcher's supervisor.

When the coded data was analysed with the aid of analytic software, it was examined for patterns or common themes. If patterns were identified they were related back to the theoretical propositions that surround the research. For example, patterns may emerge that indicate that schools do not recognise a regional need in their curricula. This would be used to explain propositions about the regional needs of the industry and the research questions regarding the relationship of the teaching of photography and the needs of industry. Another example might be tracing the quantitative evidence that shows, hypothetically, few photographers who received higher education training believed they were well trained to be wedding and portrait photographers. This could therefore be traced back to patterns that indicate, hypothetically, wedding and portrait photography is not considered a subject worth teaching in any depth.

4.2 Case study of higher education

There is little academic literature written about the teaching of photography in Australian higher education. To develop a broad understanding of how and why photography is being taught it was necessary to seek the opinions of a diverse range of photography teachers. These informants would reflect unique perspectives based on their experience and informed by the school and institution where they were employed. Questions within the case study protocol, the case questions, were developed using data from phase one to direct the content of the open ended questions designed for interviewees. The first phase

data analysis showed, in its broadest sense, who was teaching and what, why and how photography is being taught. The phase two case study would investigate in a far more focused way, the how and why questions arising from major themes identified in the first phase. Together, this presented a detailed picture of photographic education, one that has so far not existed.

4.2.1 Case study design for higher education

Yin (2009) lists the five components of case study design: a case study's questions, its propositions if any, its unit(s) of analysis, the logic linking the data to the propositions and finally, the criteria for interpreting the findings. These points of management are linked into the case study protocol at different levels. The case study questions are those that are directed at the case study designer and are about the type of information that needs to be collected and why. Again, these are derived largely from the research questions and from the analysis of data from phase one. Beyond this Yin (2009) suggests that the questions form a plan that guides the collection of data and the design of the interview questions. This is best explained by saying that questions of relevance should be asked at all levels of the enquiry. These include the following levels (Yin 2009, p. 87):

- **Level one:**
 - › Questions asked of the individual interviewee.
- **Level two:**
 - › Questions about the case.
- **Level three:**
 - › Questions asked across multiple cases when trying to identify patterns (looking for pattern matching from repetition).
- **Level four:**
 - › Questions of the whole study including the literature and other relevant data.
- **Level five:**
 - › Questions that go beyond the study into other relevant or connected areas.

Of the questions above, Yin (2009) suggests that the level two are the most important. The focus must be on getting information about the case and not individual units of data collection, the person. This is an important distinction in a case study where for example, there may be several people from the same school being interviewed. It can be seen however, that the protocol questions assist in keeping the whole case in perspective

in the small and larger sense of the study.

Scholz and Tietje (2002) describe the architecture of embedded design/analysis in a similar way to Yin (2009), and describing it here offers a slightly different perspective on the design of the case study framework. Scholz and Tietje (2002, p. 30) describe a three level design:

- **Level one:**
 - › The case as a whole, this includes all ways of viewing and understanding the case, this is a holistic view.
- **Level two:**
 - › The conceptual world case. This involves understanding the contextual elements and how the various areas of knowledge can be integrated. By having an understanding of the various areas of knowledge informing the case and the methods of integrating them a more valid understanding of the case is possible.
- **Level three:**
 - › The final level is where the two types of data and results reside. This includes the data from field observations, measurements and surveys and data from existing sources.

These framework examples broadly set up a logical structure from which to commence developing the case study questions and ultimately the questions for interviewees.

4.2.2 Developing the case study questions

The broad themes of case study investigation are shown below and are related to the management frameworks above and will be developed at three levels. This hierarchy will be the basis of the development of the case study investigation; these points will direct the development of the case study questions and the eventual development of the interview questions for interviewees and other data gathering:

- **Level one:**
 - › Higher education's role in teaching photography.
 - › Higher education's role in providing skills to the economy.
 - › Higher education's relationships with industry.
 - › Higher education's role in society.
 - › Higher education's response to Federal
 - › Government policy and objectives.
- **Level two:**
 - › School philosophies, missions and objectives.
 - › School curricula outcomes/key learning goals.

- › School associations with industry.
- › School views of student outcomes and career opportunities.
- › School views on the concept of their region.
- **Level three:**
 - › Data from education informants.
 - › Data from other sources.
 - › Analytic methods to connect the data.

This hierarchy describes the case and its connections to the embedded units of analysis and offers a way of understanding the logic of developing the case study. Scholz & Tietje (2002) advise however, that in the real world, problems are unusually multifaceted, ill-defined and complex, rendering a single unifying framework non-existent. They suggest that the analysis of such complex problems is governed mostly by the *what ever works paradigm*.

4.2.3 Case study implementation

4.2.3.1 The Proposition

It is fair to assume that some institutes of higher education teaching photography will have different intended outcomes for their courses. These may not necessarily be focused totally on tightly defined career outcomes. For example, in the analysis of the quantitative data, 70% of respondents to the question ‘[t]o what extent do you believe the course you are associated with meets the needs of students seeking a career in photography?’ answered in a positive way. Other respondents indicated that was not the intention of their course, or they were teaching an elective which was not designed to lead their students towards a career in photography. Also, there were respondents who were less sure that the courses they were associated with would lead to a career and there were many reasons given for this response. It was therefore necessary to test the proposition with more in-depth questioning to establish just what teachers believed were the outcomes of their teaching.

Therefore the major proposition to be tested was; Australian higher education institutions teaching photography are preparing students well for a career in photography or associated industries. This may or may not be a universally held view but high quality qualitative data will explain the different positions of teachers and what philosophies govern their views.

4.2.4 Development of higher education interview questions

What is the conceptual framework that determines how and why photography in Australian higher education is taught the way it is and what influences teaching, learning and curriculum decisions? As a starting point for lines of investigation, information from the analysis of data from the quantitative phase was used to formulate the broad case study framework questions. They were then used in the development of the specific case study questions for interviewees.

Schools were chosen to represent both regional differences and course differences. For example, regional differences were studied by choosing several universities in regional areas of Australia as well as in metropolitan areas. Questions were designed to explore, for example: do regional universities better prepare students for diverse careers in regional environments, do metropolitan universities offer more specialised courses suited to the special needs of commercial, advertising, editorial and scientific photography, or do regional universities perceive special regional needs?

Schools were also chosen that displayed a diverse mix of course designs. Many schools now offer courses that mix photography with other design based subjects, for example web and multi media practice. These schools were part of the case study as well as those offering specialised photographic courses. Of these two broad course designs, questions were designed to explore: if schools offering photography as just a major course option prepare students well enough for a career in photography, if new courses offering a broad range of photography and design subjects better prepare students for a career in photography and associated industries, and, if schools offering broad courses in photography and design see strong vocational outcomes.

From the concepts described above interview questions for educators were developed covering these broad themes. These are shown with an example of a primary question:

- **Demographic information.**
 - › What is the educator's age and academic position etc.
- **Broad question to open up the discussion.**
 - › How are you preparing your students for the future?
- **Core aims of Curriculum.**
 - › Can you explain the core aims of the curriculum you are involved with?
- **Pedagogy.**
 - › What teaching methods do you use to deliver your subjects?
- **Institution's place in society.**
 - › Does your institution see itself as providing an education that responds to the needs of its geographic and demographic position?
- **Industry experience.**
 - › Do you have any ongoing contact with industry?
- **Teaching and academic qualifications.**
 - › Most teachers have graduate qualifications and some have post graduate qualifications but few have doctorates. Does your school encourage research qualifications for staff?
- **Future.**
 - › Where do you see photographic education heading in the next few years?

Those themes and exemplar questions were derived from the case study framework questions and were the basis of the development of the complete set of interview questions for educators. The complete list of questions can be seen as Appendix E.

4.3 Case study of the photographic industry

To develop a broad contemporary understanding of the industry, it is crucial to seek opinions from a diverse range of photographers and other industry informants. These informants will reflect different career paths, attitudes, experience and location. Two sets of questions (for professional photographers and industry organizations), within the case study protocol, were developed using findings from the phase one quantitative data. These were used to direct the development of the phase two questions for interviewees. The analysis of quantitative data in the first phase showed, in its broadest sense, the way

the industry is structured and what individual photographers believe are their strengths and weaknesses. The phase two case study of the industry will answer the how and why questions arising from major themes identified in the first phase. The aim of this research is to present a comprehensive impression of the professional photographic industry in Australia. Prior to this study, no such impression existed.

4.3.1 Development of case study questions

As in the design of the education case, Scholz and Tietje (2002) suggest a framework to direct a case study. The framework to direct the case study of industry is as follows:

- **Level one:**
 - › The industry's place within the Australian economy.
 - › Participants within the industry.
 - › The culture of the industry i.e. diversity.
 - › Who represents the industry.
 - › Government regulations.
- **Level two:**
 - › Individual participants.
 - › Organizations and institutions.
 - › Markets.
 - › Perceptions of the industry (from within and without).
 - › Training.
 - › Industry's associations with education.
- **Level three:**
 - › Data from industry informants.
 - › Data from other sources.
 - › Analytic methods to connect the data.

This broadly sets up a logical structure from which to commence developing the case study questions and ultimately the interview questions.

4.3.2 Case study implementation

4.3.2.1 The propositions

The propositions were derived largely from the themes that emerged from the phase one quantitative data analysis and represent major areas of enquiry described in the case study.

The explanations are vital to gain a better understanding of the industry but also to the final mixing analysis stage.

The propositions that were tested in this case study include:

- Higher education in photography prepares students for a career in industry.
- The introduction of digital photography has brought benefits to the industry.
- Industry organisations play a significant role in maintaining notions of professionalism.
- There are distinct differences between different sectors of the industry.
- The industry must come to terms with technological innovation.
- A single industry body would serve professional photographers better than the many that now exist.

Those propositions were not the only themes that were explored in the development of the interview questions for interviewees but they were the key themes from which were tied other relevant questions.

4.3.3 Development of the interview questions

Developing the case study questions for interviewees was slightly more complex for the industry phase as it included professional photographers as well as some representatives of industry organizations. Two sets of questions were developed but there was much in common between them; each unique question had its own unique number to assist with analysis.

Industry professionals who were interviewed were chosen from the respondents to the quantitative phase one survey. These photographers left contact information and indicated a willingness to be interviewed. Other people were invited to participate if they had a relevant skill or place in the industry. For example, a retired commercial photographer with significant industry experience was invited to be involved. Representatives from the industry organizations were invited to participate. The aim was to represent diversity so that an in-depth understanding of the industry could be obtained. Diversity required interviewing photographers working in various industry sectors and geographic locations.

The interview questions for interviewees included the following broad themes. These are shown with an example of a primary question:

Questions about the industry:

- **Demographic information.**
 - › Age, location of business etc.
- **Questions concerning work place and practice.**
 - › How do you describe your practice and profile within the industry?
- **Questions concerning how interviewees learnt their skills.**
 - › Are you self taught or did you have some formal training?
- **Questions concerning changing practices.**
 - › Many people said that digital photography has had an adverse effect on their business. What is your opinion of that?
- **Questions concerning skills.**
 - › What do you perceive to be the most important skills a photographer needs today?
- **Questions concerning organizations.**
 - › Do you or have you ever belonged to a photographic organisation?
- **Questions concerning the future of photography.**
 - › What is your opinion of the future of photography?

Questions concerning the industry for representatives of organizations:

- **Questions concerning membership**
 - › What services does your organisation offer members?
- **Questions concerning amalgamation of organisations.**
 - › How should organisations better represent their members, for example should there be just one peak body representing all eligible photographers?

Those themes and exemplar questions were derived from the case study framework questions and were the basis of the development of the complete set of interview questions for industry. The questions can be viewed as Appendix F for industry and G for organizations.

4.4 Exploring the alignment of both phases

It is worth reviewing the data analysis procedures of both the quantitative and qualitative data phases at this point, as this leads to the final mixing analysis of both stages. The following table is a review of the analysis procedures that are relevant to this study, based on Creswell and Plano Clark (2007, p. 129).

Table 4.4.1 Analysis procedures: summary		
Quantitative procedures	General procedures of data analysis	Qualitative procedures
<ul style="list-style-type: none"> • Coding data by assigning numeric values 	<ul style="list-style-type: none"> • Preparing the data for analysis 	<ul style="list-style-type: none"> • Organising documents and visual data • Transcribing interviews • Preparing the data for computer analysis
<ul style="list-style-type: none"> • Visually inspecting the data • Conducting a descriptive analysis • Checking for trends and distributions 	<ul style="list-style-type: none"> • Exploring the data 	<ul style="list-style-type: none"> • Rereading the data • Writing memos • Developing a coding strategy
<ul style="list-style-type: none"> • Choosing an appropriate statistical test • Analysing to answer research questions 	<ul style="list-style-type: none"> • Analysing the data 	<ul style="list-style-type: none"> • Coding additional data • Assigning labels to codes • Grouping codes into themes • Interrelating themes (or categories) or abstracting to smaller sets of themes • Using qualitative software
<ul style="list-style-type: none"> • Representing results in statements of results • Providing results in tables and figures 	<ul style="list-style-type: none"> • Representing the analysis 	<ul style="list-style-type: none"> • Representing findings in discussions of themes or categories • Preserving visual models, figures and tables
<ul style="list-style-type: none"> • Establishing validity and reliability of current data. 	<ul style="list-style-type: none"> • Validating the data 	<ul style="list-style-type: none"> • Employing validation strategies (e.g., member checking, peer review)

The major emergent themes were identified and explained in detail in the final quantitative and qualitative mixing stage. While previous data analysis presented a broad picture of all research phases, the major emerging themes provided the substantive explanations to the major research questions and to the significant issue of alignment. Identifying the major emerging themes for explanatory analysis grew almost organically from the original quantitative phases but more particularly from the qualitative phases. This is what mixed methods research methodology is intended to achieve; a progressive, methodical collection and analysis of data designed to expose, previously unknown, connections. In other words, as the data was collected and analysed it became increasingly more apparent where the significant areas of interest resided. Connections and patterns emerged as early

as the first quantitative phases. The qualitative phases was in many ways focused more closely on some of the more significant discoveries while still following the methodology imposed by the initial research questions.

In the final mixing analysis of the major themes, all the different categories of evidence collected were used to construct the final explanations. In the end the major emerging themes are presented, not in isolation, but as part of an enlarged unifying explanation of the entire research project. The purpose is to 'genuinely integrate' (Bryman 2007, p. 4) both phases of analysis.

4.5 Conclusion

This chapter has set out to explain a rigorous methodology designed to maximise the collection and analysis of diverse qualitative data. It has explained in detail the reasons for adopting case study protocols, particularly the importance of the validation processes. These processes lent the research the discipline and rigour necessary to support the findings. It has explained the implementation, within the two qualitative research phases (higher education and industry) of the design and execution of the data gathering processes. There was a need to maintain precision in the design and deployment of the interview questions because of their significance in the final explanatory mixing phase. The design of the questions for interviewees needed to be, not only unique but complimentary to the overall intent of the case study design framework. The intent was to make the analysis of the final emerging themes and patterns obvious and logically significant.

While the final mixing analysis is the most important component, the qualitative phases are highly influential on the research outcomes as they seek to illuminate the underlying explanations of much that was discovered in the quantitative phase. The qualitative phases are largely personal, inasmuch as they involved personal interviews with people who were significantly involved with their industry. The researcher found the coordination of all the interviews as one of the most difficult aspects of this study. However, the interviews brought the experience, character and colour of the participants to the research and they humanise and contextualise it in a way that a quantitative study alone cannot begin to do.

In conclusion it is worth highlighting some cautionary words by the respected mixed methods researcher Alan Bryman, in the *Journal of Mixed Methods Research* (2007). This article highlights the difficulties some mixed methods researchers had in successfully integrating their analyses in their mixing chapter and suggests that some researchers are uncertain how to construct this chapter. He suggests this is 'particularly difficult, as it means that scholars have few guidelines upon which to draw when writing up their findings' (Bryman 2007, p. 21). A certain amount of mixing occurred as the analysis of the quantitative data was used to inform the design of the qualitative case studies however particular attention was paid to the integration of both phases in the mixing analysis.

CHAPTER 5

Quantitative Analysis: education and industry

This chapter will present and analyse the data from the quantitative surveys of education and industry. Additionally it will identify questions that will require further exploration in the qualitative follow up phase. Themes emerging from the analysis will also be identified and flagged for further development in the case studies.

5.1 Profiling the academic sample

Table 5.1.1 presents an overview of Australian universities teaching photography, identifying the institution, campus and school, and the number of respondents from each school.

Table 5.1.1 Survey respondent's location and school			
Institution	Campus	Number of respondents, n= 30	School n=15
Australian National University	Canberra	2	College of Arts and Social Sciences, School of Art
Charles Sturt University	Wagga Wagga	1	School of visual and Performing Arts
Curtin University of Technology	Perth	1	School of Design and Art
Edith Cowan University	Mt Lawley, Perth	2	School of Communications and Arts
Griffith University	Southbank, Brisbane	4	Photography - Queensland College of Art
James Cook University	Townsville, Cairns	4	School of Creative Arts
La Trobe University	Mildura, Bendigo	1	School of Visual arts & Design
Royal Melbourne Institute of Technology University	Melbourne	7	School of Creative Media
Southern Cross University	Lismore	1	School of Arts and Social Science
University of Melbourne	Victoria College of the Arts Melbourne	2	VCA School of Art
University of South Australia	City West	2	South Australian School of Art
University of the Sunshine Coast	Sunshine Coast	0	Sunshine Coast TAFE
University of Sydney	Sydney	0	Sydney College of the Arts
University of Technology, Sydney	Sydney	1	School of Design
University of Tasmania	Tasmanian School of Art, Hobart	2	Tasmanian School of Arts at Hobart - Centre for the Arts

Table 5.1.1 represents responses from teachers at universities teaching photography in

Australia at an undergraduate level¹. There is great diversity in the types of schools that are represented, illustrating that photography now has a place in a variety of curricula. The RMIT response is the largest; both the RMIT figure and the JCU figure was possibly influenced by the researcher's past and present associations with these universities.

Table 5.1.2 summarises the length of time respondents had been teaching in higher education. The data is grouped generally in five year periods and presented as a percentage and total number of participants.

Table 5.1.2 Length of time teaching at university.		
Time	%	Number of respondents
Less than one year	3.3	1
1-5	6.7	2
6-10	13.3	4
11-15	26.7	8
More than 15 years	50	15
(n= 30). Arithmetic mean = 14.8, (where <1 year = 0.5, > 15 years = 20)		

Table 5.1.2 establishes that the sample includes many long serving teachers, with 76.7% teaching for more than eleven years. Also, while the data in Table 5.1.2 does not specify the number of teachers commencing a full time teaching career it does indicate that few new teachers are being employed, with only one teacher in the 1-5 year range. What this table does not show is if teachers change institutions during their careers.

Table 5.1.3 summarises the academic status of photography teachers in terms of their employment status.

Table 5.1.3 Academic tenure.		
Status	%	Number of respondents
Full time	73.3	22
Sessional (casual)	16.7	5
Part time	10.0	3
Mean/median/standard deviation (n=30)		6/4/10.44

Table 5.1.3 shows that 73.3% of teachers are full time academics which correlates closely with the number of teachers with over eleven years of teaching experience (76.3%, see table 5.1.2). This table also shows that teachers with different employment status responded to the survey, this adding depth to the interpretation of the data as it represents the predominant tenure groups. This data does not show the presence of adjunct and visiting teachers.

¹ Responses were not received from the University of Sydney (Masters of Documentary Photography) and the University of the Sunshine Coast.

Table 5.1.4 summarises each teacher's highest academic qualification.

Table 5.1.4 Academic qualifications.		
Qualification	%	Number of respondents
Masters by research	36.7	11
Bachelor (Hons)	23.3	7
Masters by course work	13.3	4
PhD	13.3	4
Bachelor	6.7	2
Diploma	3.3	1
Other	3.3	1
Certificate	0.0	0
None	0.0	0
Mean/median/standard deviation (n=30)		4.3/4/3.6

All teachers responded to this question and the only 'other' response was a graduate diploma. It is significant that 63.3% of teachers had postgraduate qualifications but of those, a relatively low number, 13.3%, had a doctorate, perhaps this is even more surprising given the long tenure of many academics. Case study research will attempt to explain institutions attitudes towards continuing research and teachers' attitudes towards post graduate study.

Table 5.1.5 represents the responses from teachers who were asked if they had any teaching qualifications.

Table 5.1.5 Formal teaching qualifications.		
Response n=29	%	Number of respondents
No	55.2	16
Yes	44.8	13

Twelve teachers listed their teaching qualification which included certificates, diplomas and undergraduate and masters degrees in education. This figure is similar to a study of 176 academic staff at the University of Wollongong. The researchers queried the attitudes towards teaching development at the University and found 52% of full time staff had teaching qualifications and 48% did not (Nasar, Gillett and Booth 1997). Further investigation in the case study will attempt to explain the policy of schools to their teachers having tertiary teaching qualifications, and teachers' attitudes to teaching qualifications and also what value is placed upon industry experience.

Table 5.1.6 is a comparison of academic and education qualifications and industry experience of sessional/casual teachers to the whole sample. This comparison was made by filtering the data from the previous two tables and survey data collected on each respondent's industry experience.

Table 5.1.6 Comparison of casual & sessional qualifications & experience compared to the whole sample.			
Sessional teachers (n=8)	Sessional/casual %	All teachers %	Number of sessional/casual respondents
Academic qualification	100	100	8
Industry experience	37.5	71.4	5
Teaching qualification	25	44.8	6

An interesting point about Table 5.1.6 is although all casual and sessional teachers have academic awards, only 37.5% of them indicate that they have any industry experience. Case study research will investigate how part time and sessional teachers are selected. For example, are they selected for specific industry skills or employed following graduation because of their familiarity with the curriculum?

Table 5.1.7 represents responses from teachers who were asked if they were actively involved in research leading to publication or exhibition. This includes a breakdown of the responses from sessional/casual teachers.

Table 5.1.7 Research activity of university teachers.				
All respondents (n=30)	%	Number	Sessional/casual %	Number
Yes	86.7	26	62.5	5
No	13.3	4	37.5	3

This question was answered by all respondents and indicates a relatively high number of casual/sessional staff involved in research. It would be expected that most full time university academic staff would normally be expected to be involved in research. Does this data indicate that many academics are currently undertaking PhD research, if so would it lift the low number of academics with this award? Teachers were also asked to comment on their primary area of research. There was a broad range of research projects described. These included the more traditional themes of art and landscape as well as, for example, research into history, forensic photography, education and technology.

5.1.1 Summary

With data collected from all Australian universities teaching photography it can be seen that photography is being taught by experienced teachers with 56% indicating they held a bachelor qualification or higher and, largely, some industry experience. What is notable is that a small majority of teachers did not have any formal teaching qualifications; this was close to the numbers in the university of Wollongong study of their entire academic staff. Also of note were the low number of new teachers being employed.

The aims of the follow-up case study research will be to build an understanding of the contemporary priorities of schools and teachers with regard to:

- The relative importance of industry experience.
- Attitudes towards the value of teaching training especially at tertiary level.
- Attitudes towards further research leading to higher academic awards.
- An overview of selection criteria for teachers.

5.2 Curriculum and delivery of photography in higher education

Table 5.2.1 examines how photography is taught, be this as a full degree, a major as part of a degree or as an optional elective.

Institution (n=30)	Campus	Full Degree	Major	Elective
Australian National University	Canberra		X	
Curtin University Australia	Perth		X	
Charles Sturt University	Wagga Wagga	X		
Edith Cowan University	Mt Lawley Perth		X	
Griffith University	Southbank, Brisbane	X		
James Cook University	Townsville, Cairns.		X	X
LaTrobe University	Mildura, Bendigo		X	
Royal Melbourne Institute of Technology University	Melbourne	X	X	
Southern Cross University	Lismore			X
University of Melbourne	Victoria College of the Arts Melbourne	X		
University of South Australia	City West, Perth		X	
University of Technology Sydney	Sydney		X	
University of Tasmania	Tasmanian School of Art, Hobart	X		
%/Number		53.3/16	43.3/13	10.0/3

Table 5.2.1 shows 53.3% of institutions have a full degree course in photography and 43.3% have photography as a major. Two respondents said their subject was taught as an elective and another teacher said his subject was a science major as part of a Bachelor of Arts in Photography. Not explained in these data are the questions about the merits of including photography as a major or as a full degree. Case study research will investigate why some schools are providing a broad based curricula while others offer photographic specialisation for students. Case study will explain the perceived benefits and the rationale behind each approach.

Table 5.2.2 examines the teaching settings most commonly used by photography teachers. Respondents were asked to select as many as necessary and all teachers answered this question.

Setting (n=30)	%	Number
Tutorial room	96.7	29
Studio	90	27
Computer laboratory	86.7	26
Lecture theatre	76.7	23
Field	76.7	23
Digital print facility	66.7	20
Photographic darkroom	63.3	19
Online learning environment	36.7	7
Real Work-place situation	23.3	7

The data in Table 5.2.2 shows traditional teaching settings like the tutorial and photographic studio are still the most widely used. The computer laboratory is more widely used than the lecture theatre although the computer lab may now be considered the de facto lecture theatre. It is also worth noting the very close usage numbers for the digital print facility and the photographic darkroom. It may have been assumed that as the digital era matured the use of the photographic darkroom would have been phased out more than it has been, and that the digital print facility would be more widely used. Further case study research will attempt to explain what teaching settings are now being used. Another interesting statistic is the seemingly low figure of 23.3% for 'work-place'. Case study research will try and determine how students are exposed to the work place (where photography has a vocational outcome) and whether it is formal or informal.

Table 5.2.3 examines which teaching methods are being used by Australian photography teachers. Teachers were able to choose as many responses as required.

Table 5.2.3 Teachers teaching methods.		
Method (n=30)	%	Number
Group discussion	90.0	27
Practical	90.0	27
Lecture	83.3	25
Project-based learning	80.0	24
Tutorial	76.7	23
Workshop	73.3	22
Inquiry-based learning	63.0	19
Group work	60.0	18
Action learning	60.0	18
Problem-based learning	50.0	15
Peer teaching	43.3	13
Team teaching	36.7	11
Work integrated learning	33.3	10
Case-based learning	33.3	10
Online	30.0	9
Other	16.7	5
Role play & simulations	10.0	3
Scenario	6.7	2

Table 5.2.3 shows teachers are using a variety of methods, some of which may be classed as innovative for art schools, for example Inquiry-Based learning. Five teachers entered 'other' teaching methods, while not new or innovative they are worth listing because they add breadth to the teaching choices available to teachers, they are:

- Individual tutorials.
- Critique.
- Exhibition visits.
- Readings.
- Mentor scheme in third year.

It is clear from the data in Table 5.2.3 that teachers indicated they were using a range of pedagogies,² for example Problem-based learning. What is not clear is how, why and where they are using them. Case study research will seek to explain those questions and determine if these approaches are helping align teaching with vocational or other graduate outcomes.

² As distinct from the classic classroom lecture.

Table 5.2.4 shows the dominant reason teachers chose to use a particular teaching method. The sessional and casual data is presented separately.

Table 5.2.4 Primary driver for selection of teaching method with a break down of the casual/sessional data.				
Reason (n=29)	Whole group%	Whole group/Number	Sessional/casual %	Sessional/casual Number
Subject content	44.8	13	37.5	3
Individual preference	34.5	10	37.5	3
University policy	10.3	3	12.5	1
School policy	10.3	3	12.5	1

These data show that content is the driver of pedagogy to a far greater extent than institutional directives or policy. The figures for university/school prescribing pedagogies are relatively low, however, the context for this will be explored in the case study research. There is a fairly close alignment between all respondents and the breakout of casual/sessional staff. Six people made comments on the reason for choosing a teaching method and exemplar quotes are shown below along with teaching experience of the teacher:

- All the above [ie. the four listed choices], (more that 15 years experience).
- Unfortunately, teaching style is being increasingly dictated by people whose output is an accounting spreadsheet rather than students who have the ability to solve problems, (38 years experience).
- Assignments dictated by photography department on the main campus away from my location, (1-5 years experience).
- My preference [choice] is based upon 17 years teaching experience and research in the area.
- Individual motivation and excellence driving to teaching and learning experience for both teacher and student on a 1-1 basis where ever possible-that was RMIT's success, (11-15 years experience).

Some of these comments have been made by very experienced teachers. Case study research will investigate the role of the university or school in the choices of teaching methods used.

Table 5.2.5 summarises the response to the question ‘to what extent does your school actively encourage innovative teaching and learning activities?’ This table has been compiled by analysing the comments made by respondents; the headings correspond to the major themes that emerged.

Table 5.2.5 Encouragement of teaching innovation by key word summary		
Emergent themes	%	Number
Encouraged to a large extent	42.8	12
Encouraged with qualification	17.9	5
Encouraged to a large extent with qualification	10.7	3
To a moderate extent	10.7	3
Encouraged	10.7	3
Encouraged to some extent	3.6	1
Little encouragement	3.6	1

The answers were overwhelmingly positive in terms of active encouragement. Twenty-eight teachers provided comments and some of the more informative are presented below:

Encouraged to a large extent:

- We are encouraged to explore new ways of teaching ... we change our own programmes regularly to test our ideas which are often changing and evolving to meet the needs of new students.
- Very proactive. Teaching and learning unit- frequent seminars- Grad Cert in Higher education, and, course content and teaching methods are constantly being reviewed / updated.

Encouraged with qualification:

- Tries to encourage it (innovation), but it (the school) has trouble allocating resources, and, to a large extent funding is not always available.

Encouraged with large qualification:

- Heavily. Unfortunately, “innovative teaching” seems to be defined almost exclusively as online delivery of information, and traditional methods of direct interaction with students on a practical level are discouraged as too costly.

The responses to this question are in some way contradictory to those summarised in Table 5.2.2. Teachers state that the university and school do not, in most cases, direct teaching methods but are happy for teachers to explore innovative teaching ideas. Case study research will explore in more detail the individual contexts that govern teaching and learning within different schools.

Teachers were asked if they used different teaching methods to teach theoretical and practical subjects. Sixty three percent (17 teachers) said yes and thirty seven percent (10 teachers) said no, 3 skipped the question. The comments below may help to show why teachers make certain distinctions between practical and theoretical tuition but not how they are implemented.

Theory and practice are blended:

- Theory is lectured and tutorialized, practice is demonstrated although I cannot rationalise the difference. Perhaps it is nothing more than historical distinction between what happens in lecture rooms and what happens in photo studios.
- Tend to prefer to blend both aspects, integrated situations result in better retention of knowledge in my experience.
- Cannot really separate the two, and do not understand how anyone can think that you could.
- Elements of all methods go into what subject and content we are delivering. We do not set a particular teaching method to a particular course.
- I prefer not to separate theory from practice, it is a fallacy to do so.

Theory and practice taught/learned differently:

- Practical content is taught through action learning, theory is taught to larger groups.
- Practical can be a combination of hands on & lecture if needed. Theoretical more reflective.
- They are totally different disciplines.
- Theory in lectures and tutorials, practical in hands on workshops.

All the above comments provide some insight into the rationale for teaching decisions. Nevertheless the relatively high number (37%) of teachers who do not use different teaching methods for practical and theoretical subjects is a curious result that will be explored in the case studies.

Teachers were asked to describe the core aims of the course with which they were associated. All teachers responded to this question. The responses fell into four broad categories: those that mentioned vocational outcomes clearly pointing to photographic practice (20%), general vocational outcomes (37%), a broad based creative education (30%) and other responses (7%).

Vocational outcomes that clearly point to commercial photographic practice:

- To produce competent and intelligent image makers who can engage in professional photography or pursue graduate studies.

- To produce people who will succeed in industry at the highest level both in Australia and abroad i.e. to produce a high % of successful shooters in the world's top 10%.
- To acquire photographic skills across a range of institutional practices; to develop an understanding of the role of photographic practices within broader cultural and social context; to develop a critical understanding of theories speculating of photography and photographic practices; to encourage a critical and creative approach to photographic practices.

General vocational outcomes:

- To produce students who are flexible, knowledgeable in at least 2 areas of new media arts (major/minor) and ready for the future workplace.
- Providing students with an accurate awareness of the media industry and their ability as individuals to make a positive difference to the social health of the mankind.
- To produce graduates who have a strong conceptual ethic combined with an understanding of the professional industry.

Broad based creative education:

- A broad based and eclectic education in photomedia production.
- The understanding and sustainability of thinking and making process in photographic based art.
- To teach principles of photography as a tool for observation of things outside our normal range of perception, measurement, and analysis of events and processes.

There are teachers who pursue a successful industry based outcome as their core objective while others have a world wide focus. Other teachers were expressing broader more altruistic outcomes about education in general. Further case study research will attempt to clarify the core aims of curricula and determine if there is much variation or similarity from school to school.

Table 5.2.6 summarises teachers' responses to the question, 'to what extent do you believe the course you are associated with meets the needs of students seeking a career in photography'? This table is compiled by grouping key words contained in responses. All teachers answered this question.

Table 5.2.6 Courses meeting student needs for a photographic career.		
Key word response (n=30)	%	Number
Good, very applicable, excellent, totally	53.3	16
Part of outcome, a start, moderate	30.0	9
Limited extent, small part, diminishing	16.6	5

Just over 50% of teachers considered that their course(s) did meet the needs of their students

seeking a career as professional photographers, which at first examination may seem low, but the comments listed below help to place this data in context. If the responses for the first and second rows are added it could be said that 83% of teachers thought their course met the needs of students well or moderately well.

Responses that exhibit interesting themes are listed below; some explore the broad diversity of intended outcomes:

Meeting students' needs to a high degree:

- Seeking a career in photography is only one outcome of this program. Like all undergraduate degrees, our program seeks to introduce the student to a breadth of liberal studies, history and politics.
- Career in photography can mean many of things. My graduates successfully find employment across many sectors of the industry, including the wedding and portrait market (something this specialization does NOT teach). We are specifically aimed at industries such as defence, automotive crash testing, biomedical photography, and manufacturing and aerospace applications.
- So far-totally-but not much longer if it is dismantled further and turns into another soft option generic photography program.

Meeting students' needs to a moderate degree:

- It is a start, to be followed by practical on the job experience, good grounding in problem solving.
- Diminishing. Structural changes from stand alone degree to major in generic degree resulted in reduction of taught units in the major. Current structure encourages 'multi-skilling' at expense of depth in one specific discipline.
- It could be but we are first and foremost an art school.

Meeting students' needs to a limited degree:

- Hard to measure, not enough. Like so many industries there are too many graduates to cater for demand; commercial and conceptual.
- The course does not seek to meet this need.

There are some themes arising out of the comments above that will be explored in case study research. Firstly, do teachers believe that there are too many graduates for the demand and does this matter? Secondly, do teachers believe that courses are becoming too generic to be of real value to students or does the availability of greater choice in curriculum content improve opportunities for students?

Table 5.2.7 summarises the responses to the question, ‘to what extent does the course you are associated with have aims that reflect the needs of the region in which the students will be working?’ Responses have been listed by theme.

Table 5.2.7 Does the curriculum reflect any regional needs?		
Response by theme to regional need. (n = 27).	%	Number
Very little regional focus, Australia, international, Asia/Pacific focus	46.2	12
Strong local programme, well focused locally, highly tailored	23.1	6
Moderate regional focus	23.1	6
Some regional focus	7.7	2

The concept of region was broadly interpreted; here are some indicative comments on the regional definition and focus of schools:

Strong national and international focus:

- Strong international cohort of students for Asia-Pacific region and to a lesser extent European countries.
- Perth does not support an extensive range of photographic opportunities. Course has developed an international dimension encouraging students to engage beyond the region.
- Very little. We look at interstate and international examples.
- Our students have to be internationally viable!
- One of the Key performance indicators of [university] is the internationalisation of our curricula and students. By extension we do not promote [region] as the local region, rather in journalism, it is the world.

Strong local/regional focus:

- We set public art projects that encourage our students to interact with their community/region. Our course attracts students from regional N.S.W.
- Huge extent as we are all art practitioners and must exhibit regularly to maintain our employment.
- The course is highly tailored to the region.
- As a regional campus-very much so...

Some regional focus:

- Only to some extent as the student cohort is diverse.
- Poor, we are under resourced and not industry savvy, students often enrol into our course having come from high schools with better facilities.

While there is a significant group that see their *region* in terms of a world-wide industry many have a commitment to their more immediate area; there is however still some ambiguity about the terms *local* and *region*. Case study research will attempt to identify the reasons for and benefits of both approaches. Also, are some schools promoting an

international image so as to attract overseas and interstate students? Case study research will explore more precisely the regional definition of schools and how that is reflected in the curriculum.

5.2.1 Summary

Photography is taught in Australian universities, mostly by full time teachers with many years teaching and practical work related photographic experience. Casual and sessional teachers make up about one quarter of teaching staff. Casual staff are just as well qualified as full time staff but have less photographic industry experience. Most teachers have bachelor or post graduate qualifications but few have a doctorate. While just over half have a teaching qualification, none have a tertiary teaching qualification. Most teachers' pedagogies are driven by personal choice based on subject content. Only a minority of schools have any formal pedagogical policy. While most teachers thought that teaching innovation was encouraged by their school it seems that it is largely left to the teachers to implement the innovation.

Teachers used, by and large, fairly traditional teaching settings and methods. The computer laboratory was in use more than the lecture theatre but it can be assumed, that in many ways, the role is similar. Some teachers reported using less traditional pedagogies like Project-based learning and almost one third used online teaching. It was interesting to see that the traditional photographic darkroom was being used almost as much as the digital 'darkroom'. What was perhaps more surprising was the low number of teachers who did not indicate the use of any authentic work-place teaching and learning activities.

Unsurprisingly, most teachers thought that the courses they taught in did meet the needs of students seeking a career in photography. Also, most teachers thought that the courses they were involved with had a vocational outcome but not necessarily a specific one. However, some teachers were happy to describe their courses in terms of having broad, rich educational experiences. Course structures have changed in the last ten years as the culture of the digital age and its new media methods proliferate. While new course content is offered to meet these demands some teachers comments expressed concerns that the new curricula may not be serving professional photography well.

The word *region*, while open to interpretation, was fairly well described by teachers. This researcher defines a region as the geographic area from where most students are drawn. Almost half the teachers saw their region as an international one where their graduates had to be viable. One school mentioned that it had a strong cohort of students from the Asia-Pacific region. It would be assumed that these schools have designed their curricula to reflect a world view of photographic practice. What is less clear is how the schools that claim to have a strong regional focus, and here it means local focus, have developed their curricula. Are the needs of students in these regions different from those in metropolitan regions and do these schools offer course content to reflect any differences?

The complete SurveyMonkey.com data summary of the Higher Education questionnaire can be viewed as Appendix Q.

5.3 Quantitative analysis of industry data

Data collection in the two surveys of industry were collected in four broad sections:

- 1 Background demographic information and work trends.
- 2 Industry and work experience, education, training.
- 3 Ongoing professional development.
- 4 Views on employment, job seeking and training.

A total of 393 photographers (299 via organizations and 94 direct from industry) completed the quantitative surveys. The response rate for the survey of industry was 44%.³ The response rate for the survey of organizations cannot be determined accurately. The MEAA does not have a breakdown of the photojournalists within their broad membership base and Free Radicals in particular has members who belong to other organizations. If the number of photographic businesses in Australia is approximately 6000 (Ibisworld 2012) then this represents a total industry wide response rate of 6.6%. This indicates a confidence level of 95% with a ± 4.78 margin of error with 50/50 heterogeneity (Creative Research Systems, 2014). A confidence level is 'the amount of statistically confidence one desires to have in the estimates' this is often set at a level of 95% (Dillman, Smyth and Christian, 2009).

³ A total of 216 people were invited to participate in the survey.

Table 5.3.1 shows the comparison of age groups between photographers selected from organizations and the general industry, in terms of those that chose to provide this information. Chi-squared probability numbers (p.no.) are included to assist interpretation.

Table 5.3.1 Age distribution of photographers.							
Group	1 - 20	21 -30	31 - 40	41 - 50	51 -60	over 61	Total number
Organizations %/ number	1.4/4	18.6/55	21.4/63	29.1/86	22.0/65	7.8/23	296
Industry %/ number	0.0/0.0	7.7/7	27.5/25	29.7/27	29.7/27	5.5/5	91
Combined %/ number	0.7/4	13.2/62	24.5/88	29.4/113	25.9/92	6.3/28	387
Group data arithmetic mean (based on group mean) = 43 years. (p < 0.08).							

The photographic industry is dominated by participants between 31 and 60 years of age (83.9%). There is a steep fall in participation after the age of 61 perhaps because of retirement. The median age of all Australian workers is 39.5 years (ABS, 2009) which is a little younger than the photographers represented in these samples.

Table 5.3.2 summarises the gender of each group.

Table 5.3.2 Comparison of gender between sample groups.		
	Male	Female
Organizations %/ number	61.7/182	38.3/113
Industry %/ number	80.2/73	19.8/18
Mean %/ number, (n=386), (p < 0.001)	71.0/255	29.1/131

The photographic industry is predominantly male especially in the industry sample. The balance of women in the organizations sample is higher than the industry sample, this may reflect the number of women working in the domestic sector or perhaps the large number of female graduates who join organizations when they enter the workforce.

Table 5.3.3 summarises the responses that asked for the principal place of residence of the respondents. The Chi-squared ‘test for goodness’ is used to assist analysis with all relevant tables and charts (Preacher, 2001). This is a model-fitting test that works out what data would look like if there no associations between the variables and then determining the differences between the observed and the expected results. If the difference is small then it can be asserted that the sample difference reflects the population difference. The designated probability number (p.x) being the error. For example a number of zero means there is no difference between the sample and the population (Sapsford, 2007).

Table 5.3.3 Principal place of residence as a percentage.			
Group	Capital City	Regional City	Small town or rural area
Organization %/ number	69.0/205	20.4/ 60	10.5/31
Industry %/ number	66.8/64	24.7/23	6.5/10
Mean %/ number. (n= 389), (p < 0.76)	68.9/269	22.6/83	8.5/41

Small towns and regional areas have almost twice as many respondents from the organizations sample than from the industry sample. This may indicate a balance towards wedding and portrait photography in these areas with far less commercial work available. As expected most of the respondents lived in capital cities. However almost one third of the responses to the surveys came from non-metropolitan areas.

Table 5.3.4 summarises answers to the question that asked what was the respondents' highest photographic qualification.

Table 5.3.4 Highest photography qualification.			
Qualification (n=183). (p < 0.13)	Organizations % /Number	Industry % /Number	Mean % /Number
Diploma	28.2/35	31.2/10	29.7/45
Bachelor	38.7/49	15.6/5	27.2/54
Certificate	12.9/16	21.9/7	17.4/23
PhD & Masters	6.5/8	12.5/4	9.5/12
Press/cadetship	4.8/6	3.1/1	4.0/7
Industry award	1.6/4	3.1/0	2.4/4

Table 5.3.4 lists the responses of the photographers who undertook some formal education. Of these, almost 60% had either a Bachelor's degree or a Diploma. The mean for both groups having a bachelor or diploma award is close but a far higher percentage of people in the organizations group have a bachelors award.

Of the combined total of both surveys, 46.6% of the industry as a whole have some formal training but only 17% have a bachelor or higher award. Considering the number of university photography graduates this may seem like a very low figure. It is possible that many students pursue further study and find employment outside the photographic industry or in other sectors of the industry (non-photographic).

Figure 5.3.1 summarises the answers to the question that asked respondents to which organizations they belonged; the complete data set can be viewed as Appendix N.

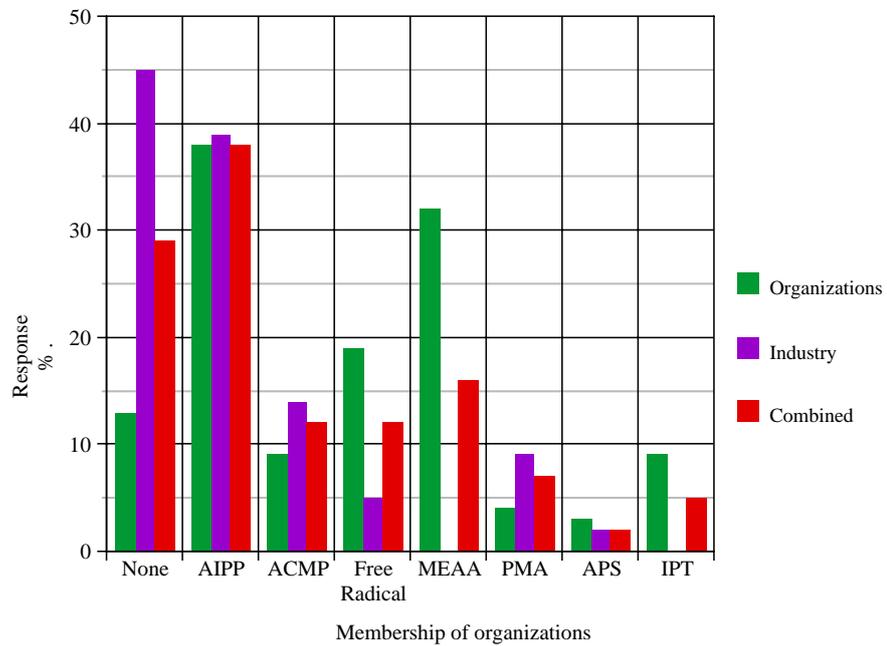


Figure 5.3.1 Photographers membership of organizations in Australia (n = 274) (p = 0).

What is perhaps surprising in Figure 5.3.1 is the similarity of the percentage of photographers in both surveys who responded as belonging to the AIPP. This may indicate that the surveys are quite accurately measuring the industry as a whole because it can be assumed that the survey of organizations may have shown a higher membership than the industry survey. However, the ACMP is not so evenly represented across both surveys, which may indicate that its members are made up of more advertising photographers in metropolitan areas who were well represented in the industry survey. There are also a large number (45.3%) of respondents from the industry survey who belong to no organization at all. Case study research will attempt to explain more of the make-up of organizations memberships.

Another interesting discovery was the number of additional organizations photographers belong to, these included (n):

- Australian Institute of Medical and Biological Photographers (15).
- Wedding and Portrait Photographers International (3).
- Centre for Contemporary Photography (3).
- Australian Cinematographers Society (2).

- National Association of Photographic Professionals U.S.A.(2).
- Professional Photographers Association of Queensland (2).
- Australian Accredited Professional Photographers (2).
- Australian Graphic Design Association (2).
- World Institute of Photographic Masters (1).
- National Association of Visual Arts (1).
- Victorian Association of Photographic Societies (1).
- Australian Centre of Photography (1).
- Professional Picture Framers Association (1).
- Victorian Association of Photographic Societies (1).
- Australian Institute for the Conservation Material (1).
- Camera Collector Society (1).
- National gallery of Victoria (1).
- Six others with initials that could not be determined.

The above list shows the high number of organizations within Australia representing the specialized needs of photographers. This data suggests that there are low membership numbers in many small organizations. The question that needs exploring is, are all these organizations delivering the services which members require? As one respondent commented of one organization: ‘[I] resigned. Perhaps (organization name redacted) is the most fun but no Federal clout’.

Figure 5.3.2 summarises the responses to the question ‘in total how many years have you derived an income from photography? This does not have to be your primary income’.

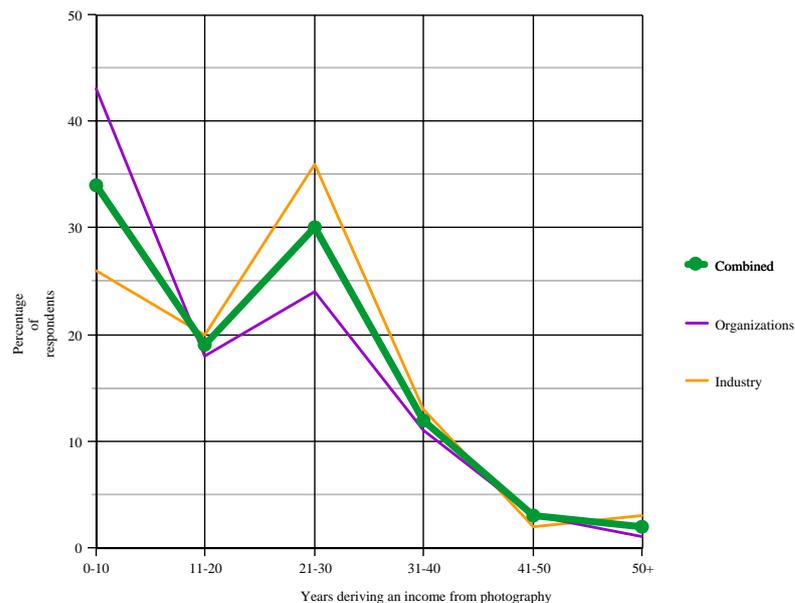


Figure 5.3.2 Percentage of respondents deriving an income from photography (n = 388), (p < 0.19).

The data in Figure 5.3.2 show that many people entered the industry in the ten years prior to the surveys being delivered, with the combined average highest at this point. This correlates with the Ibisworld (2012) analysis which showed the number of people who took up photography as a hobby doubled between 2004 and 2007 and that the trend has continued. It is possible that many of these new ‘hobbyists’ have in fact become ‘photographers’.

By the second decade there is a sharp reduction followed by sharp rise to the 21-30 year group. There is then a decline to the 50 plus year group which probably reflects the age of respondents and the fact there are fewer respondents in those years. These data are difficult to explain. Could the high number of entrants into the industry in the last decade, the beginning of the digital age, have had an adverse affect on the less well established professionals in the 11-20 year group? Could this be a result of the natural attrition in the business cycle? Could the peak in the 21-30 year group represent the well established photographers who have not been affected by new entrants into the industry?

These phenomena are not explained by the age of respondents. There is no correlation between the age of respondents and the lower numbers deriving an income from photography in the 11 to 20 year group. As Table 5.3.1 showed previously, there is a distribution of respondents’ ages rising steadily from 13.2% in the 21-30 age group, peaking at 29.4% in the 41-50 age group and then declining steadily to 6.3% in the over 60 age group. The complete survey data for this question can be viewed as Appendix H.

Figure 5.3.3 shows the years deriving an income from photography filtered for how photography was learnt, i.e. self taught or higher education. These data are the mean figures for both organizations and industry.

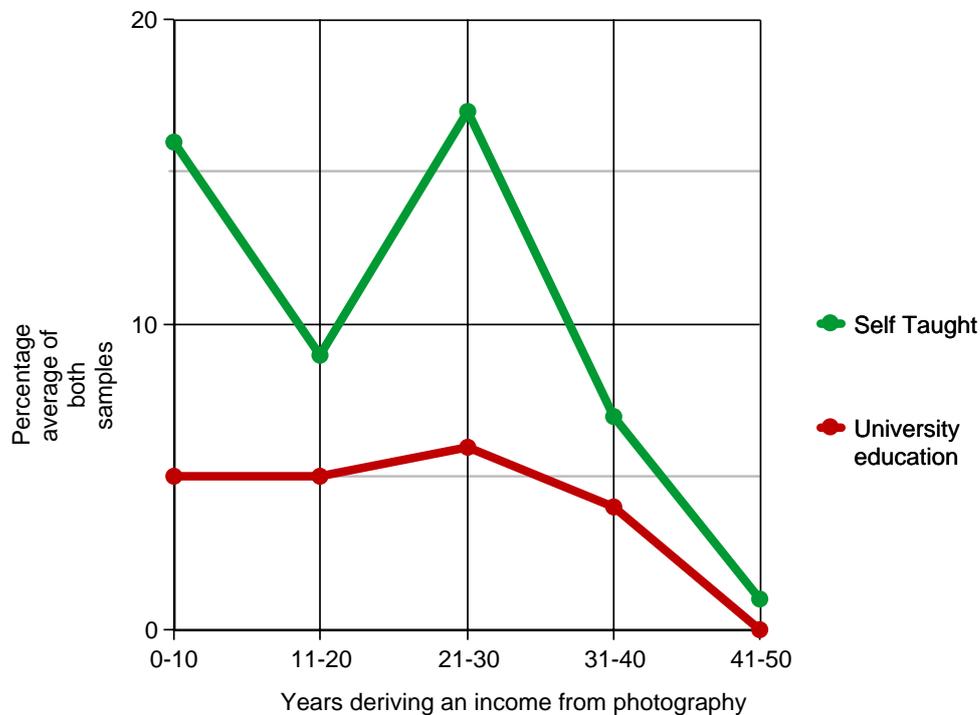


Figure 5.3.3 Sample averages of self taught and university educated photographers (n = 328), (p < 0.81).

Figure 5.3.3 seems to suggest that, compared to university educated photographers, there is far more volatility in the self taught entering the industry. The data shows a large number of self taught entering the industry in the last 10 years; the digital decade. What this data does not explain is the appearance of a large number of self taught photographers that entered the industry 21 to 30 years ago nor why there was such a dip in the 11 to 20 years group. University educated photographers peak slightly in the 21 to 30 year group but it may have been expected that there would be far more university educated photographers in the industry in more recent years considering the larger numbers of graduates leaving universities.

Table 5.3.5 summarises the answers to the question which asked if photography was the respondent's principle employment.

Table 5.3.5 Principle employment.		
Group (n=353), (p < 0.0010)	Yes	No
Organisations %/Number	66.7/178	33.3/90
Industry %/Number	84.3/75	15.7/14
Combined mean%/Number	75.5/253	24.5/104

This Table shows that almost 25% of the total sample had other forms of employment. These data suggest that one quarter of the industry is part time either by choice or circumstance. Almost twice as many people in the organizations group stated that photography was not their principle employment, this may indicate a high number of weekend/wedding photographers are members of organizations like the AIPP.

Figure 5.3.4 summarises the responses to the question, 'how would you describe your current employment status or position in the photographic industry?'.

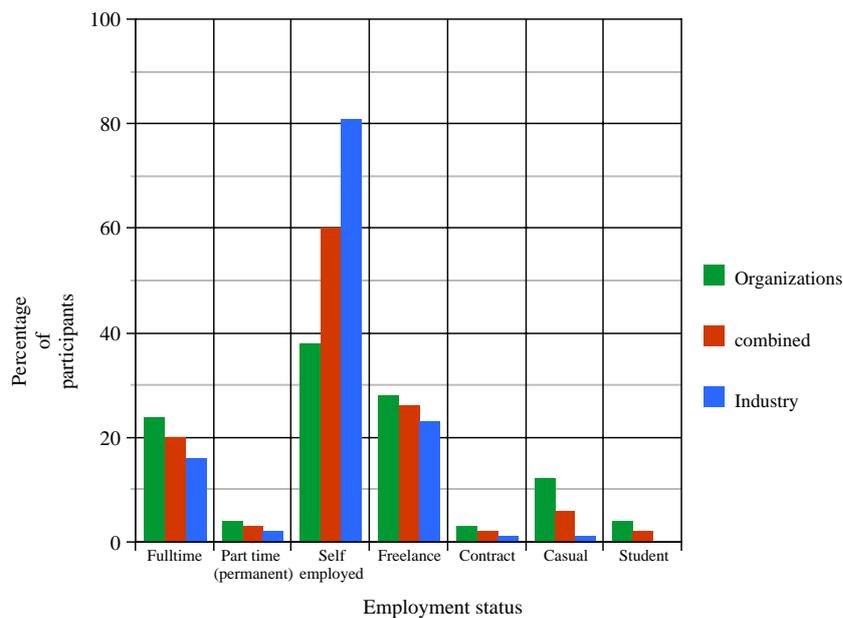


Figure 5.3.4 Combined employment status (n = 374), (p = 0.00).

Both groups are dominated by self employed and freelance photographers. There is a higher number of full time employees in the organizations which may indicate the higher numbers of employed photojournalists, teachers and scientific photographers in that sample. The complete numerical data set can be viewed as Appendix I.

Table 5.3.6 summarises responses to the question that asked for respondents' principal place/area of work. The data is presented showing the percentage and number of respondents and the table is ordered on the combined descending mean.

Table 5.3.6 Principal place/area of work.			
Group (n= 384), (p > 0.4)	Usually within the area I live	At different locations within Australia	Within Australia and overseas
Organizations %	66.4/192	16.6/48	17.0/49
Industry %	71.3/67	18.1/17	10.6/10
Mean %	68.9/295	17.4/65	13.8/59

Most respondents worked within their area of residence but the data shows that photographers are a mobile population with 31 per cent working at locations outside their area of residence.

Table 5.3.7 summarises the responses to the question that asked what sectors of the industry respondents worked within. Respondents were able to tick multiple choices. This table shows the main areas of occupation (above 10% mean participation). The table is ordered on the combined descending mean.

Table 5.3.7 Working role within the industry.			
Role (n= 352), (p = 0.0)	Organization % /number	Industry % /number	Mean % /number
Portrait photographer	46.1/123	55.3/47	50.7/170
Commercial, industrial photographer	25.8/69	67.1/57	46.5/126
Wedding photographer	32.2/86	37.6/32	34.9/118
Advertising photographer	19.5/52	48.2/41	33.9/93
Business manager or manage own business	19.5/52	43.5/37	31.5/89
Editorial photographer	36.3/97	22.4/19	29.4/116
Photojournalist	27.3/73	10.6/9	18.6/82
Photographic artist	20.2/54	16.5/14	18.4/68
Stock photographer	9.4/25	22.4/19	15.9/44
Public relations photographer	13.5/36	17.6/15	15.6/51
Fashion photographer	10.1/27	16.5/14	13.3/41
Post production professional	8.2/22	15.3/13	11.8/35

It is interesting that the mean percentage for portrait photography of just over 50% is almost identical to the Ibisworld (2010) research of the industry that shows a figure of approximately 50% as the wedding and portrait (domestic) sectors share of the Australian market. The second point of interest is the mean figure of 46.5% of respondents who identified themselves as commercial/industrial photographers, but Ibisworld (2010) data

shows that this represents less than 25% of the market. Case study research will attempt to explain how photographers actually work within their market and whether there are differences in the type of assignment mix between photographers working in capital cities and those in regional and country areas.

Table 5.3.8 summarises the responses to the question; ‘if you do other paid work outside the photographic industry what field is it in?’ Respondents could choose several responses. The table contains mean responses above five percent. The complete results can be viewed as Appendix J.

Table 5.3.8 With what other employment are photographers engaged?			
Job type (n=102), (P > 0.15)	Organizations% /Number	Industry /Number	Combined mean/ Number
Administration	14.4/13	16.7/2	15.6/15
Creative art and design	15.8/14	8.3/1	12.1/15
Publishing and journalism	14.4/13	8.3/1	11.4/14
Education	15.6/14	8.3/1	12.0/15
Media and broadcasting	13.3/12	8.3/1	10.8/13
Construction	1.1/1	16.7/2	8.9/3
Hospitality and events management	6.7/6	8.3/1	7.5/5
Management	5.6/5	8.3/1	7.0/6
Advertising,marketing, PR	12.2/11	0.0/0	6.1/11
Information services	3.3/3	8.3/1	5.8/4
Leisure, sport and tourism	2.2/2	8.3/1	5.3/3

This question was only answered by twelve people in the industry survey and that may reflect the lower number of photographers in this sector that do not have to seek work outside the industry; conversely it may show that there are many more part time photographers in the sample of organisations. Again this may indicate there are many weekend wedding/portrait photographers represented in this group. Case study research will attempt to explain this phenomenon.

Figure 5.3.5 summarises the breakdown of the time spent between employment in photography and in other employment pursuits. The complete data can be viewed as Appendix O. The data on the left represents those that worked 90% in other activities and 10% in photography.

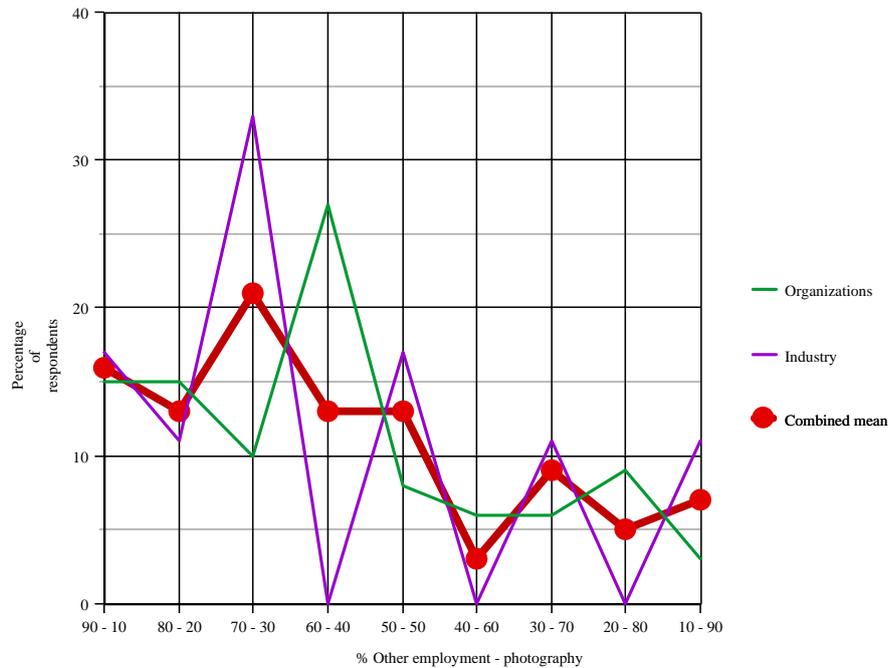


Figure 5.3.5 Analysis of the time spent between employment in photography and in other employment pursuits (n = 175), (p = 0.0).

This figure shows that many photographers spend a significant amount of time involved with other work and this correlates with the previous table showing far higher numbers of the organization sample perform other work. The data shows 66% of photographers in the organization sample spend more than 60% of their time in other employment. This may be at odds with data in Table 5.3.5 that shows 66% of photographers from the organizations sample stated that photography was their principle employment. Perhaps this indicates that many identify as photographers but must do significant other work to survive. Case study research will explore this speculation.

Table 5.3.9 analyses the responses to the question ‘if your work in the photography industry is not your principle source of employment do you wish it was?’

Table 5.3.9 Desire to work more in the photographic industry.		
(n=112), (p < 0.003)	Yes	No
Organisations %/Number	73.7/70	26.3/25
Industry %/Number	76.5/13	23.5/4
Combined industry mean/ Number	76.1/83	24.9/29

These data shows a very strong correlation between sectors and suggests (together with the previous Figure) that there are many respondents doing other forms of work that would prefer to be working as full time photographers. The data may also indicate that the majority of the industry as a whole is under-employed to some extent. Case study research will attempt to find out to what extent photographers feel they are under-employed and the reasons behind that observation. It will also try and determine what efforts photographers make to find more work, and what work they once did that may not now exist and the reasons for that phenomenon.

Table 5.3.10 summarises the responses to the question that asked photographers to detail the challenges faced in gaining more work in their sector of the industry. Participants could choose as many responses that were relevant to them.

Table 5.3.10 Challenges of finding additional work.			
Challenge (n=354), (p = 0.0)	Organization % Number	Industry % Number	Mean % Number
Digital photography has enabled many more people to enter the market, this is putting pressure on professional photographers	43.4/115	66.3/59	54.9/174
The market is over crowded	32.1/85	43.8/39	40.0/124
In my area of the industry my work is increasingly being done by amateurs	27.5/73	40.4/36	34.0/109
People will not pay for the quality of work that I do anymore	20.8/55	31.5/28	26.2/83
Price cutting is pushing me out of the market	23.8/63	31.5/28	27.7/97
I am not good at marketing my skills and services	23.8/63	13.5/12	19.7/75
I have all the work I need	20.0/53	16.9/15	18.6/68
There are limited employment opportunities in my area of photographic specialisation	18.1/48	6.7/6	12.4/54
In my geographic area opportunities are limited	10.9/29	2.2/2	6.6/31
Keeping up with new technology	5.3/14	7.9/7	6.6/21
I do not have enough experience	12.1/32	0.0/0	6.1/32
I do not have the equipment to compete with other photographers	9.4/25	1.1/1	5.3/26
I do not have the skills to compete with other photographers	4.9/13	0.0/ 0	3.0/13

Both groups indicate that they believe that the introduction of digital photography has affected their business and this could be partly explained by their response that amateurs are doing more of the work they once performed. Added to this, is the possibly related observation that people are no longer willing to pay for quality work, again this may indicate the effect of the well equipped amateur entering the market. Case study research will look at these questions in depth with consideration of the possible effects of innovation within the industry in the past ten years or so which represent the introduction of sophisticated digital technology; not only to the industry but to photographers of all kinds.

5.3.1 Summary

The Australian photographic workforce is three quarters male and slightly older than the national work force. Almost half of all photographers do not belong to any professional organization. A large percentage of photographers have left the industry after ten years, which may reflect the normal small business attrition rate. Most Australian photographers are self taught and three quarters said that photography was their principle employment. Many said that they spent 70% of their time in other paid work and three quarters said they would like to have more paid photographic work.

Photographers identified three main reasons why they were not getting enough photographic work: 1) digital photography, 2) an over-crowded market and 3) the number of amateur photographers. Price was also identified as a problem for some respondents saying that clients were no longer willing to pay for quality work.

There are important questions that need explaining that are core to the whole industry study. These questions include;

- What work used to exist that now does not because it is performed by others (non-photographers, for example engineers on site take their own progress photographs)?
- If the work that was once done by new graduates and keen amateurs has gone what work are they chasing now and how has this affected the industry? This would include questions about work quality, pricing and competition within the industry.
- Has the recent growth of photo agencies that are aggressively entering the commercial photography field altered the freelance market?

5.4 Industry and work experience, education, training

Table 5.4.1 summarises responses to the question, ‘what attributes or qualities have enabled you to establish a successful career in the photographic industry? Respondents could tick as many as they wished and were encouraged to leave a comment.

Table 5.4.1 Successful career attributes.			
Attribute (n=349), (p < 0.06)	Organizations % /Number	Industry % /Number	Mean & /Number
I have worked hard over many years and made a reputation for myself and my work	56.5/147	71.9/64	64.2/211
I am good at solving problems	55.0/143	46.1/41	50.6/184
I work well alone	49.2/128	47.2/42	48.2/170
I am very competitive	22.7/59	31.5/28	47.2/87
I have a unique talent that people are willing to pay for	40.4/105	40.4/36	40.4/141
I had a good education and training	45.0/117	32.6/29	38.8/146
I am a good team worker	41.2/107	28.1/25	34.7/132
I am willing to do work that other people will not do	26.9/70	36.0/32	31.5/102
I have good management skills	25.8/67	32.6/29	29.2/96
I am very good at self marketing	23.1/60	32.6/29	27.9/89
I have specialised equipment that enables me to do work others can't do	10.4/27	25.8/23	18.1/50
I participate in industry awards competitions and that keeps me up with industry best practice	16.9/44	7.9/7	12.4/51
I have good retail skills	10.4/27	13.5/12	12.0/39

This survey data is somewhat self selecting as only the photographers who are still in business could have answered the questions. Overwhelmingly, years of hard work and the establishment of a reputation were selected by both groups as the major reason for their success. The remainder of the response categories can be seen as common generic skills of many trades and professions. Case study research will attempt to explain what is meant by hard work; do talented photographers find work naturally coming their way or, have even the most talented had to market their skills and manage their businesses well. And do, where applicable, photographers see themselves as anything other than small business men and women.

Figure 5.4.1 shows responses to the question that asked photographers, ‘what do you believe are the defining attributes/features/skills of a professional photographer. This chart was compiled by grouping key-word descriptors in respondents’ answers and quantifying the results. The complete data can be viewed as Appendix K.

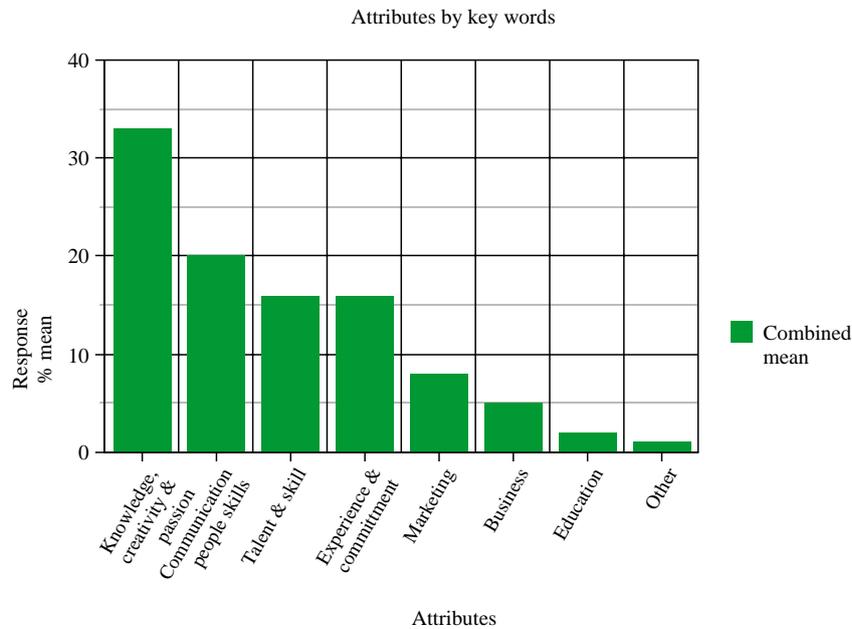


Figure 5.4.1 Combined responses to defining photographer attributes (n = 311).

Attribute one, (knowledge, creativity, technique, quality and passion) and three, (talent, skill, eye, style) contain similar themes that are related to the creative and technical skills of photographers. Combined they indicate that 60% (first choice) of respondents think these are the most important attributes of a professional photographer. Between those choices, communication and people skills were considered very important. What is perhaps more significant is the low weight placed on marketing and business skills, which were a combined mean score of 12.4%. Case study research will investigate if this phenomenon has anything to do with the desire of many photographers for more work or if they believe that photographic talent is more important.

Although many respondents sited technical skills as important almost no one mentioned anything related to computer, software or IT skills. Also education ranked lowly with a response rating of 2.9% as a third rank choice. In fact one person even stated that having a non-formal education was an advantage.

In table 5.4.1, skills and talent were rated below many other choices as defining skills of a photographer. Photographers credit these skills with their success but do not think they are as important as a defining attribute. This is an anomaly that will be investigated in case study research. Another anomaly is education and training which is credited quite highly as a skill leading to success but rates poorly as a defining attribute.

Table 5.4.2 summarises responses to the question which asked respondents how they learnt their photographic skill: they were able to select more than one choice.

Table 5.4.2 How photographers acquired their skills.			
Method (n= 331), (p < 0.5)	Organizations % /Number	Industry % /Number	Mean /Number
Self taught	61.4/157	65.8/50	63.5/207
University course	28.7/73	18.4/14	23.6/88
Short courses conducted by universities, Tafe colleges, photographic schools or industry bodies	22.0/56	27.61/21	21.5/77
Tafe course	18.9/48	22.4/17	20.7/56
Cadetship	12.2/31	10.5/8	11.4/39
Apprenticeship	4.3/11	6.6/5	5.5/16

TAFE and university are similar (low 20%) but as a vocational choice they are well behind the self taught. It will be interesting to discover how the self taught actually learnt their skills what makes them predominant in the industry. Case study research will explain if these data reflect the age of many respondents in these surveys and if there were no educational opportunities available when they entered the industry.

Figure 5.4.2 shows the breakdown of age compared to how respondents learnt their skills. This was compiled by filtering the age data and the learnt skills data.

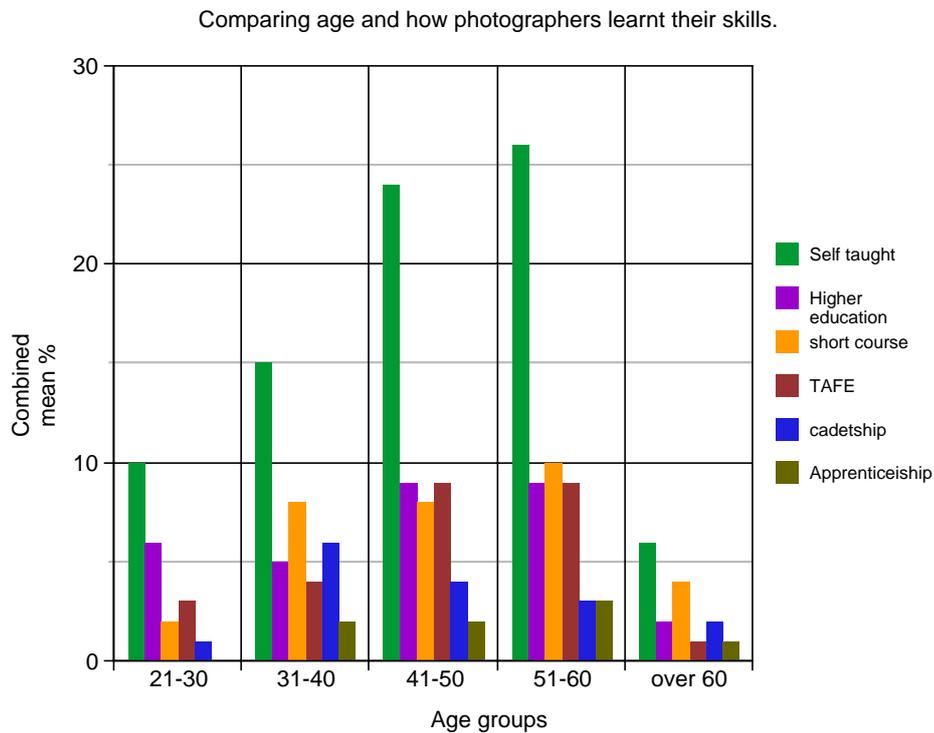


Figure 5.4.2 Breakdown of age compared to how respondents learnt their skills ($p < 0.9$).

Figure 5.4.2 takes each age group and filters the responses to show how respondents learnt their skills. This data is the mean percentage of both survey groups' responses. While not everyone learns their skills in their twenties it is fair to assume many people do, and then join the industry in some capacity. In all age ranges the self taught are predominant. In the over 60 year group all numbers decline, probably because of retirement. It is evident that a greater percentage of respondents took up university education in recent years.

The TAFE data shows a similar pattern to the university data except it trends steadily down from the 51 to 60 age group. While reasonably steady for 20 years the popularity of short courses is in sharp decline; it is possible that the seminar offered by organizations and individuals may be replacing the more formal short course.

The apprenticeship has been in steady decline as a way of learning photography for 40 years. This may be due to studio assistants working more and more as casual employees rather than being indentured, full time, to one photographer.

It is not clear why the cadetship, after growing for 20 years, has gone into sharp decline. This group will mostly be photojournalists working in the newspaper industry. The cadetship was the traditional way newspaper photographers learnt their craft. It is possible that these employers are now taking young photographers with formal photography/media education and employing them as graded trainees.

Respondents chose to leave comments in the *other* box to better explain their education. Fifty-nine percent said that they learnt their skills with on the job training, usually as an assistant. This is important as it highlights a major way for people to enter the industry. The remainder of responses included online learning, seminars, the Australian Defence Force and camera clubs. It seems likely that many of the self taught may have been involved with some type of on the job training at some point in their career. If this is indeed so it is of importance to this thesis and any implications will be explored in the case study research. The core question here is that if so many working photographers are self taught what is happening to the hundreds of people who graduate from university courses each year; why are there relatively so few in the industry?

The quote below shows the sometimes complex ways photographers learn their craft and what one person (21-30 years experience) believes is important. This quote is included to show the sometimes circuitous route photographers choose to take to learn what they think is necessary to succeed. This may be a fairly common path and case study research will establish how photographers educate themselves before they feel well established.

I studied photography at RMIT, did a cadetship, worked for an Australian Advertising Photographer of the Year. But my best learning has been from working closely with journalists, learning the depths of how they see a complex story and trying to capture that insight visually.

Table 5.4.3 analyses responses to the question asking where photographers obtained their academic qualification. The table was compiled by counting the choices made by respondents.

Table 5.4.3 Where did photographers obtain their qualification.		
Institution (n=173)	Number	%
All Universities, combined total excluding those below.	71	41.0
Royal Melbourne Institute of Photography University.	26	15.0
All Technical and Further Education, combined total.	25	14.4
Griffith/Queensland College of the Arts.	14	8.1
Photographic Studies College, Melbourne.	11	6.4
James Cook University, Townsville.	11	6.4

Most Australia teaching institutions were represented in these data but many received one or two responses. This was the case for TAFE colleges and if they were listed separately they would not feature in Table 5.4.3, but collectively they represent a significant force in photographic education. It is also notable that a private institution, the Photographic Studies College (PSC) is included. PSC is a college located in inner Melbourne that has been operating for over thirty-eight years. It would be interesting to discover why their graduates are so well represented and this may be explained in the case study research.

Figure 5.4.3 examines the responses to a rating scale question which asked respondents who received a formal education how well they were taught various key skills. The x axis represents the 'rating average' where the five ratings choices in each row were assigned a numbers from 1, extremely well to 5, not well in each column in each row. Each point on the graph shows the average score for each skill. One hundred and fifty one people from the organizations answered this question and the rating average is 3.2 out of 5, forty-six people in the industry group answered this question and the rating average is 3.5 out of 5.

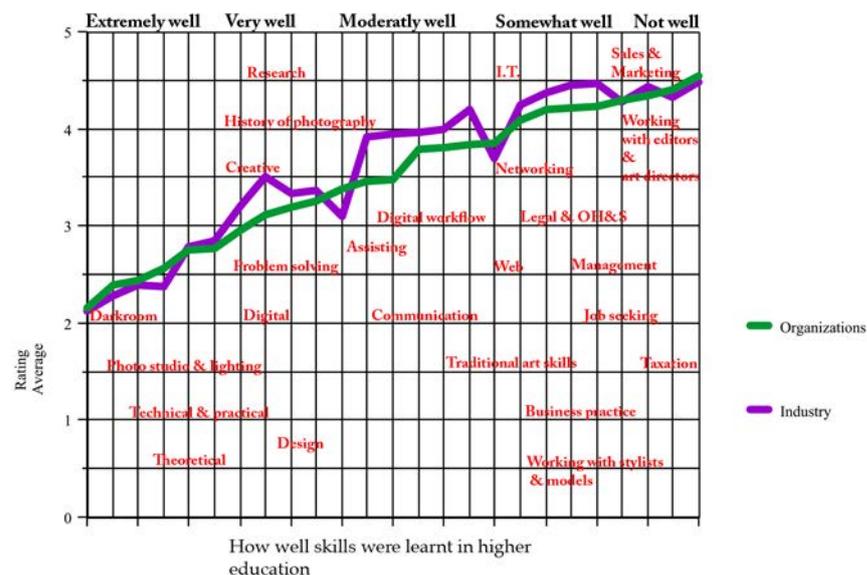


Figure 5.4.3 Evaluation of skills learnt in higher education (p < 1.0).

Clear issues emerge from the data displayed in Figure 5.4.3; firstly the traditional photographic subjects have been well taught and secondly the very low rating of business skills and work related skills. This should be viewed in the light of the very high numbers of photographers who are under-employed. It is possible that photographers are lacking

or unaware of the need for business and marketing skills. Case study research will try and explain how working photographers view the importance of skills learnt at university and what skills they may have benefitted from learning but were not taught. These data show that there is a very close alignment of responses between the two surveyed groups. The complete data from which Figure 5.4.3 was derived can be viewed as Appendix L.

Table 5.4.4 summarises the answer to the question which asked, ‘[w]edding and portrait photography is one of Australia’s largest industry sectors. It is practiced in almost every city and town in Australia. If you are a wedding and portrait photographer, how well did your education or training prepare you to enter the industry?’

Table 5.4.4 Training for wedding and portrait industry.					
(n= 132), (p < 0.8)	Extremely well prepared	Very well prepared	Moderately well prepared	Somewhat well prepared	Not well prepared
Organizations %/Number	5.2/5	11.3/11	35.1/34	18.6/18	29.9/20
Industry %/Number	8.6/3	14.3/5	31.4/11	22.9/8	22.9/8
Mean/standard deviation =10.5	6.9	12.8	33.3	20.6	26.4

The data shows that most respondents considered that they were only moderately or less well prepared for work in the wedding and portrait sector of the industry; this is a combined total of 80% of respondents. The question must be asked of universities, why are they not doing more to prepare their students for this sector, the largest sector in the industry, and one that is practiced in all regions of Australia. Are the self taught better motivated and more able to survive in this industry and could this be because of previous business experience? This is a crucial question considering that there is evidence that a large majority of photographers consider their businesses are suffering from the introduction of digital photography and the influx of amateurs. Case study research will test the perception that the self taught entering the industry may well be taking advantage of the digital revolution but, more importantly, may be at a greater advantage because they understand the *business of business* on account of their backgrounds.

5.4.1 Summary

This section shows that photographers cite hard work and reputation as the main reasons for their success in the profession. They said that creative and people skills as well as technical

skills were the most important attributes required to succeed in the industry. Information and technology and computer skills were rated as less important by photographers. Most photographers are self taught but this number is declining as more university trained photographers enter the industry. The number of university educated photographers is still lower than the number of self taught photographers. For those with a formal photographic education, the basic creative and technical skills were well taught, however business skills were either not well taught or not taught at all.

Questions that need further explanation include:

- The importance of business and marketing skills; how and where do photographers acquire them?
- Why is the apprenticeship in decline and how are photographers finding and receiving on the job training?
- How do the self taught teach themselves?
- How do photographers quantify their 'hard work' in terms of activities?
- How do photographers with university qualifications rate the usefulness of their training?

5.5 Ongoing professional development

Table 5.5.1 summarises answers to the question that asked respondents if they participate in any on-going training or professional development that is offered by professional organization(s) to which they belonged.

Table 5.5.1 Participation in professional development.		
(n= 318), (p < 0.8)	Yes	No
Organizations %/Number	54.1/131	45.9/111
Industry %/Number	47.4/36	52.6/40
Mean	50.9	49.3

This data shows that an average of 50.9% of respondents participated in ongoing professional development and conversely 49.3% did not. There is strong alignment between both survey groups. This researcher would have expected that members of organizations would have participated at a far higher level in professional development programmes because many of the organizations provide these services to a high quality. The opposite may have been expected from the industry group but this was not the case. A question that needs to be asked in case study research is why do photographers belong (or do not) to organizations, what they get out of membership and what they think they should get out of membership?

Also photographers will be asked; if you *were* a member of an organization why did you cease your membership? This information may help organizations provide services that photographers need which may increase membership. These questions will help to establish what role organizations play in Australia, if photographers' needs are being met and their role in photographic education.

Table 5.5.2 summarises responses to the question, 'how important is it for the profession that professional bodies (eg. AIPP, ACMP) introduce continuing professional skills development as a requirement to maintain professional accreditation and membership?'

(n= 293), (p < 0.26)	Organizations % /Number	Industry % /Number	Combined mean/total number
Extremely important	37.9/86	36.2/25	37.1/111
Very important	25.1/57	23.2/16	24.15/73
Moderately important	16.7/38	13.0/9	14.9/47
Somewhat important	7.0/16	15.9/11	9.3/27
Not at all important	13.2/30	11.6/8	12.4/38

Ongoing professional development is considered to be important to most photographers but exactly what is important to such a diverse group may be explained in the case study research. This data shows strong correlation between the survey groups.

Table 5.5.3 summarises the responses to the question, 'which of the following do you regularly (approximately annually) engage with?' Respondents could tick as many as they thought relevant. The data is presented in a descending order based on the combined mean.

Option n= 330, (p = 0.0)	Organizations %/n	Industry %/n	Combined Mean
Relevant books and magazines	72.9/183	51.9/41	62.4
Visitor to art galleries	71.7/180	51.9/41	61.8
Trade magazines	52.6/132	49.4/39	51.0
Online Tutorial	49.0/123	51.9/41	50.5
Trade shows, eg. PMA	37.5/94	54.4/43	46.0
Industry seminars	42.6/107	44.3/35	43.5
Creative workshops	46.2/116	40.5/32	43.4
Exhibitor at art galleries	32.7/82	20.3/16	26.5
Industry award competition	37.1/93	13.9/11	25.5
Industry shows	17.5/44	27.8/22	22.7
Industry conventions	22.3/56	21.5/17	21.9
Webinars	16.7/42	22.8/18	19.8
Academic research	23.5/59	7.6/6	15.5
Academic conferences	11.6/29	2.5/2	7.1
Mean/Median/Standard deviation	37.5/37.1/19.9	33.0/34.1/18.3	35.0/26.5/18.3

These data are again closely aligned between the two survey groups and shows that generally photographers do participate in a wide variety of activities that could be seen as improving and up-dating their professional skills. Case study research will examine the real importance of on-going training to photographers and how easy is it for them to find the knowledge they need, especially in non metropolitan areas.

Table 5.5.4 summarises the responses to the question; ‘if you are an employee (not self employed) in the photographic industry are you provided with adequate and ongoing professional skills development?’

Table 5.5.4 Employee industry training: Organizations.		
(n= 99), (p < 0.045)	Yes	No
Organization %/Number	24.4%/22	75.6%/68
Industry %/Number	55.6/5	44.4/4
Average	40/27	60/72

The important data here are the figures from members of organizations, many of whom are employed photographers for example, photojournalists in newspapers (MEAA respondents 32%/69) and medical and scientific photographers (ITP respondents 9%/19 respondents) employed in hospitals. The sample of organizations shows three quarters of the respondents citing they received no ongoing training. Case study research will try and establish if there is a need.

5.5.1 Summary

While photographers from both surveys rate the importance of ongoing training quite highly only half (similar in both surveys) participate in training offered by organizations (45% of the industry respondents do not belong to any organization). Seventy six percent of employed members of organizations said they were not provided with any ongoing industry training.

Books and magazines were the most popular way for photographers to receive new information. Seminars and trade shows are attended by about half of all respondents; online training is at the same level and it can be anticipated that this type of training will become more popular.

Considering that ongoing training is seen as important by most photographers only half

participate in any, and when they do it is mostly done by reading books and magazines and visiting galleries. With so many photographers looking for extra photographic work and citing digital innovations amongst the challenges of finding new work it is surprising they are not participating in many of the technical and business training opportunities that exist. Professional organizations play a vital role in providing ongoing professional development but there are many organizations and membership across the industry is relatively low. There are challenges for the industry’s many representative bodies to raise membership levels and provide relevant training options.

5.6 Employment, training and job seeking

Table 5.6.1 summarises the answers to the question ‘have you ever employed people who graduated from university photography or creative art schools?’

Table 5.6.1 Employment of graduates.			
(n= 328), (p = 0.0)	Organizations % /Number	Industry% /Number	Mean % /Number
Yes	23.5/58	35.8/29	29.7
No	76.5/189	64.2/52	70.3%

These data show that most photographers have never employed a graduate but they may still employ an assistant. Most photographers are self employed and often work alone. It may be that many can not afford to employ assistants as the size of small jobs would prohibit it. However, many commercial photographers do employ assistants as their work is often advertising photography with large budgets. It will be interesting to discover, in case study research, from where they are drawing these people and what criteria they use in the employment selection process.

Figure 5.6.1 summarises the responses to the question that asks respondents to rank the skills (graduate attributes) of graduates they *have* employed. The *x* axis is the mean rating from 1 *highly skilled* to 5 *poorly skilled* which is weighted for responses. Each point on the graph shows the mean score for each skill. Thirty people from the industry group answered this question and the rating average is 3.0. Sixty-six people from the organizations group answered this question and the rating average is 3.0.

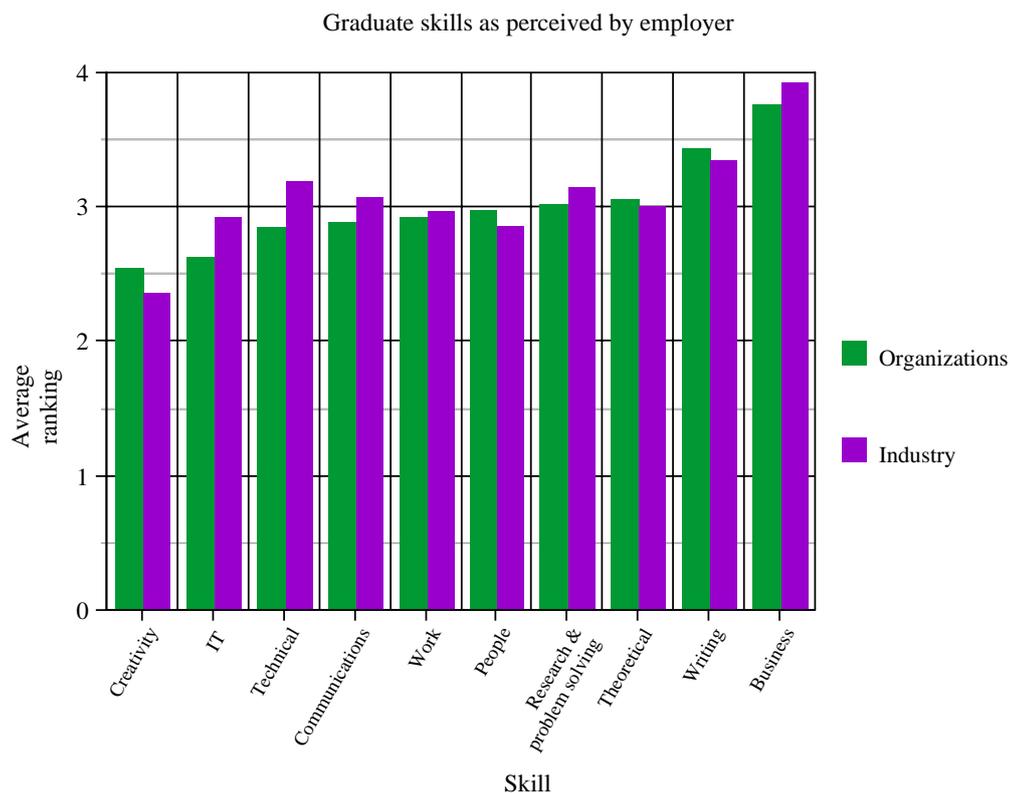
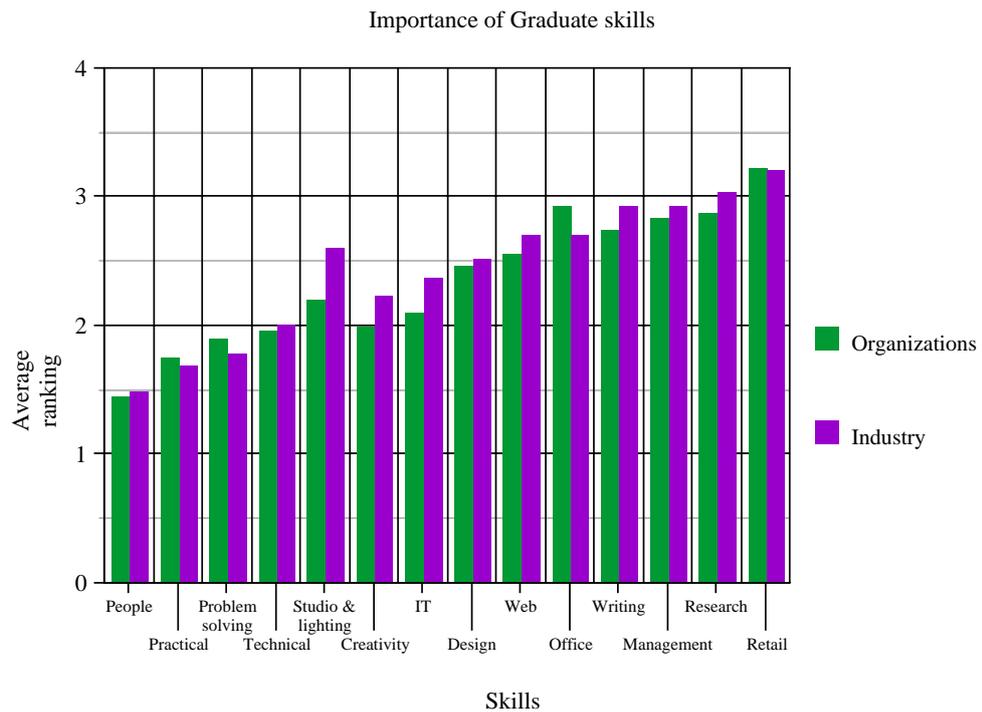


Figure 5.6.1 Mean skill levels of employed graduates, ($p < 0.99$).

These data represent the skill levels in various categories graduates bring to the work place as assessed by employers. These data align well with Figure 5.6.2 which has these as highly desirable attributes. Business skills are rated low, but this skill is not valued very highly by employers. However, as most photographers are self employed, business skills may be very important skills to have. Case study research will investigate why some graduate employees are seen as having poor skills in some areas and if this really effects employment possibilities. The detailed data for Figure 5.6.1 can be viewed as Appendix M.

Figure 5.6.2 represents the responses to the question; ‘if you were to employ a graduate from

a photography or creative arts school how would you rate the importance and necessity of the following attributes or skills?’ The *x* axis is the weighted average across the columns from 1 *essential* to 5 *not valuable at all*. Each point on the graph shows the average score for each attribute. Thirty one people responded from the industry group and the average rating for skills is 2.4; two hundred and seventeen people responded from the organizations group and the average rating is again 2.4.



2010 survey of organizations and industry

Figure 5.6.2 The importance of graduate skills ($p < 0.99$).

People skills are the essential graduate attribute, while management and retail the least important skills. As this is a question about employment case study research will explore what types of work graduates are required to do and how they are chosen for the job. Also, if people skills are so important are these skills being taught in any way at the universities, and are students being selected into courses because they possess this important skill?

5.6.1 Summary

This final section looked at the skill levels graduates have and may need when employed by a professional photographer. While people and creative skills are considered important

data highlight the lack of importance given to business and marketing skills. This is especially interesting in context of data already examined that shows so much apparent unemployment in the industry. Case study research will look in detail at the actual range of business skills industry professionals possess and where they learnt them.

5.7 Industry survey summary

Several themes arise repeatedly in this section, these are summarised here:

- 1 The number of university graduates in the industry is small and most photographers are self taught; do the self taught have an advantage over university graduates?
- 2 Of concern is the possible underemployment of photographers; most photographers claim to have to supplement their photography income with other work.
- 3 Photographers cite many reasons why they have difficulties finding additional/sufficient work: an understanding of contemporary industry trends/innovation is required.
- 4 Although photographers seemed to suggest that they had adequate training in the traditional skills of photography, when wedding photographers were asked if they received adequate training in wedding and portrait photography most said they were only moderately to poorly trained. Given this is the largest segment of the market this seems somewhat surprising. It needs to be explored in depth if photographers may not be receiving adequate vocational training. Is this the role of universities or TAFE colleges?
- 5 Almost half the photographers in Australia do not belong to any professional photography organization to represent their views or to access ongoing training and networking opportunities. While that may be so several large organizations and many small ones exist. The role of organizations needs to be examined with a view to future representational strength.
- 6 Although management and business skills are not valued by employers as graduate skills, they may be valuable to graduates who may wish to establish their own business. This takes the discussion back to the issues of the seemingly high attrition rate in the first ten years of business, the low number of graduates in the industry and a need for photographers to supplement their income with other work. The question must be asked of universities; are they doing enough to provide their graduates with the skills and attributes they need to turn their education into a successful photographic career?

Many important findings and further questions emerged from the analysis of the base line survey data. It will be the case study research that will explore many of these questions in more depth. This will provide a context for the industry in the second digital decade of the twenty first century.

The complete Surveymonkey.com data summaries of the Organizations and Industry questionnaires can be viewed as Appendices O and P.

CHAPTER 6

Qualitative data analysis: higher education sector

6.1 Introduction

This chapter will analyse the qualitative data collected from a series of interviews with teachers in the case study of the higher education sector. Following a demographic summary the analysis will be addressed in three broad sections with subsequent sub-sections:

- 1) Preparing graduates for their future:
 - › Curriculum core aims.
 - › Curriculum issues.
 - › Vocational issues.
 - › Business and marketing.
 - › Preparing students for the domestic sector.
 - › Graduate numbers.
- 3) Pedagogy:
 - › Methods used in teaching.
 - › Content delivery and teaching settings.
 - › Practice and theory: how teachers approach their teaching.
- 3) University and teachers:
 - › Industry experience of full time and sessional teachers.
 - › Teachers education training.
 - › Research within schools.
 - › Regional issues facing schools.
 - › Future issues facing photography education in Australia.

While Punch (2009, p. 171) states there is ‘no single way to do qualitative data analysis’ there is a need to provide some logical structure. Therefore each section will be described with reference to the questions asked and an explanation of the phenomenon under investigation will be made. In most sections, following the analysis, a hypothetical explanation of the data will be framed to identify common patterns.

This chapter represents the voice of education, limited only by the number of people from

the sector that could be included; it is a narrative that speaks from within the case. More importantly this analysis adds explanations and depth to the research themes and draws out the sometimes more subtle nuances that lie beneath the surface of the quantitative data. It is a strategic reflection of views which aims to better explain questions arising from the quantitative phases. This qualitative phase will also provide internal verification of the quantitative analysis.

The quantitative baseline survey of teachers was answered by fifty eight people from thirteen universities. This follow up case study research included eight teachers from four universities and one teacher from the VET sector. The only caveat is that the case study represents four higher education institutions (31%) out of the thirteen that were identified as teaching photography and responded to the survey, plus one VET school. What is important to consider is not the size of the case study in terms of numbers but rather in terms of the depth it will provide. Furthermore the explanations and information provided will either support or refute the quantitative data and eventually create new insights. New questions and themes may also arise that require further explanation. This is the enlightenment phase and should be read with the understanding that the questions asked of interviewees are based on what emerged from the baseline questionnaire phase which in turn was derived from the research questions.

6.1.1 Profiling the education interviewees

All interviewees were asked for some demographic information that would position them within the case study. While no identifying data can be displayed Table 6.1 shows some information to profile each person.

Table 6.1 Demographic information about interviewees			
Informant	Age	Location	Role
T1	30-40	Townsville	Senior academic/lecturer
T2	30-40	Townsville	Sessional lecturer
T3	60-70	Melbourne	Head of School, retired
T4	50-60	Melbourne	Academic director/lecturer
T5	60-70	Regional Victoria	Senior lecturer/part time
T6	60-70	Brisbane	Programme convenor/lecturer
T7	60-70	Melbourne	Programme director/senior lecturer
T8	40-50	Melbourne	Senior academic/researcher
T9	40-50	Townsville	Lecturer

Table 6.1 reveals a diverse group of interviewees in terms of age, location and the work they perform. The interviewees are located in metropolitan and regional areas of Australia. This will enable comparisons to be made between regional and metropolitan schools. A wide range of experiences of academics is represented including a young sessional teacher, lecturers, programme leaders and a Head of School.

6.2 Preparing graduates for their future

This section presents data derived from interview transcripts and other sources and will be analysed to explain in greater detail questions arising from the quantitative phase, in particular, the aims of curricula in preparing students for their lives beyond undergraduate study. The core of comprehending the final alignment analysis is understanding the mechanisms as to how and why schools and teachers prepare students for the future.

6.2.1 The core aims of courses

Table 6.2 is a summary of stated course aims from schools of higher education teaching photography in Australia. This is a broad analysis and includes quotations from official handbooks and web sites. The table includes schools that are not included in the interview programme. Two schools, the College of Fine Arts at the University of New South Wales and the Sydney College of Arts at The University of Sydney mention photography in their course guides but do not discuss career outcomes related to photography.

Institution	Exemplar quotation
Australian National University	'The majority of graduates from the Photography and Media Arts Workshop, in addition to practising as independent artists, find employment in various fields of the arts industry, including new technology and photographic industries.' (ANU, 2012)
Charles Sturt University	'In the third year students identify and investigate areas of photographic practice of particular relevance to their career aspirations.' (CSU, 2012)
Curtin University	'The major provides for a variety of vocational and further needs, from competencies in the continually evolving digital modes of production and dissemination, to the practical application of communication theory and design principles.' (C.U., 2102)
Edith Cowan University	'Our Communications, Creative Industries and Arts course structures are designed to promote multi-skilling of students, which combined with our focus on community projects and industry placements, serves to increase employment prospects in an increasingly competitive market.' (ECU, 2012)
Griffith University	'... prepares graduates to play their part in the world ... the curriculum fosters a global perspective in all students.' (G.U. 2011, p. 1) 'You will be capable of working at a professional level ... anywhere in the world'. (G.U. 2011, p. 9)

Table 6.2 Stated course aims for graduates	
Institution	Exemplar quotation
La Trobe University	'Through a new Work Ready stream, students can now add to the standard curriculum by doing subjects designed specifically to help prepare for the workforce.' (La Trobe, 2012)
James Cook University	'This course offers a balance of practice and theory for those seeking careers in digital imaging and photography.' (J.C.U., 2012)
Photography Studies College	'... all [courses] designed and specifically written to produce contemporary professional photographers and image makers who are prepared for a career in one of the many sectors of the photographic industry.' (P.S.C., 2012)
RMIT University	'The degree enables you to develop a range of skills relevant to the diversifying creative and commercial industries.' (R.M.I.T. University 2011, p. 26)
Southern Cross University	'Graduates work as professional and community artists, designers, arts administrators, educators, curators and arts writers. Graduates are employed by the private and public sectors or are self-employed.' (SCU, 2012)
University of Melbourne Victoria College of the Arts	'...prepares students for careers as art practitioners. An education in the visual arts usually produces people who are creative, flexible and able to adapt specific skills to occupations with a visual or aesthetic component.' (V.C.A., 2012)
University of South Australia	'Professional visual arts or craftspersons are essentially self-employed, working from their own or cooperative studios.' (UniSA, 2012)
University of Tasmania	'It provides graduates with knowledge and skills in their chosen field and the capacity to continue to develop towards independent and professional practice in the creative arts.' (U.T., 2012)
University of Technology Sydney	'Graduates of this course are able to engage in the broad scope of photographic and image-based careers.' (UTS, 2012)

Table 6.2 shows that, despite using selectively chosen quotations, courses are largely focused on vocational outcomes for their graduates with Griffith University clearly stating that they see their graduates filling global roles and Edith Cowan University identifying an increasingly competitive employment market.

A quantitative survey question asked respondents to state the core aims of their course and the analysis shows four general response outcomes:

- Those that mentioned vocational outcomes that clearly point to photographic practice (20%).
- General vocational outcomes (37%).
- A broad based creative education (30%).
- Other responses (13%).

In order to determine if there is much variation in the core curriculum aims of different schools and to develop a better understanding of any differences all teachers were asked to explain the core aims of courses they were associated with. Without exception all interviewees said that their core aim was vocational and selected comments are summarised in Table 6.3.

Table 6.3 Summary of intended core aims of courses teaching photography		
Interviewee	Comment	Analysis
T1	50% of our program is around preparing for the world of work and the other 50% is about the art form, the discipline, the nature of knowledge, the history of and philosophy of artistic practice.	This reflects what most interviewees expressed where the scope of their curricula had a common philosophy of going beyond purely vocational goals by offering extensive generic content that would prepare students for a wide range of work choices.
T3	...the core aims were ... it was a diversity.	T3 based his course design on three key attributes: knowledge, personal creativity and the reality of industry.
T4	We are part of the VET sector we are producing graduates who are industry ready and that is something we pride ourselves on ... if that's all we did we would not be as true to the students as we should be.	This philosophy was, perhaps surprisingly, held by the VET school's teacher whose comments reflected those of many interviewees when he stated that if they were only producing graduates who were industry ready they would not be doing enough to prepare their students life.
T5	Ours is absolutely vocational.	T5 teaches photojournalism and works very hard to find placements for her graduates.
T6	Preparing people to function as photographers ... across a range of disciplines.	This is a vocational outcome but T6 questions the concept of vocation: is it something you get paid to do or something you enjoy doing?
T9	My overall core aim is to develop my students as self-aware intelligent practitioners of whatever subject they are in ... everything for my money is vocational.	T9 has a wish to develop individual skills but feels that in a publicly funded institution you must be aware of the market.

This analysis is at variance, to some extent, with the quantitative data, it shows that all interviewees agree that the core aims of their programmes are to provide vocationally relevant training. It also demonstrates that many teachers place importance upon broad generic skills development that will prepare their students for the diverse challenges their eventual careers will present. Nevertheless the following questions need exploration: 1) are the skills required by a changed industry being taught and 2) how are the needs of industry being assessed?

6.2.2 Curriculum design and implementation for industry

The core aims of courses have been outlined above, but it is the design and implementation of a school's curriculum that shows how it intends to meet those outcomes. Teachers were asked to explain how their curriculum design is relevant to the industry of professional photography.

The purpose of this analysis is to look at how curricula have been redesigned to meet the needs of a changing industry; one where the paradigm of the role of the professional

photographer may have changed forever. Teachers were asked to explain if the new curricula were serving the needs of professional photography, and in particular, if course design was providing enough specialized photographic training to meet the needs of students entering the profession.

Firstly, and possibly provocatively, this scenario is posed: T9 questioned the current notion of professional photography and stated that ‘the legacy of the traditional photographic industry’ was being usurped by digital media professionals whose skills were ‘enabling nonspecialist practitioners to become photographers’. T9 sees the role of the professional photographer, someone with ‘specialist technical knowledge’ as ‘rapidly diminishing’. T9 is setting the scene for educational outcomes that enable students to work in a broad range of career opportunities. T7 agrees and explains ‘teaching is very different to what it was’, in the past his students were put through ‘a very tight programme’ and were prepared for the studio. However, there are now more choices available to undergraduates and the chance to specialize by doing post graduate courses.

T6 accepts that digital technologies have changed some, but not all, photography teaching in his school, where students still shoot film. He says ‘we haven’t changed the focus on photography...[o]ur perception of training photographers is, obviously, we give them the technical foundation but our aim is to train them philosophically as photographers, as storytellers’. He believes this gives his students the flexibility to work in many areas.

T4 is adamant that it is course design and implementation that matters and that, if you understand what ‘skill sets they [students] need to [have when they] leave’ then you can work backwards and create the learning that is necessary. In contrast T3 believes that ‘a course does not need to pre-empt what a student is going to do with that knowledge’. Ultimately his tightly focused courses gave ‘people a choice’ but he explains that broad based courses ‘that have a broad ranging series of skills produced people who go out and use those [skills] in an appropriate way as well’.

6.2.2.1 Variations in curriculum design

Three schools offered what could be described as a traditional photographic course structure where students choose defined photographic streams or elective course directions, for

example commercial and advertising illustration, photojournalism, or art practice. Course streaming varied a little from school to school, for example, one has a common first year and then offered speciality streaming while the others offer streaming via course electives in the final year. RMIT University offers an extensive range of options in their third year programme, including Web Imaging and Design and Digital Video Projects. The fourth school offered a broad range of subjects that were offered under several bachelor degrees. These included for example, Bachelor of Creative Industries (Media Design, Photomedia and Visual Arts), Bachelor of New Media Arts (Illustration and Visual Media, Media Design and Music and Sound Media).

To begin the analysis of schools T8 'partially agrees' that the generic nature of some course content may be having an effect on specialist photographic skills, T8 states:

With the next bunch of students I can really stretch the depth of the knowledge because I think there is too much of a focus on creative outcomes without understanding what is happening, that concerns me ... I think there are some risks which are associated with the new technology so it is possible to produce what appears to be high-level photographic results certainly in a few instances, without a fundamental understanding of the process and what is involved in that.

T8 is worried about the lack of some core understanding of fundamental principals of photography and digital technology and that without this knowledge, students are at risk of being left behind as the technology 'changes again rapidly'. He believes that if students are taught the basics of visual perception, basic imaging along with the physics of how light works they will be able to adapt as technology changes. T8 is saying that he is worried about the emphasis on creative outcomes at the expense of a deeper understanding of the underlying principles. His strongly held view was that, a university had a greater role than teaching technical skills and that it was important for 'the longevity of the career' that the 'fundamental building blocks need to be taught fairly strongly.'

T8 is in the process of studying the school's future direction with the purpose of redesigning the curriculum with the assistance of 'industry people, to understand what might be the best way forward'. T8 does not have a direct teaching role in the photography school but is involved with students. He is fairly new in the job but sees the need to strengthen the basic understandings of photography. After speaking to him at length the researcher formed the opinion that T8 has some concerns with the emphasis on creative outcomes over

foundations of theory that should be associated with a traditional university education.

At the same school T7 believes that students are given more flexibility in what they can study. Students are pursuing far more varied skills and their work 'is a lot more personal, whereas before it was very tight.' T7 also discusses recent course changes where many subjects have been 'thrown out', he explains that the new curricula is based more on what students 'would like to do' rather than what 'you have to do.' T7 says the curriculum is more student driven and is perhaps contrary to the needs of the industry. However, T7 likes the open curriculum design that gives students freedom and choices.

The next school studied offered a traditional photography course and was proud of this fact. It offered streaming into advertising illustration, photojournalism and art practice. The school offered traditional film capture along side digital capture—this unique mix attracts a lot of students from overseas countries. T6 explains the justification for the school's traditional approach:

[w]e have kept that traditional element because we feel that it is incredibly important and it gives them a foundation of what photography is. It has a history of 170 odd years now, it gives them the history.

This school has only broadened its curriculum to some extent to meet the needs industry. It has adopted digital techniques where necessary, for example in advertising photographic illustration, but in other areas like art practice T6 states, some students 'would not know how to work a digital camera.' He explains that students are given a 'technical foundation' but they are also trained in the philosophy and traditional ideas of photography.

This school has been running a similar programme since about 1990, it is popular with students who want this particular, traditional approach to photography education and has not seen the need to significantly broaden its philosophical approach. Whether this is serving the needs of the professional industry is uncertain but T6 maintains 'we haven't changed because it works'.

The third school is offering a streamed traditional approach, T4 explains his schools curriculum design, structure and implementation this way:

[i]t is about the structure of the course, the design of the program. All these other things like design, visual culture, and digital techniques and so on, they

are all crucial to being a photographer. Where they become problematic is if they are isolated and are seen to be things around the edges and are not integrated into the whole reality of the making of images and understanding images and I think that comes down to the course design.

T4 sees the intelligent integration of all the elements as the key to a successful course outcome. He also sees the problem of introducing subjects that are not clearly focused on core outcomes. He believes you will lose sight of the key educational goal if you do not have:

... your eye focused on where you want your students to be at the end of the course ... if you know the skill set they need to leave then you know how you need to support them and build that skill set.

This school seems clearly focused on an outcome for students that is based upon what the students need at the end of their studies and the curriculum is built upon these work-ready skills.

The other school studied in depth is different; here there is a contrasting philosophical paradigm that drives a broad based curriculum designed to equip students for a changing creative industry and one where students can be expected to have 'between five and seven substantive career changes' (T1) in their working lives. T1 addresses the question of training students to be professional photographers by stating, 'training has changed substantially and it may not necessarily be good for the industry'. This is unequivocal but it does not represent the educational outcomes the school seeks to provide. T1 explains that students get a far broader education than they did ten years ago for example 'students do learn a second area of practice which means for many employers they get a photographer who has got a solid set of design skills'.

6.2.2.2 The appropriateness of curriculum design

There are two areas of analysis to consider: 1) if curriculum design was serving the professional photography industry? and 2) were courses meeting the needs of students? The first point depends at which school you are analysing. Teachers from the school with the broad based curriculum did not claim it was their goal to produce professional photographers per se but rather, to produce photographers with additional skills for example, graphic design skills, or web designers with photographic skills. That school's goal was to respond to a changed work environment where they see students with a range

of skills far better equipped to find ongoing work. Regional issues bear upon this too; as will be discussed later, schools see their regional position to some extent as a context for their curriculum design.

At the opposite end of the spectrum were the *traditional* photographic schools that continued to offer tightly streamed courses, basically as they have done so for many years *because they worked*. But there is much middle ground and this was best represented by T7's school. This school had shifted its approach in recent years to give students more subject choices. He stated that this was a student driven model that did not necessarily reflect the needs of industry. Nevertheless he stated, in defence of the school's role in preparing students for the profession, that students' final year portfolios were 'just amazing'.

In all the responses there was little discussion by interviewees that directly addressed the question of the needs of professional photography. Only T1 discussed this in the context of his school's changed curriculum. T4 pointed out that his curriculum was built, to some extent, backwards from the needs of graduating students, but the industry was not discussed in depth. It is the lack of a discussion of the current needs of the professional photography industry and how that is factored into current curricula design that is a major concern in this analysis.

The second question, does the curriculum meet the needs of students? is harder to answer because student needs, other than being broadly referred to as vocational, were rarely discussed in detail. Also, there is a distinction between what students themselves believe they want and what curriculum designers think they need. The first point may be impossible to determine without some empirical evidence, as for the second, if it is assumed that a vocational outcome is the primary concern of curricula only T1 was able to explain student needs in terms of their ongoing career opportunities. The other teachers discussed their courses in terms of choices and opportunities but the issues were not really explained in terms of the needs of industry.

At the beginning of this section T9 suggested that the concept of professional photography was undergoing fundamental change. Therefore many students' needs are not being met by schools that continue to graduate students in a mould that was built in the past. Despite adopting modern technology and integrating it into curricula, many schools, with best

intentions, may be pandering to the perceived needs of students. T7 seemed to suggest, and T4 agrees and states that today there ‘is as little pressure as possible’ put upon students and they are just there ‘to have fun’.

While this analysis does explain the various case study examples in detail it does not verify the quantitative data which is equivocal with only 53% of teachers saying their courses met their students’ needs ‘to a high degree’. Quantitative survey informants may have felt more comfortable offering up some criticism of the courses they were associated with, whereas case study interviewees, who were in most instances senior academics, felt the need to honestly justify their course design in positive terms. They may too, have been more circumspect than the online survey informants.

These findings need to be seen in the context of an industry in decline. As will be discussed later, surprisingly, schools are not even providing training, in any meaningful way for the domestic sector. The domestic accounts for over half the industry in all areas of the country.

To answer the questions posed at the beginning of this section and based on the premise that the role of the professional photographer is diminishing: 1) curricula have changed to meet a changing industry but in most cases traditional models prevail, 2) students needs are not being met by most schools who pursue traditional photo school curricula. While schools have all the best intentions the inescapable fact is that industry has changed significantly and within that, the role of the professional photographer has changed in many respects forever.

6.2.3 Preparing students for work and work integrated learning

Quantitative survey data shows that only 22.3% of teachers selected the “work-place” as a teaching setting for students; the researcher considered this surprisingly low. It has already been shown that courses are described as having a vocational orientation and course structures are designed, amongst other things, to fulfil that outcome. Teachers were asked to describe what they were doing to prepare their students for their future. This analysis will concentrate on the responses that explain how schools introduce their students to the world of work.

All respondents said that their students were required to meet their school's industry contact requirements, especially in the final year. Teachers had a clear idea of what they were doing to prepare their students for their life in work which, in the short term, was a career in the photographic industry. Work integrated learning (WIL) in its formal pedagogical sense is practiced by two schools. A de facto version of WIL, work placements and internships were seen, not only as a way of introducing students to the industry they were primarily interested in, but as a way of making vital industry connections.

T6 described the use of WIL as a core part of the school's (and University's) philosophy. WIL is the integration of theoretical and practical learning with a real workplace; the aim is to provide the student with an authentic work experience prior to graduation. This is 'probably the primary way which we prepare students' (T6).

T1 also describes the WIL programme used in his school and explains that it not only involves industry based internships but is also supported with classroom based work scenarios and other work related experiences so that students get life long learning skills so they are able to 'navigate the complex world of work.'

The VET sector's approach is no different. T7 states that his school's students definitely have a close and structured involvement with the real work environment. He states:

[i]n third year we look at them working about 60% in the outside world and then bringing some of their ideas in as part of the programs ... We have a mentor program that is compulsory for them in their final year. Every student is associated with a practitioner out in industry. They have to engage with that person and I had to do a report on them and they have to go and see them a certain number of times each semester. So there is a strong structured component in that relationship.

It is worth adding that in many schools, students are also exposed to many other work related experiences including for example: guest lecturers, visits to studios, galleries, media outlets, and pitches to industry panels.

Industry consulting panels and mentor programmes further suggest that schools place great importance on student involvement with industry. Despite the quantitative data it seems clear from the case study analysis that getting students involved with the industry

in at least their final year and possibly earlier is a priority. Finding meaningful placements may at times be difficult (T3) but the experiences and contacts students forge in these formative times are seen as crucially important to a graduate's ability to enter the industry; regardless of sector they choose.

This analysis strongly suggests that the education sector sees that a formal connection between their students and industry as being vitally important and all had work placement programmes in place. Only two schools identified a formal WIL programme was being used. Nevertheless, helping students with their transition into work is common to all schools despite their different course structures and teaching philosophies; the researcher formed the opinion that it was considered important and seemed to be well structured. This analysis shows that whether the work place is seen as a teaching setting or not it is certainly seen a vital place for students to experience authentic working environments and develop contacts.

6.2.4 Business and marketing skills for photography graduates

Quantitative data analysis shows that most photographers who had graduated from a photography school believed that they were well trained in traditional photographic skills but poorly trained in business and marketing skills. Teachers were asked if their courses offered business and marketing training generally, or training that specifically addressed the needs of graduates embarking on a career in photography.

All teachers acknowledged the importance of students acquiring business and marketing skills but this was, in most cases, not reflected in a specialised and well structured learning programmes. Teachers responses fell broadly into these categories:

Adopted it as a speciality:

- Each of the programs addresses marketing and business skills (T6).
- Yes we do teach it. And it is specific to the photography area ... it is a compulsory part of their subjects (T4).

Adopted it with qualification:

- Unfortunately it is generic, because of the people who are teaching it saying it doesn't matter which business you are running you have got to learn the business of it. But I feel that they could really help them by being very specific, by saying you are in the photographic industry (T7).

- I would say it is generic, it is about ABNs, BAS, PAYG tax, that kind of stuff and marketing (T5).

Excluded it:

- We don't keep it as part of the training ... a few of our students are going onto to be high school teachers and have no interest in business and marketing (T1).
- We used to run a course which was business and marketing which was so heavily criticised by the students that we actually dropped it which I think was a mistake (T6).

Regardless of its status many teachers commented on the challenges associated with including training for business and marketing skills in the curriculum. The following comments typify the difficulty some teachers have had:

- We tried so many different ways of introducing it into the curriculum and it was always met with howls of dissension and apathy and people performing poorly (T3).
- A lot of students really do the minimum required for those subjects because they do not see it as the main game. They are so focused on the creative output that they do not think this thing is important (T4).

Teacher T3, deferred business and marketing training to the post university internship experience. While the internship may be useful it may not represent a real substitute to course integrated training. This strategy assumes that all students have an internship where these skills are actually experienced in a meaningful way, which is certainly far from certain.

T9 took this debate to a higher level and had business and marketing training at the same value as all other skills that were taught as part of 'a degree level qualification'. He believes that graduates who operate in business need skills to 'conduct their business in ethical and legal way.' He believes there should be more to business and marketing training than just preparing tax returns and understanding contracts. It would seem incumbent on universities to offer comprehensive and relevant compulsory education in the skills of business and marketing to all students. Without such training students could find themselves at a great disadvantage if they chose to enter the industry as sole traders.

This research shows there is a conflict between, 1) the total agreement that business and marketing skills are important and 2) the trouble many schools have in running successful, relevant business and marketing courses. If some schools see the need for, and do provide this education, why is it that other schools seem to have difficulty doing so?

As an important coda; there is some recent evidence that business and marketing skills are being taken more seriously than some previous comments may suggest. A recent graduate from RMIT University made this comment as a result of a Facebook discussion about starting a photography business (Macauley 2012):

There is one business subject we do currently for the BA which covered topics such as marketing and branding, tax and registering a business with the ATO, accounting, how to charge your work, tips for assisting, and how to work with production managers and art directors there wasn't much talk on the legal side of things (besides the tax advice we got from an accountant that was brought it) like copy right and licencing agreements and what all the legal terms mean nor many case studies on different business models or an assessment of where the current photography market stands.

A number of students took a business management elective subject from outside the department that went into a lot more detail but was generic in detail. When we really should be asked to write out a business plan that would satisfy a major bank or say a grants body. I think the ACMP does a good job of running lectures and combined with the better business bible but it was always a struggle to get students to attend meetings. I guess it is the case that the people who want it the most will go the extra mile and attend those things that in itself is now the key barrier to entry to the industry that in some part use to be based on technical understanding and the cost of starting up a photography business?

This is a significant comment as it demonstrates that business training is being offered in what seems a relevant way and that keen students are seeking out further subjects that they believe will help them in their career. It also emphasises the value of industry bodies education programmes. The writer also highlighted that not all students respond positively to these opportunities.

6.2.5 Preparing students for the domestic sector

Quantitative analysis shows that most photographers (63%) are self-taught and approximately 50% work in the domestic sector. As universities do not directly teach wedding photography skills it can be assumed that many wedding photographers are self-taught or have taken TAFE or short courses in photography. Also, when asked how well did your education or training prepare you to enter the domestic sector of the industry only 17% indicated they were well prepared; and this represents responses from both industry survey groups. The assumption is that there are many poorly prepared graduates

entering the large domestic sector of the industry.

Teachers were asked if they were providing any special training for students wishing to enter the domestic sector of the industry especially considering it represents at least 50% of the Australian photography industry. There were many explanations offered for why schools did not cater directly for this sector of the market:

An elitist attitude exists:

- It is a huge part of the market but I think universities have a little bit of an elitist perspective on all of this and I think that is what we have suffered from. A lot of the staff here see weddings has the lowest end of the market (T8).
- It was a very difficult job to build that up from the conservative base that it had to the advertising/illustration mentality, the flamboyance and energy and wedding and portraiture was left a little bit behind (T3).

It is not our responsibility:

- We used to [teach it] but we do not any longer. And I think, philosophically, it is probably seen more as a TAFE environment (T5).
- [People] don't necessarily need for a B.A. in order to become successful in portrait or wedding photography (T9).
- Don't necessarily see the advantage of coming through a course, not to the same extent as the other areas [of photography] (T4).

We teach transferable skills:

- I don't target anything I do towards anything you might call training as such for a particular segment of the industry but I do give students skills which they can use if their preferred route is to go into that area of professional portrait or wedding photography (T9).
- I don't think that doing weddings and portraits is a completely different skill set to doing very creative photography or high-level technical photography. Photography is about being a professional. You do that in whatever scenario you need to (T8).
- Not specific training other than that we provide them with the skills of a photographer with the sort of work they would have to do, how to deal with portraiture, in the environment, how to deal with lighting in that environment. We give them the technical skills. But in terms of the industry not specifically, but we do get a lot of students who come through our course and want to do that domestic area and we tend to put them through the commercial major and within that in their final year they are producing a fully self-focus folio. They would be steered towards building a portfolio that meets the needs of that industry (T4).

The Industry is responsible:

- The industry can quite well look after itself when

it comes to that kind of work,¹ (T5).

Student attitude:

- Students think that wedding and portrait photography is kind of like the work that you do as a photographer when you can not get real work. Whereas we all know that when they leave that's where all the work is, (T1).

It is obvious from the case study data that schools are largely not focused on the largest portion of the Australian photographic industry. While teachers may acknowledge the size and importance of the domestic sector they are mostly reluctant to incorporate it directly into their curricula in any meaningful way. The list above represents the reasons why schools choose not to teach the skills of domestic photography as a speciality and there is little evidence that shows any logic in decisions not to provide this teaching. Interviewees seem to suggest that it is something that other schools, like TAFE or private sector colleges can do as higher education concentrates on the more glamorous and *up-market* sectors of the industry like fashion, photojournalism and advertising. There is again no industry accreditation of schools that could provide course guidance for this industry sector.

This case study analysis does support the quantitative data regarding the lack of formal training for domestic photography and provides an interesting explanation of the attitude of educators to domestic photography in Australia.

6.2.6 Graduate numbers and employment opportunities

Comments made in response to an open-ended question in the quantitative survey suggested that there are too many photography graduates to cater for industry demand. Case study questioning asked interviewees about their attitude to job possibilities for graduates and whether they made students aware of the competitive nature of the industry. The following comments reflect the views held by interviewees:

Agree with the phenomenon:

- There are too many graduates coming out, and too few jobs ... it's difficult to get jobs, and jobs are pretty rare in photography, to get jobs and build a business in photography in Australia, it's not impossible but it is difficult (T4).
- Oh absolutely yes! ... it's really competitive out there (T9).

¹ The term 'that kind of work' is quite pejorative.

Not a new phenomenon:

- For 36 years it was made clear that it is tough to get into this business unless you are amongst the best practitioners it is going to be very hard for you to succeed and get a job in this business. That was made very clear to people (T3).
- Yes, it's always been there, I don't think it has changed there is always going to be that way (T7).

The situation has changed:

- It was different in the older days because you have 30 or 35 coming in first year and maybe four or five coming out the other end and the others left in despair (T7).
- [Where as it was once] manageable ... now you have third years of 60 people [graduating] and you multiply that by three or four other institutions around Melbourne, all of a sudden you have to place 240 people in meaningful situations: there is a problem ... you can't possibly place all of them in a meaningful way (T3).

Student awareness:

- Very much so ... In what can be referred to as our professional studies, ... where the realities of the industry are made very, very clear to them (T1).
- Yes, we make them aware of that from probably, not probably but definitely from the first semester (T5).
- Of course we had to make them aware as students of what their opportunities are and there is no doubt that opportunities in Australia are limited, there are a lot of photography schools and a lot of students entering the industry (T4).

The comments seem to show that little has changed over the last thirty years; graduates have always faced some difficulties getting work and students have been warned of the difficulties they are likely to face. What has changed is the increasing number of students who are graduating. This has undoubtedly placed additional pressure on job seekers in an industry that is facing so many other pressures, for example, the loss of work to amateurs, which is in turn decreasing opportunities.

At present there may be an oversupply of photography graduates for the industry, but this is not a new situation. The future shape of the industry will ultimately determine what employment choices are available and educators will endeavour to provide relevant training. It is also possible that a united industry peak body with a view to improving skills within the industry could provide assistance to schools in developing relevant domestic curriculum choices.

6.2.7 Defining the region and meeting regional needs

Quantitative data shows that most schools (46%) did not identify closely with the region they are located in but rather saw their region as Australia or the world. Some schools (23%) indicated they had a strong regional focus; the remainder (31%) stated that they only had some local focus. However there appeared to be some ambiguity in how teachers defined the term 'region'. Therefore, in the case study interviewees were asked if their university provided an education that responded to its geographic and demographic needs.

Most teachers stated that they are training their students for a global market. Two said they had a local and global commitment and two, from regional campuses, said they had a focus based on their regional area. Teachers used terms like "world context", 'opportunities in Australia are limited' (T4), and that education will become increasingly a global commodity. T6 said '[I] don't think we have ever seen ourselves as responding to Brisbane, Queensland. We have always looked at this as an international outcome.' T7 was quite clear that their courses were designed for, and not just limited to 'Melbourne or Sydney, it is global, everything is global.' Most interviewees (seven out of nine) saw a need to provide courses of a 'world standard' (T3), because if students cannot find work or do not want to work locally they can 'create opportunities overseas for themselves' (T4).

Two regional teachers said that their university had a formal commitment to their region:

- [The university] does have a commitment to the region (lists several regional campuses in two states) ... yes they do have a specific regional charter (T5).
- Curriculum is designed partly with that in mind, so students study the two areas of practice, we try and teach multi-skilling, to cater for geographic region. But we also give them a set of skills so that they can survive in the big metropolitan areas and overseas as well (T1).

T1 states that his university had a mission to become a leading university in the unique geographic location, which it saw as its region. T1 also said that his university was trying to meet the needs from the three major regional areas it served. T1 also acknowledged the university's commitment to local indigenous student needs.

The metropolitan universities did not see themselves as particularly representative of the city/region they were located in, while on the other hand teachers at regional universities did say they had a responsibility to their rural/regional area and educating students who were able to work in the region was important to them. Also, although asked, no interviewees said that their courses were designed to attract overseas students, nevertheless some schools had international students enrolled. This case study data does verify the data collected in the quantitative surveys and adds greater depth to the understanding of the regional outlook of schools.

6.3 Pedagogy within schools and into the future

The quantitative data shows that most teachers are using innovative pedagogies (80%), for example Problem-based learning; what was not clear was how, why and where they are using them. This section analyses a series of questions put to teachers that seeks to explain what teaching methods are in use especially those of a more innovative nature. Another question arising from the quantitative data analysis was the way practice and theory are taught. Different views were expressed by questionnaire respondents therefore case study interviewees were asked to explain their attitudes in more detail. Case study interviewees were also asked to discuss the teaching methods they used why they used them and to speculate about teaching pedagogies that may be adopted in the future.

A variety pedagogies were in fact being used and teachers had clear ideas about what worked best in their schools or individual practice. Except for WIL² being specifically referred to by some respondents, *newer* pedagogies were not singled out in nearly as much detail as they were in the quantitative responses.

T1 explained, quite comprehensively that it was his school's philosophy to:

Encourage diversity of methods and innovation in methods. I hate the concept of the chalk-and-talk lecture model; while we use it, what I am interested in is interactive learning environments, the use of scenarios, project-based work, connections with industry, real-world learning, experiential learning, anything but the master-apprentice chalk-and-talk stuff, it doesn't work to

² Not a teaching method

any significant extent with the majority of students these days. They want to understand and construct meaning and connections, that means you have to provide the connections, and show how things fit together; put them in scenarios, throw problems at them, make them identify solutions.

Other teachers were able to say they used ‘a range of methods,’ (T4), and a ‘huge range’ (T6), of teaching methods and were able to list them; they included:

A range of methods, lectures and tutorials, workshops, studio based deliveries, digital computer lab deliveries, vacation work in special workshops on vacation. Quite a variety and including a little bit of online which is more of an online support of content and online delivery (T4).

It goes from formal lectures down to taking them out into the field with cameras, darkrooms, studios so that there is a practical hands-on teaching, lectures, tutorials, small group workshops. We cover just about everything, just about every teaching methodology you could use (T6).

The impression was that most methods were chosen by the teachers and were based on the subject content. T6 said that all the course content was created within the department and ‘the teaching staff here have actually created the courses and the content themselves.’ T5 said that the university had no say in teaching methods ‘[w]e make all our own decisions.’ The VET sector was different in that their teaching has to be more prescriptive than in higher education. Teachers have some freedom but they must meet strict teaching parameters set by regulators.

When asked about teaching practice in the future almost all teachers mentioned online teaching but responses were equivocal. Of the seven teachers who discussed online education four saw its inevitability but thought there were difficulties successfully delivering all content online, while three held very positive attitudes. These are some indicative views:

Positive attitude to online teaching:

- [There] is a lot of potential for changing methodologies, and deliveries ... I see enormous potential for changes in teaching practice. There are very large parts of the world that don’t have any photographic training so there are great possibilities for online delivery. This can be married very well with the benefits of digital technology so that you can provide training to people in different countries who don’t have a strong base in how to produce professional photography, especially some of the more technical aspects (T9).

Inevitable but with qualifications:

- It is not an easy medium to teach in. There are certainly things that will

work well online. You could look at our photojournalism area because the thing is online anyhow in terms of photojournalism itself. But then again how do you teach a first year student studio practice online (T6).

Not sure of its place:

- In actual fact it has been shown that students want the social interaction with their peers and with the teachers. And that is, particularly in the creative environment, it is really crucial and to have that reflection and feedback on your work within a group environment is also really important (T4).

T4 and T7 advocated a blended approach with some online and some face-to-face learning. T9 also recounted research that suggested not all teaching survived online and that ‘students gain a lot by having a college with architecture and spaces, it anchors and grounds the experience’, whereas online detaches some students from the reality of learning. T9 was a firm believer in the value of real face-to-face interaction between students and teachers and thought that it was ‘not going to go 100% digital [online].’

6.3.1 Conclusions

This case study analysis found that only one school had a structural philosophy to all pedagogies used in courses which was to encourage diversity and an interactive teaching environment. Most teachers chose their own teaching methods to suit their preference and content. It is unclear if these choices are coordinated throughout the school or department. The case study does validate quantitative data that shows that a variety of teaching methods are being used.

There were doubts expressed about online teaching by just over half of the teachers interviewed. Particular concern was expressed in regards to some aspects of online delivery for creative subjects like photography. Others, and certainly ones who were using online delivery methods, were far more enthusiastic and saw them as an important part of the future of teaching photography.

The future of teaching and how it is delivered may need to change, to not only accommodate curriculum issues but also to fulfil possible budget restraints. T1 had some sobering views of the realities of running a university. He observed that higher education in Australia was ‘being slowly choked’ by a government funding formula which is ‘not in step with inflation

or the rest of the world. What universities do to survive is a whole range of things, many of them purely for business purposes and to make money to run the place.’ T1 observes that innovative teaching and curriculum practice is hard to achieve in practice because of cost. That is why you still have examples of larger numbers of students in multiple rooms listening to video conference lectures, it is usually done that way ‘because it is cheap.’ T1 states that teachers must strike a balance between ‘really top-quality innovative learning experiences as well as some of the more traditional lecture/tutorial-based stuff; because we don’t have a choice.’

6.3.2 Teaching practical and theoretical subjects

Another question arising from the quantitative data analysis was the way practice and theory are taught; some respondents thought they were quite different subjects while others saw a far more integrated approach. The case study questions aimed at trying to explain these differences in more detail.

T6 was able to provide an interesting explanation of the way theory was learned by students, and this came from an official university-wide evaluation of all theory content in all courses. T6, explained that there were:

[d]ifferent forms of theory, but their fundamental premise was that if we are working in a studio we are actually teaching theory. And that is reinforced by the formal theory that is being taught. We came to the conclusion that we are teaching theory in all our courses, that’s what it is, theory. It’s the practice of theory.

This view is reinforced by T1 and T9 and perhaps answers the question arising from the quantitative data, which shows the dichotomy between those that said that theory and practice were different, and, those that said you cannot really separate the two—they are interrelated:

- Overall, as a school we definitely teach theory, we teach practice ... I guess what we aim to do is to show students how theory informs practice, and vice versa. It is very challenging not only to do that as an academic, to establish how that relationship works, how they feed each other and vice versa, but it is very difficult for students to grasp that. ... [it] is very challenging but that is one of the goals of higher education; to develop that level of understanding and depth of knowledge (T1).

- I do try to integrate theoretical and practical in the workshop sessions. For example, when we are dealing with portraiture and doing work in the studio ... so for me there is a big crossover there and if they get both of those things right then bingo the job is done (T9).

It would appear from the case study evidence that theory and practice are perceived differently but that a skilful blending of the two becomes the classroom model; as T6 explains: ‘we are teaching theory in all our courses, that’s what it is—theory: it’s the practice of theory.’

6.4 Industry experience of teachers, teacher training and research

The quantitative survey of teachers built up a comprehensive profile of the experience and qualifications of teachers in Australian universities. Questions designed for the case study interviews endeavoured to verify those data as well as explaining more about these themes:

- The relative importance of industry experience for teaching.
- Attitudes towards the value of teaching training especially at tertiary level.
- Attitudes towards further research leading to higher academic awards.
- An overview of selection criteria for part time teachers.

Findings from universities and the VET sector are introduced here together as the case study analysis produces similar outcomes for both areas.

6.4.1 Teachers industry experience and selection of sessional teachers

All teachers believed that having industry experience was important and the following comments exemplify the opinions:

- I would say it was essential. I would see it particular to photography is being close on essential. Yes I would say it was essential (T8).
- We would not consider employing anybody that didn’t have a profile and all of the staff here now have extensive profiles (T6).

When asked why teachers think some industry experience is important, the main reason and one echoed by most teachers is that it establishes a:

- Connection with the world we are steering our students towards, I think is really important. They can bring experience to the classroom and often take the classroom out into the world as well which is really useful (T4).

Although the comments above apply equally to full and part-time teachers there was one part-time teacher who valued her ongoing industry practice more than a full-time teaching position. She stated she ‘would never want to work full-time because I want to keep my finger on the pulse and that involves a lot of working out here in the real world and I think it is a big mistake to just teach full-time’ (T5). While that opinion was interesting the role of the part time teacher is different to that of the full time teacher and there will always be the unavoidable trade-off between skills in both areas. That is not to say that part time staff are not competent and committed, but, just as full time teaching staff cannot be expected to devote much time to a professional photographic life away from teaching, part time teachers will, by definition have lower contact teaching hours and are likely to be far less involved in faculty business.

T1 also emphasises the importance of sessional staff (nontenured part time teaching staff) having a current practice and being an important part of the teaching mix by stating the school’s general ‘aim [is]to get current industry practitioners to do a lot of the sessional work because it is just a perfect way of keeping things current...there is no greater benefit to a university student than to be learning from someone who is active in the industry.’

The quantitative data shows that 71.4% of teachers had some industry experience but case study evidence certainly points to a unanimous opinion that industry experience is essential. What is in question is where the teachers have had their photographic work experience. This question was not asked, however, if their industry experience was in the domestic sector this is certainly not reflected in course offerings. Therefore it would be reasonable to assume that teachers are chosen to reflect the skills being taught at individual schools.

6.4.2 Attitudes towards teacher training

The qualitative data shows that 55% of teachers have some formal teaching qualification.

The question of whether teachers should have teaching training is vexed and comes from the general opinion of interviewees that:

- Some of them [teachers] are instinctively good educators and some of them are not. Some of them definitely are not (T9).
- I have come across people who have had teacher training and have possibly been the worst teachers I have ever encountered (T3).

The overwhelming opinion was that teaching training was very important but comments varied about its real world viability and usefulness. These comments put the subject into a better context:

- When somebody becomes a photographic lecturer somewhere along the path in the next five or ten years of the career they should pick up a teaching qualification. That tends to be a real-world scenario that works (T8).
- You will see an ongoing slow and steady push for more and more academic staff who teach will be required to pursue some sort of teaching qualification (T1).
- If you have a teaching qualification it just gives you a better understanding of how to communicate with people and I think it's important (T7).

T4 said that finding good people with appropriate industry experience was the most important quality but 'just having industry experience is not enough to make you a good teacher.' Teaching was considered a skill and it was important to get the experience/teaching balance right. No teacher stated there was a university policy that teachers should be teacher qualified. One teacher commented that there were support programmes in place for sessional and casual staff.

Case study investigations added some depth to the quantitative research. They showed that some interviewees really valued their teaching training and that there may be a trend at universities to have teaching staff gain some teaching qualification. Interviewees were not asked about their own teacher training although, about half indicated they had some training, which validates the quantitative figure.

6.4.3 Research involvement of teachers

Quantitative analysis shows that most academics were involved with some research and research interests were indicated, but the research did not indicate how many were actively

studying towards a Ph.D. Quantitative analysis shows that a relatively low number of teachers had a doctorate (13.3%).

Case study questioning aimed at discovering more about attitudes towards research. There were a range of comments and these are summarised below:

Encouraged:

- A priority ... we currently have seven members of staff involved in higher degree research programs, six of those in a Ph.D and it is a very high priority in this school (T1).

Improvement with future programme:

- At this point in time I don't think it has been strongly encouraged however we are at a nodal point where everything is changing and that is the long-term objective of the University. I think it is fundamental ... but that is a process that will take five or 10 years, you don't develop that culture overnight (T9).

Encouraged but problematic:

- Up to a few years ago they encouraged it so much they said we will pay for you to do everything but now they say, you've got to do it, or else you can't get advancement, but you have virtually got to do it on your own. So it's getting to that point, they want you to have it, and you say well if I want to go further I'll have to do it (T7).

The last view was reinforced by T3 who referred to a staff member who was told 'you are very successful and your feedback from students is absolutely fabulous, doing a great job but unfortunately you're going to have to do a Ph.D. or we are going to have to let you go. So he left.'

The case study investigation did verify the importance of research at Australian university schools teaching photography although not all interviewees went into detail about their school's attitudes. Research was seen as important by all but one teacher (who was at odds with promotion based on higher degrees). Some of the issues surrounding research were explained and it was shown to be important to staff, the industry, and to students:

because I think people in creative areas are starting to realise that those sort of postgraduate qualifications can often give them the stimulus to produce a body of work that they would not otherwise be able to get their head around in terms of time and endeavour and guidance' (T4).

Many would believe that good teaching is supported by good research, and it would seem that if research is to be attractive to teachers it must be regarded highly by the school and funded appropriately.

6.4.4 The future of photographic education

Projecting the future of photographic education did not come directly from the quantitative data analysis but it was thought that after a decade of change brought about by digital innovations some crystal-ball gazing may be interesting. Some of the themes raised here have been touched on before and will be only briefly mentioned.

Different teachers viewed the future from different perspectives and these are summarized below:

The role of the professional photographer is changing:

- Enabling non-specialist practitioners to become photographers ... [these people shoot jobs] with mobile phones and point-and-shoot cameras and ... this goes on to high profile web pages ... I see a lot of lo-fi technology being used by non-specialists photographers in still photography (T9).
- Standards are being lowered, people are being confused about what is a very high standard of photography and what is just a nice standard of photography and what is an appalling standard of photography. Professional photography is going to find it very difficult to re-establish or maintain its ethos its level of professionalism to convince people to pay professional rates for those services (T3).

Teaching must change to accommodate industry changes:

- You can see a lot more courses that merge moving image making and still image making. Convergence. You will see a lot of courses that incorporate maybe an arts admin, curatorial or distribution element, so that he can do photography with arts admin, I think that's great. It's a really good thing (T9)
- [Education will become] a global commodity overall and there will be greater movement of students across that global environment seeking out programs and courses they believe will satisfy their requirements, despite where they are geographically situated (T7).

Return to traditional techniques:

- I think that film, all vintage techniques, whatever you want to call them, alternative techniques, traditional techniques are going to have a resurgence (T5).

In general terms, the opinions expressed above on the future of photography as a profession, are not at all encouraging; some teachers see the industry as over crowded, 'swamping the market for the industry practitioners' (T1), and with declining standards. As has been previously shown new broad based curricula are seen by many (but certainly not all) as a student's best hope to get the skills they will need to succeed in a life of work. Teachers saw the future in terms of curriculum changes to meet future industry needs and a global teaching environment; one teacher even longed for a return to traditional techniques. As has been demonstrated, teachers are very confident they are providing high quality relevant courses and it is not a criticism that they cannot predict the future. Constant vigilance is required to ensure course offerings are relevant to an industry that is rapidly changing: that is the challenge.

6.5 Conclusions

Providing students with high quality courses that are relevant to career opportunities is never an easy task. This case study shows that there are different curriculum models being used, all with the primary aim of providing vocational outcomes. There are also the secondary aims of providing students with the generic skills that will equip them for a life of work, which may involve several career changes. All schools offered their students choices that would lead them to some form of speciality. All schools took student involvement in real workplace environments very seriously as it enabled students to experience real workplaces and develop industry contacts. Industry experience was seen as being a very important attribute for teachers to have. Teachers also thought teaching training was important and some saw that in the future it would be a requirement for employment. Teachers were well aware of the issues surrounding the number of graduates entering the workforce each year and the difficulties students face finding work in a field they were trained for, although many teachers recognised that this was not a new situation.

If preparing students primarily to function as professional photographers was the core aim of many schools, it was shown that there were some anomalies in the curriculum design. In particular the provision of relevant and well designed business and marketing subjects³ was seen as highly necessary but quite problematic to implement. Secondly, the attitude to the provision of domestic photography may be seen as at odds with the size of that

³ The term entrepreneurship education was not mentioned.

sector of the industry and the potential career opportunities that exist. There was a clear focus in three schools to provide a curriculum that was biased towards the commercial/ industrial sector of the industry. At a school level it would appear that some staff were chosen who had commercial/industrial expertise. This has the effect of entrenching these skills possibly at the expense of building skills in the domestic sector. The schools that were studied offering the broadest based subject choices, including photography, may be seen as more likely to meet wider career opportunities for its graduates, while the schools offering more intensive streaming may be able to more successfully supply industry specialists.

Interviewees were well aware of the changes that digital innovations have had on photography and specifically within the industry. Schools are still full of students who want to work in the photographic industry, (perhaps the digital era has encouraged this), but educators must be cognizant of the way the industry has and is changing and do everything possible to provide outcomes that equip their graduates for a world where the role of the professional photographer is not what it once was.

CHAPTER 7

Qualitative data analysis: industry sector

7.1 Introduction

This chapter analyses the qualitative data collected from interviews with photographers and industry representatives. The purpose of this analysis is to explain phenomena arising from the quantitative phase and to build upon emergent themes. Following a demographic summary the analysis is discussed in seven broad sections with subsequent sub-sections:

- **Photographers skills and attributes:**
 - › How photographers learnt their skills.
 - › Professional strengths.
 - › Business and marketing expertise.
 - › Attributes required for survival in business.
- **The effects of digital technology on the industry.**
- **Issues affecting graduates entering the industry:**
 - › Preparedness for the industry.
 - › Choosing employees.
- **The domestic sector including wedding and portrait photography.**
- **Industry organizations and representation:**
 - › Numbers of organizations in Australia.
 - › Representation and benefits.
 - › Accreditation and licencing.
 - › Amalgamation.
- **Observations of a changing industry.**
- **The future of the industry.**

The analysis is based on a series of questions derived from the two quantitative industry surveys and additional questions designed to further explain the phenomena. As with the analysis of the education, interviewees' views will vary and it is intended that the voices of the interviewees come through in the following case study explorations. Additional data such as independent industry analysis will be introduced to support this case study where appropriate.

7.2 Demographic summary of the industry informants

The case study of industry included people working in various ways within the broad profession of photography. Table 7.2 displays demographic data that is relevant to the research. Designations “P” and “O” indicates whether individuals were either professionals within the photographic industry (P) or they represented professional organisations (O). Each group of interviewees was asked a different set of questions although similar themes were being examined. For reasons of relevance, not all interviewees are represented in all sections for example, representatives of organizations were not included in some sections because their roles were seen as non photographic.

Table 7.1 Industry informant demographic data				
Interviewee	Years in Industry/ professional role/s	Location	Full/Part time photography	Training
P1	25, Commercial & advertising	Brisbane	Full	Arts College
P2	25, Industry consultant, former teacher	Melbourne	Full	Technical College
P3	40, Photojournalist, magazine editor	Melbourne	Full	On-the-job
P4	35, Advertising photographer, commercial television producer/director	Melbourne	Full (Retired)	Technical College
P5	20, industrial PR photography, photojournalist	Melbourne	Full	Cadetship
P6	20, Advertising photographer, Australia & international	Melbourne	Full	Technical College
P7	3, commercial & domestic photography	Townsville	90% Full Time	University
P8	25, Domestic & commercial photography	Townsville	Full	University
P9	25, Domestic photography	Townsville	Full	Technical College
P10	10, PR, photojournalism, writing & TV producer	Melbourne	Part	Self taught
P11	40, Commercial photography & fine art printing	Outer Melbourne	Full	Self taught
P12	20, Domestic and commercial photography	Rural Queensland	Part	Self taught
P13	14, Commercial and advertising	Melbourne	Full	Photography College
P14	30, Domestic photographer, photo finishing business owner, educator	Melbourne	Full	University
P15	Manager Photo Agency	Canberra	Full	Not asked
P16	40, commercial photography	Melbourne	Full	University
P17	10-20 Commercial and advertising	Melbourne	Full	University
O1	10, Student liaison officer with major organisation	SE Queensland	Full	Self taught domestic photographer

Table 7.1 Industry informant demographic data				
Interviewee	Years in Industry/ professional role/s	Location	Full/Part time photography	Training
O2	40, Senior executive with major organization	Melbourne	Full	N/A Role: CEO
O3	30, Photojournalist & industrial officer	Melbourne	Full	Cadetship Role: Industrial officer
O4	20, Advertising and commercial photographer & senior executive with major organization	Melbourne	Full	University Role: President & Commercial photographer

Table 7.2 shows that there were some very experienced people interviewed including people who had been successful in careers¹ that had not changed much over the years; this includes P1, P4, P5, P6, P8, P13, P14, P17 and O4.

Some industry practitioners have reflected upon their changing career paths. For example interviewees P10 and P12 have both gone from being full time photographers to being part time in recent years, P7 has left the industry since being interviewed.² P9, while describing her practice as full time said that the business could not stand on its own without the support of a partner, ‘[at] the end of the day I have another salary there that pays the mortgage and that is a giant safety net’. In a recent conversation with P9 (October 2013) she told the researcher that business had never been so bad and she was seriously contemplating leaving the industry.

Further examples of changing career paths include:

- P2 trained at a technical college and worked as a photographer and teacher but now works as a consultant to industry practitioners.
- P11 has worked as a commercial photographer and teacher but now works mainly as a master fine art printer.
- P3 spent most of his career as a photojournalist and now works as a niche magazine editor and does little professional photography.

The significance of the above examples is that even with this small group there is great diversity in practice and career paths. Quantitative data shows that respondents identified with many categories of photography and some also worked in other fields. This phase of the research validates the quantitative data by exposing, by way of interviews, the diversity that is typical within the industry.

¹ Long full time careers working for major commercial clients or wealthy domestic clients
² Personal communication with researcher.

7.3 Photographers professional skills and attributes

7.3.1 How photographers learnt their skills

Quantitative analysis shows that, of the combined total of both industry surveys, 36.5% of respondents had some formal photographic training while the majority indicated they were self taught. The quantitative survey analysis also shows that, on average, 38.8% of respondents thought that their photographic training contributed to their success as a photographer but surprisingly it was rated low as a defining attribute. The highest ranking attributes were knowledge, creativity and passion. Case study interview questions were designed to explore more about photographers' attitudes towards their photographic education including those who identified as self taught. Table 7.3 profiles the training received and the mixed views photographers had towards their training, followed by a brief analysis of each interviewee's response.

Table 7.3 Profile of photographers training and comments			
Photographer	Training	Relevant Quotations	Analysis
P1	Diploma	I think it is certainly a stepping stone but it's not the only way to do it.	There is more than one way to learn skills
P2	B.A Photography	Was not asked the question, not relevant.	N/A
P3	On the job suburban newspaper	'Because you're out there doing it. It's not high in the sky stuff, technically I probably missed out on a little bit, but learned very quickly how to get a picture and get it in the paper.'	On the job training was how many photojournalists learnt their skills in the past
P4	Diploma incomplete	I was better suited to take on full-time work rather than continue on and complete my third year.	This may be a common scenario if a job is offered
P5	Cadetship magazine publisher	It was really good training, you couldn't beat it.	On the job training is highly regarded
P6	Two years at VCA. Two years part time Photographic Studies College	Formally trained photographers have the disadvantage of having been trained, not necessarily by great photographers ... learn from a master.	Doubts about the quality of formal education but found assisting a master photographer was better
P7	B.A. Photography	[A B.A.] is the piece of paper and the bit that you put behind your name.	Does not believe her education was that useful when it came to working as a photographer
P8	Government department training, B.A. Photography	[University training] overall it was not as useful as I have hoped.	Doubts about the usefulness of formal training
P9	B.A. Photography	As far as photographic skills go as I'm sure they [university trained photographers] have an advantage [over self trained]. As far as business skills goes possibly not. Yes I did [find university training useful]. But I lacked a lot of confidence for many years, confidence in my own self as a person but also in my photographic skills. Definitely a lack of confidence with my business skills, and dealing with people.	Lacked confidence after university and thinks the self trained are at a disadvantage with photographic skills but perhaps not business skills
P10	Self taught	Talking to friends, visiting a lot of photographers, pretty much made a pest of myself with people in the industry who I thought were experts.	Self taught photographer with few regrets
P11	BSc, Ph.D	I had plenty of formal training and learnt really nothing from it, so yes I'm self-taught.	Not really self taught but considers what he learnt on the job to be more important
P12	Self taught	[Disadvantage to being self taught] because you are learning in a vacuum a lot of the time unless you have access to people with greater skills than you.	Makes a good point about missing out on expert teaching that formal education offers
P13	Secondary school arts teacher, some photography training	Like a year 13 TAFE equivalency course ... would say that it was worth very little to me ... it probably takes just a little bit longer and you lack some confidence when you start out because you think you don't know as much as other people.	Did not believe TAFE training was very useful but being self taught can work out if you have the time

The data in Table 7.3 shows that many photographers were self taught and some did not complete or did not engage substantially in formal training. This coincides with the quantitative results. Many of those that did some formal training questioned its usefulness, some quite strongly. Several people mentioned that the internet was now a useful learning resource. Some of those that undertook formal training, and even if they did not complete it, mentioned that it opened useful doors into the industry. Taking on assisting roles in the photography industry was mentioned by many as being one of their most valuable learning experiences.

Overall the analysis reveals a varied range of learning experiences and attitudes to the value of formal photographic education. This, partially validates the quantitative survey data which indicated that only 38% of photographers valued their formal photography education as a career attribute. It is also possible, in hindsight, that the value of education may have been absorbed into the normal, natural practice of being a photographer. Also, without some training they may not have been able to enter the industry in the first place. When in business and established in a career, photographers may take for granted the skills they learnt as part of their training and other skills, and may attribute other innate aspects such as creative talent and communication skills as reasons for their success.

7.3.2 Training in business and marketing

Quantitative data analysis reveals that 30% of respondents said they had good business and marketing skills but they were not asked how they acquired those skills. Case study interviewees were asked if they had received any business and marketing training and to evaluate its importance. Table 7.4 is a summary of the responses from interviewees. It displays the type of training they received, exemplar comments and the number of interviewees who indicated this type of learning. Only photographers were asked this question.

Table 7.3 How photographers received their business and marketing training		
Training received	Exemplar quotations	No. of interviewees responding to theme
Formal including short courses	<p>I did a short course TAFE which was part of the NEIS scheme... I found it very handy little course and I think everybody should do it (P13).</p> <p>I had a business mentor for five years who specifically taught me marketing skills. However his marketing skills were tailored to a large city and did not quite work in my rural area (P12).</p> <p>At University I did an elective in public relations but that is probably the only training I have had in that sort of area ... I don't think that anything in that subject came close to the things that I have had to learn since business-wise (P7).</p>	7
On-the-job/self taught	<p>I have spoken to a lot of people who have helped me along the way and I've got friends in marketing and my wife is a communication consultant and in some ways she has helped me market myself but no, no formal training (P5).</p> <p>I have had real life on the ground [job] business and marketing training (P4).</p>	6
None or via seminar	No none, sadly (P10).	2

The comments in Table 7.4 add greatly to the quantitative analysis and demonstrates if photographers who had received some business and marketing training mostly thought it was useful. The photographers who claimed to have had no training could also be grouped with the ones who said they had received their training *on-the-job*; this may, for example mean doing their own book keeping or employing others to do it. Few said they had undertaken formal business and marketing training and none said they had received that training while working in a previous occupation. At the same time P1 made this observation:

[a] lot of self-taught photographers have had previous lives in other industries and other jobs. They already know a lot of business skills ... photography is no different to any other small business, it's all the same skills that are required to make any business successful.

While many interviewees had no formal training or learnt on the job, all agreed that business and marketing skills rated high in terms of need. This opinion is typified in the comment, 'I think they are pretty important. I think without them I think you are almost inevitably doomed to failure', (P11).

While the people interviewed had mixed exposure to business and marketing training it would be fair to assume that these people had some innate set of skills that ensured

their survival in business; aside from photographic talent. As was pointed out by several photographers, these skills were seen as basic survival skills.

7.3.3 Photographers' professional skills and attributes

Quantitative data analysis shows responses to the question, 'what attributes or qualities have enabled you to establish a successful career in the photographic industry?' to which most (64%) said 'hard work.' There were also many other reasons given. When interviewed photographers were asked to discuss what they saw as the attributes that most contributed to their success in the industry, interestingly, no one specifically mentioned hard work.

Quantitative data analysis also shows the results to the question, 'what do you believe are the defining attributes/features/skills of a professional photographer?' Responses show that, on a scale, knowledge, creativity and passion were highly rated and education and business skills were rated low. The case study questions about strengths and skills were asked separately but because there was so much overlap in the answers they are presented together. While the researcher sees these attributes as being different, interviewees did not always see such a distinction.

The following comments are indicative and are echoed by many interviewees and point strongly to the reasons for their success in the industry. The skills and strengths that were mentioned varied and are summarised in descending order in Table 7.5. Many interviewees mentioned several attributes, some only in passing while the most prominent attribute was discussed in detail.

Table 7.4 Photographers professional skills and strengths

Skill/Strength	Exemplar quotations	No. of interviewees confirming attribute	Analysis
Communication/ personal	My personality, my ability to get on with the people I am photographing. I think I have an ability to relax people in front of my camera and most of my work is people based ... my ability to communicate with my clients and my subjects are my biggest strengths. And I'm able to get jobs right (P5).	15	Some interviewees made a strong point of these skills while others mentioned it in passing, either way it is seen by all as the most important strength they have. People skills are required for so many of the day to day activities of photographers.
Artistic	Coming from a fine art background you have a sort of ready-made understanding of aesthetics, composition and all that kind of stuff which are translated well I think between design, photography and art and painting (P13).	12	Mostly mentioned in passing it is perhaps not surprising that the interviewees believed they have good artistic skills, in many ways this is what their clients are paying for: some unique quality in their work.
Technical	I think probably technical expertise and producing quality products (P8).	8	Again this was mostly a brief comment for most interviewees; they put some value in their technical ability and this perhaps part of their artistic skill.
Business and marketing	Without a doubt [photographers need] to understand how to run their profession as a business (O2).	8	This was, when mentioned, a strong point with interviewees and they said that without these skills they could not practice professional photography at all.
Quality work	Always driving to do a better job and to improve and to try and keep up with what is happening in the industry and with technology that's important too (P1).	5	It is not surprising that creative people take pride in delivering quality work to their clients; it is likely why they get repeat work and attract new clients.
Passion	I think drive, and passion in this industry are definite requirements (P9).	3	For some this was the first thing they mentioned – it was the reason they were doing what they did, without the passion it would not be worth the effort and in some cases the poor remuneration.
Photographic	For a photographer the ability to see in a photographic sense is the most important part, it is the art that produces the world beating photography (O3).	3	This skill goes with the artistic and technical skills and is seen as important; without this skill there would not be much else.

Table 7.4 Photographers professional skills and strengths			Continued
Skill/Strength	Exemplar quotations	No. of interviewees confirming attribute	Analysis
Network	Being able to use the network you have built up and be able to talk to people and most of all been able to have a healthy inquisitive appetite ... and getting to know people is critical and using your network to your advantages critical (P10).	2	A few people mentioned their networks of business contacts, it is probable that other interviewees had well established industry contacts that would have been built up and nurtured while they were in business. If this question would have been directly put then it is possible that more people would have made comment.
Perseverance	Because you get knocked back a lot (P10).	2	This is possibly a common trait with many successful business people; the determination to carry on even after disappointments.
Relationships	That's right maintain relationships, embrace change and value what you know (O4).	1	This is closely related to networks of business associated and people skills.
Reliability	Delivering what is required on time and being consistent (P1).	1	This was only mentioned by one interviewee but it is, again, one of the traits common to most successful business people — unreliable people do not usually survive long in any business.
Software	A knowledge of Photoshop would be a definite (P7).	1	Only mentioned by one person it is possible that this skill is just taken for granted by many photographers.

Table 7.5 adds explanation and context to quantitative data by showing how photographers identified their main strengths in terms of their professional lives. The comments are not really surprising seeing that photography is, in so many ways about people, personalities and ideas that need creative interpretation. P2 states that it is ‘no longer just about the image, they have to be able to communicate their ideas, they have to be able to talk to people, it is a personality contest’. Digital photography has made the industry far more competitive because ‘everybody is a photographer’ (P2), thus communication and people skills are possibly more important than ever.

An interesting observation was when photographers were asked about their strengths and skills no one identified, initially at least, business and marketing. It was only later, when they were asked directly about these skills did they recognise them as being important. Also, while technical skills were mentioned often, this was mostly just in passing and only one interviewee really made a point of it.

Interviewees were also asked to comment specifically on the skills they saw as necessary for their survival in the industry. There was some overlap from the previous question as these attributes are common to business generally. The different emphasis put on survival skills is important; the main themes are summarised in Table 7.6. These are ranked in descending order with an exemplar quotation and brief analysis.

Table 7.5 Photographers survival skills

Skill	Exemplar quotations	No. of interviewees confirming skill	Analysis
Business and marketing	To survive, business and marketing skills definitely ... But to survive the main thing is the business and marketing aspects of the business so you do remain in the industry. If you don't know those things you'll just go out the back door (P8).	8	This is seen as the most important skill by most interviewees and some were quite adamant that without it they would not be practicing photography professionally. This question was put directly and this sees it now rated on top of the list of importance.
Perseverance, determination, tenacity and patience	Perseverance would be one of them, just ... don't take no for an answer (P10). Determination you have got to be determined (P7). They'll need to have tenacity (P2). Patience and have an understanding that you may have to do a lot of work without pay to get the skills and the knowledge to then go to clients with confidence that you can actually produce a result for them (P5).	7	These could be grouped as the "hard work" skills. While no one, surprisingly, mentioned hard work by name it is quite likely that most of the interviewees survive because they work hard and keep going through the hard times.
People/communication	They need people skills, they need to be able to communicate (P2).	4	From being on top of table 4.6 these skills are seen as slightly less important than business skills and hard work but nevertheless they remain important.
Flexibility	I did school photography for six months, wedding photography then I eventually worked my way up through ad agencies who did things for shopping centres, food courts, you work your way up to what you want to do (P13).	3	Several photographers made the point that you must be flexible and be willing to take on what ever work come along especially when starting a career. One photographer still actively seeks out the lower paying work because "it pays the bills".
Technical and training	Photographers need good technical skills as always but also must maintain a professional and responsive back office. Successful photographers will recognise that they are in a fast moving technology sector and will ensure their workflows and equipment consistently change to recognise best practise (P15).	3	Technical skills were not mentioned much, and only one interviewee mentioned that in his industry up grading skills will be important in the next few years as digital technology continues to change.
Strategy	They need to be analytic in terms of being able to understand what the changing needs of the marketplace. So somebody who is fleet of foot and capable of analysing what is happening and being able to respond to that is probably the biggest skill (O2).	1	Although not mentioned by others this comment is similar to the previous one and infers that technology will continue to change and photographers must be ready to take advantage of the opportunities that are created.

Table 7.6 data is specifically about survival in the industry. Quantitative analysis shows that most respondents (74%) wanted more work in the industry and that the challenges of finding more work included the effects of digital technology as well as a crowded market and price pressures. The view that the industry is becoming more competitive and work harder to find is reinforced by the Ibisworld analysis which states:

[f]alling demand and greater infiltration of the industry by amateur operators will inevitably lead to price-based competition, driving revenue down further. The commercial photography segment's share of the industry's dwindling revenue is most likely to decrease, as clients of that segment are better equipped to perform the tasks themselves (Kelly 2012, p. 15).

The survival skills mentioned are in no way surprising as they include many of the attributes that may be common to many self-employed trades people. Technical skills were rarely mentioned and O2 felt that, '[t]he least important are how to use the correct shutter speed and aperture.' While not dismissing technical skills O2 is certainly reinforcing why so few interviewees mentioned that skill (3). Creative talent was not mentioned as a survival skill. This may be through modesty as it can be assumed that without some creative talent a photographer would find it difficult attracting work.

7.4 The effects of digital technology on professional photographers

Quantitative data analysis shows that 55% of respondents attributed the wide spread popularity of digital photography as the greatest challenge they faced finding additional photographic work. The often cited mantra mentioned by many is, '[d]igital has allowed everybody that can pick up a mobile phone or some capturing device and they think they are a photographer' P4. This study asked interviewees for their opinion on the effect that digital technology has had on their business. The following exemplar quotations show the polarised views that are held on this topic. Some interviewees had both positive and negative opinions on the subject. The quotations below typify the two opposing attitudes:

Positive Attitudes (14):

- I think that with the introduction of digital photography we had a massive cost cut to our business. No longer did we have to purchase film or processing. So there has been a profit in our

business. Most people should have been able to take advantage of it ... And the good thing about it now, ... you can repeat it, you can save it, you can automate it, and repeat it (P9).

Negative Attitude (4):

- I think digital cameras have ruined the industry. Absolutely. And I don't think we will ever go back ... because [digital] cameras are so good more and more people are using them and quality of photography is declining as good photographic techniques are abandoned (P13).

Most photographers saw digital technology as an evolution and embraced its benefits that included the opportunity to increase profits from post-production work and no photo lab costs (P1). Many felt that they were in greater control of their work and able to add greater creative input that was not possible with film.

Negative attitudes mainly concerned the increased number of people entering the industry with easy to use digital equipment. These people are seen as a threat and as suppliers of inferior products at low prices. Again this concern is reinforced by the Ibisworld research, Kelly (2012, p. 12) states, '[o]ver the long term it is likely that digitalised technology will dilute the value of photographic services in this market.'

One other issue raised by a few commercial photographers, related to the quality and abundance of digital technology, was the amount of photographic work now done *in-house*, by for example, advertising agencies and other businesses and, consequently, not given to professional freelance photographers. A recent (2013) conversation with P17 confirms this and said that this trend was growing. P17 said that companies with large product inventories were setting up in-house studios and staffing them with inexperienced photography graduates. This was taking significant work away from experienced commercial photographers. These companies were accepting lower quality results as much of the photography was destined for lower quality web reproduction rather than for example, print reproduction. This is supported by the Ibisworld research which states, '[i]n the current slow economic environment, householders and businesses (e.g. media outlets) are undertaking photographic assignments that would formerly have been the realm of professionals' (Kelly 2012, p. 4).

This section explains many of the negative responses expressed towards digital technology that arose in the quantitative data analysis. The photographers interviewed in this case

study are generally more positive towards the industry. As can be seen the transition from film to digital has had a significant impact on some photographers, and this includes experienced photographer P12. Despite some negativity the digital revolution has opened up opportunities for many people in the industry and they have adapted their practices to accommodate the changed market. New technologies and new techniques have meant that traditional film based work-flows and business models have been challenged and this has been reflected in both sectors of the industry.

7.5 Issues facing graduates entering the workforce

7.5.1 An evaluation of the preparedness of graduates for work

Quantitative analysis asked respondents who had employed graduates (30%) to rate their skills. The qualitative question had a slightly different focus and asked interviewees how well they thought recent graduates were prepared for the industry. This section of analysis covers issues such as the overall readiness of graduates for work and explains the reason for graduate strengths and weaknesses.

In both sectors most respondents have had some experience employing graduates as assistants. Their comments are summarised by key themes with the number of respondents indicated in parentheses.

Poorly prepared (8):

- Absolutely appallingly prepared! Did you expect that answer? They are not prepared at all. They are naive with a capital N ... I'm astounded at the lack of knowledge many of them have from all areas (P2).
- Poorly, poorly prepared (O2).

Well prepared with qualifications (4):

- Probably as good as they have been over the decades (P4).
- I think in general they are reasonably well prepared. I don't know whether they are much better or worse than they used to be (P1).

Undecided with qualification (1):

- I am not completely certain. I tend to feel that they are not prepared in a photographic sense. I think that the recent crop of graduates

might have been prepared for the digital era, so then they have a lot of generalist skills in a lot of mediums but to actually walk out of uni. and say that are almost prepared to take a professional photograph, under pressure, to a high standard that a client wants; I think they have a long way to go after they graduate (P8).

Linking education to employment (1):

- When it comes to this industry, there is currently no mass educational formula for success. I'm very sorry to say that there is such an oversupply of student photographers that education has little or no relevance to employers any more...as a result many of our assistants have no education or have left before completing their studies (P16).

What is obvious from these comments is that no one is categorically saying that graduates are well prepared for assisting work. Although this may seem alarming at first the real point may be that higher education should be seen as just a beginning and this view is supported by experienced commercial photographer P6 who states, '[graduates] need to be in the field as an assistant or you will never get there'. This is a very important point and is supported by commercial photographer P11 who states:

[a] lot of them feel that they are not well prepared, they seem to have a big shock when they hit the outside. Unless they can get a job as an assistant for a really good photographer that is prepared to give them time and really introduce them to things, they are really not prepared to go out and work for themselves. Mentally they might be but they haven't been prepared by the courses to do that.

After study, the next important stage for many graduates is the assisting phase, perhaps formally known as the apprenticeship process. P11 points out that this is a similar situation for doctors, architects and other professions and trades.³ Domestic photographer P8 believes many things may be impossible to teach and 'it is through the industry experience you get that, you learn the skills.'

Many photographers made comments about the skills graduates had or lacked. While working photographers have a good idea about the skills they *think* graduates should have acquired there may be some confusion understanding just what skills graduates *actually do have*. It is likely that many employers do not have knowledge of modern curricula (but this question was not asked). Employers may also have quite specialised duties specific to their business, for example set construction and painting⁴, which may not have been

³ Except they require a licence to practice.

⁴ Researcher's personal experience as an assistant.

covered in higher education.

Whether employers do or do not understand modern curricula there are still some concerns about what is not being taught. Commercial photographer P13 described several basic studio lighting set-ups that graduates have difficulty assembling. He states that graduates do not have ‘enough of the basic skills.’ He states that schools are teaching to the ‘top end’ and not devoting enough time to the basics, ‘you have to start with that and work up from there ... being creative is awesome until the client says I can’t see the buttons on the jacket.’ This view is supported by P17. He explained that he has a monthly job to visit a newly established in-house commercial product studio and tutor the young photographers who work there. P17 states that these recently graduated photographers have not been prepared with the basic skills which include, for example, aperture control and lighting.

What is clear is that the industry is expressing some concern about how well graduates are prepared for employment. Most employers are not usually employing graduates to act as photographers but as assistants. Some photographers expressed concern that in particular some basic skills were not being well taught, for example, studio lighting. What photographers do in fact look for when employing graduates as studio/field assistants is the topic of the next section.

7.5.2 Qualities employers look for when choosing a photographic assistant

This analysis is based upon the quantitative analysis of the graduate skills that employers look for when they are seeking a graduate to employ as a photographic studio or field assistant. The quantitative survey asked respondents to rate the importance and necessity of various attributes and skills that graduates needed when applying for a job. The analysis shows that, people, practical and problem solving skills rated as the most important and management, research and retail skills the least important.

Case study interviewees were asked what they looked for when choosing an assistant. Working as an assistant for a photographer is not usually about taking photographs therefore, many of the skills learnt in higher education will not be directly employed. However other skills will be utilized for example, setting up studio lighting and cameras.⁵

⁵ From the researcher’s personal experience and observations and assuming these skills were taught.

This question looks at what photographers are actually looking for in graduates trying to take the step into the industry. The number of times an attribute was mentioned is listed in parentheses. Key findings of importance include:

Personality and enthusiasm (8):

- First of all it is about of all personality. Either as a photographer, as an assistant, for me they have to think like you do, plan like you do and you have to be good friends as well for me that is very important. ... They have to be nice, inherently good fun people for me to want to work with them (P3).

Attitude (5):

- I don't care about folio, I don't care about education, all I care about is that they are interested in what they are doing, very interested, but also they are committed as well ... Arrogance won't get them hired again, if people are great you know just nice with people you know personable absolutely, they are great to be around, you can feel safe when the client is there (O4).

Trustworthiness (4):

- You have to know that you can trust them with your clients (P2).
- They are going to have to potentially talk to clients while I am away doing something else and potentially tarnish the reputation of me as a photographer then I would far rather not employ them even if they can take a fantastic photograph. And reputations take so many years to build and just take a heartbeat to destroy. You are nowhere without your reputation (P10).

Technical ability (4):

- As an assistant, someone who had some shooting skills (P12).
- It is certainly an advantage to have somebody who already is proficient with Photoshop especially (P1).

Hard work and team work (4):

- The ability ... to get their hands dirty, very important, very important... Have an understanding of working as a team, is very important you work as a team (P4).

Problem solving (3):

- This work ethic of how to solve a problem enthusiastically. Solving a problem at all costs without causing a big drama, and not beating themselves on the chest (P6).
- As long as they are professional and have ideas and they are able to respond to questions in a creative way, solve problems, solve problems is a big one P8.

Presentation and appearance (3):

- I really don't want someone really gothic coming

along with me to a photo shoot⁶ (P9).

Creative folio (2):

- I would definitely look at the portfolio and see what sort of work they have been doing and if they are suitable for the work that I would be needing them for (P7).

These findings validate the quantitative data to a large extent. Analysis shows that photographers who are interviewing potential employees are looking for enthusiastic workers with the ability to get on with people in what can be high pressure situations which involve long hours. Surprisingly perhaps, a good folio of photographic work seemed far less important. Some interviewees mentioned the importance of technical and software abilities but did not specify skills or software in detail. From the feedback it seems that choosing an assistant is a subjective personal choice and the applicant's appearance, enthusiasm and personality may, ultimately, be the most important attributes.

7.6 Issues and attitudes relating to the domestic sector

The domestic sector of the market is significant, and while terminology varies it includes all forms of retail photography including weddings, portraits, school and university photography. These businesses are usually non-employing sole operators (Kelly 2012). The wedding sector of the industry is significant in terms of employment and revenue, this is supported by Ibisworld (Kelly 2012, p. 12) which states that weddings 'generate the largest share of this industry's revenue, accounting for about 40% annually and employing about 50% of professional photographers.'

The quantitative data analysis quite clearly shows that most respondents considered that they were only moderately or less-well prepared for work in the wedding and portrait sector of the industry (80% of respondents from all sectors). Case study interviewees were asked where they learnt their wedding and portrait photography skills. Furthermore questioning was also aimed at explaining more about the domestic sector of the industry and attitudes towards for example, the effects amateurs are having on professional photographers' work.

Although many of the interviewees were from the commercial sector, most had done some

⁶ Post Punk fashion sub-culture featuring dark and morbid themes.

or still did wedding photography work. Many did not advertise that they shot weddings, and as P13 observed ‘it’s quite common that people [commercial photographers] will have two websites.’ Industry consultant P2 agrees that many photographers run two separate web sites because ‘life has become so tough in the last 10 years many commercial photographers that I work with shoot weddings on weekends as a means to survive.’

Discussions on the domestic sector were wide ranging and reflected the context of each interviewee, which to a large extent meant which sector they primarily operated in and how they were coping with changing market conditions. The following exemplar quotations examine various attitudes.

Attitudes towards domestic photographic skills:

- I do see wedding photographers as incredibly skilful people because it’s not only the photographer you have to be skilful with, it is placating potentially troublesome brides and grooms (P10).
- I’m not pigeon-holing and I’m not forming barriers, we are photographers, we aren’t wedding photographers, we aren’t advertising photographers, we aren’t car photographers, food photographers we are photographers (P4).

P4 has some very strong opinions about the role of the photographer, he believes that all skills are transferable and that a photographer should have the skills to do any type of work.

Attitude towards the reputation of the domestic sector:

- It’s not the people who have sought training, but it’s people who have decided to buy a camera, have taken photos of the child and the dog in the backyard and decided that they are a portrait photographer. They’re what’s giving us a bad name, unfortunately. ... That’s the problem, that is the big problem and they really, really, are impacting on the industry (P12).
- As long as they are charging a reasonable and decent amount for the work, and for the standard of work that they are providing. I think that what does the industry more damage are people who are not charging, taking into consideration the time factor, and perhaps not needing to make a living from it so they are really undercutting, they are not charging a reasonable amount (P8).

P8 has a slightly different view to P12, she sees the damage being caused to the industry in terms of price cutting and fair value for work. This may not be a new phenomenon in the domestic sector. Wedding photographers are now having to face the fact that ‘weekend warriors’ (P12) are now able to shoot a wedding for very low costs and supply images on a DVD; this is quite different to the established practice of shooting a wedding on film

and then selling album and print packages. P12 is expressing an opinion that is held by many photographers in the domestic sector. This is supported by Tuck (2012) who states,

[t]he business model that most wedding photographers have worked with, that of selling prints and album packages is under serious threat. They will have to come to terms with a new paradigm, young tech savvy clients who have no real interest in a print book and want to have all the images turned over to them on a disk. Most clients know they can design and produce their own books at a fraction of the price and with total control.⁷

Interviewees were asked if poorly trained photographers were harming the industry. The term, poorly trained, was not explained but it was well understood to mean part time photographers. The problem of poorly trained people damaging the reputation of the industry by performing poor quality work is probably not a new phenomenon (O2) but from comments made it seems to be greater now than ever before.

Critical attitudes of the domestic sector:

- You can make three grand shooting a wedding, there is good money in it ... I am personally sick of them, because I did too many, it's a bit of a burnout thing (P13).
- There are only a small handful of wedding photographers who I have met who are, how to put this, you are not left with the experience that they just love screwing people over. At the seminars I have been to photographers are boasting about how much they got out of this person, how they sell \$6.00 8 by 10 photographs for \$300, just gloating, it's just off (O4).
- I guess commercial photographers don't go into the business thinking, I want to make big bucks, they want to fulfil their creativity and make beautiful photos. Wedding and portrait photographers see the money, they are businessmen, business people; they want to go out and make as much money as they can and shoot as many weddings as they can. It is a sausage factory kind of business (P2).

The commercial photographers quoted above⁷ claimed there is significant money to be made in the domestic sector. O4 has a very cynical point of view and there may be some jealousy evident here. High mark-ups on print and album sales are a fact of the domestic sector⁸ who generally do not charge their time by the hour, as many commercial photographers do. There are different business models in operation in the different sectors.

P2 sees a different dichotomy between the two sectors; one based on creativity and the other on monetary rewards. Whether it is true or not they are certainly attitudes held by

⁷ O4 works as a commercial photographer, P2 works with both sectors.

⁸ Personal experience of researcher.

some in the industry, especially those from the commercial sector (P4). It is a perplexing observation considering P2 has been closely involved with both sides of the industry. It would be hard to believe that wedding photographers were quite that mercenary and did not care equally about the quality of their imagery. Annual AIPP print award events bare testimony to the ongoing quality of Australia's wedding and portrait photographers. Equally, as has been shown, commercial photographers, while they care about their artistic skills must remain in business and that is the business selling their skills.

Attitudes towards teaching domestic skills:

- I find that universities should be places where students are challenged to research topics and to extend their ability in photography. TAFE colleges should be an area where the basics of camera craft are taught ... at this stage I cannot see that even a TAFE college would take on a subject like wedding and portrait photography. So it is frustrating I think (P8).
- I do notice that the majority of students I meet want to be editorial or fashion photographers ... Probably the reality is when they graduate they find it is difficult to make a living in those areas or to even enter into that market successfully so they probably turn their skills to the domestic market because it is more accessible (P1).
- I think people studying photography, the last thing they want to do is to become a wedding and portrait photographer (P2).

These comments reveal an underlying reality that many graduates face: firstly many are not taught wedding and portrait skills to any great degree, and secondly, many find that wedding and portrait photography is the only viable work that is available to them. P8 is not sure whether university or the TAFE sector would be willing to take on this teaching but he does not offer any possible alternative as to where it should be taught.

P1 explained a reality of students and their transition into the commercial sector. Many have creative interests that will not be realised so they turn to the domestic sector as a way of earning a living. This scenario would seem to be common and given this, it is perhaps surprising that the domestic skills are not covered more extensively in higher education (as was established in section 6.2.5).

The analysis of the domestic sector verifies many of the issues that were identified in the quantitative data including:

- 1 Digital photography is allowing many more people to enter an overcrowded market.

- 2 More photographic work is being performed by amateurs/part-timers.
- 3 Clients may not pay for quality work any more.
- 4 Price cutting is hurting the market.

While the qualitative data is not collected entirely from the domestic market this analysis would certainly support many of the important issues that emerged. Some comments from commercial sector interviewees showed a difference of attitude between the sectors, almost to the point that they considered the domestic sector to be in some way inferior.

There was some ambivalence about whether domestic photography should be taught at all and if it was to be taught who should teach it and where should it be taught. This was somewhat at odds with the notion that the domestic industry was seen as unsophisticated and was being given a bad reputation by the increasing number of *weekenders* entering the industry and giving it a bad name by employing poor work practices and supplying low quality work. Specialised domestic curricula options within higher education institutions teaching photography may be one way of bringing talented graduates into the industry. While many graduates practice in the domestic sector more well trained and creative participants may enhance what is at its best a very important industry sector with high professional standards.

7.7 Attitudes towards photographic organisations

Quantitative data analysis shows that photographers belong to many industry organisations, it also shows that 45% do not. This section examines attitudes towards the representative bodies of which some interviewees were members, these were; the MEAA, a trade union representing press and freelance media photographers, the ACMP representing mainly advertising and commercial photographers and the AIPP that represents wedding and portrait photographers and increasingly photographers from other specialities.

This analysis shows that case study interviewees are equally divided (38%) between the AIPP and the ACMP, and those with no membership; only one other group was mentioned.

The relationship between the quantitative data (industry figures) shows the AIPP to be similar in numbers (QUAL = 38%), the ACMP to be higher (QUAL = 14%) and those with no memberships, lower (45%).

Discussions about organisations were wide ranging and sometimes not well focused. Three topics received the most vigorous consideration; these were, 1) the number of organizations, 2) the merits of amalgamation and 3) the issue of licencing and industry accreditation. It is fair to say that, except for the organizations that interviewees belonged to, they had little knowledge of other organizations and generally 'didn't realise there were so many other groups out there' (P12).

Indicative comments that represent interviewees' opinions on the major issues surrounding industry organizations will be quoted and analysed separately; there is often some overlapping in the answers because they share common themes.

Views on the quality of representation:

- I am really only familiar with the AIPP and the ACMP and I believe both represent the industry very well and both have a place in representing the industry (P4).
- I know that now Queensland has a splinter group of four photographers because they didn't think AIPP was doing the right thing (P12).
- I think that the AIPP is bringing about some changes that all sound fantastic so this is all going to have a really good impact (P9).
- I think, like the MEAA has done a good job for the editorial photographers and for people working within the media I think that side of the industry they have been very relevant (P1).

There was generally a positive attitude shown by members of organizations to the services they pay for: it can be assumed that if they were not happy they would leave. Membership services included: industrial representation, education, including seminars and business assistance, seminars and annual competition. Members of the AIPP were also interested in the concepts of licensing and accreditation of professional photographers. P12's comment illustrates the ease of setting up a small niche group.

Attitude towards licencing and accreditation of photographers:

- I think it's the only way it can work, it's the only way we can go to ensure the future of the industry (P12).
- No, I don't think it is necessary. Most of my clients, 99%, don't even know that I have studied so whether I have a licence to operate or

- whether I have a degree or, at the end of the day it always comes down to the quality of your work and how you deal with your clients (P1).
- We can solve that problem as an industry easily by creating the concept of, for example, a licensed photographer. But how would that license be granted, the licence would be granted by a self regulating body, but how do we achieve that, we can only do that by having a unified body (O2).
 - Internal licencing ... it is almost surprising the amount of positive feedback we get from members about it, that they are really happy with it. The reason it is popular is because they can see it as a method of separating themselves from the rest of the photographers (P8).

The concept of a licence to practice is seen by some AIPP members as very important to the future of the industry although it is only the AIPP promoting this idea. They see it as a way of establishing some credibility with consumers and setting themselves apart from other photographers. P1 points out that it is not necessary for commercial photographers as his clients just would not care. This concept is primarily an AIPP proposal.

Problems with a licensing scheme:

- It is only going to be useful if everybody knows that the accreditation means something. If you're working towards an accreditation that no one has any idea about what it is I don't think it is going to be of any benefit whatsoever (P9).
- I think that it is a possibility but I think it would be very difficult to enforce, very difficult to put in place (P7).
- But for a government to say every photographer needs to be licensed as per se a certified practising accountant I don't think that is ever going to happen. But I certainly think internal accreditation we are working on and it is going to work very well (P8).

Many photographers point out that a licensing scheme would not work because it would not be controlled by an appropriate government authority which could enforce some compliance. Again this scheme seems to be of greatest concern to photographers practicing in the domestic/retail sector. The AIPP, which represents many professional domestic photographers, is managing the *Accredited Professional Photographer* (APP) scheme which is a de facto licensing programme that requires members to maintain annual currency if they wish to use the title and associated logos in their marketing. The biggest problem seems to be getting the message out to consumers who may not understand or care about such a scheme especially since it is only being offered by one photographic organization.

Attitudes towards the number of organizations:

- It is a problem, having so many small organisations ... small groups pop up everywhere just because people like to get together P8.
- So I think a lot of those small organisations are going to find it difficult to find a real niche that actually gives them some real following. It is a fairly costly exercise just to run any organisation doesn't matter whether it is a multi- state or multi- industry there are still setup and management costs that are consistent whether you have got 60 members or whether you have 5000 members. So there does need to be some rationalisation O3.

This discussion opens up the problems of having a large number of representative organizations, many of which are quite small (see section 5.3), and having so much fragmentation. Besides the fragmentation of representation there is also considerable crossover of interests. O3 points out the problems of running a small organization and not having the resources to provide the services that many members may require.

Organization problems:

- I think the big problem with a lot of these organisations is that it is working photographers who run these organisations and they are busy working photographers so it's really hard to do everything. The AIPP in my limited experience of the talk that I did there they have full-time employees that is dedicated working for the AIPP as an organisation (P2).
- It is a terribly fragmented industry and that is probably historical. It is not very efficient being so fragmented at this point in time because we don't serve the interests of all the members. We certainly don't represent the public very well by virtue of that fragmentation ... fragmentation does not enable us to project a unified image and the unified message which people can understand. At the moment we are just terribly, terribly fragmented (O2).

Organisational fragmentation and its associated problems of management and effective representation may be the biggest problems facing the photographer bodies in Australia. This appears to be an historic problem but one that many interviewees find problematic.

Positive attitudes towards merging organizations and unification:

- Just suppose if all those organisations came together into one organisation how powerful that would be an greater can be for photographers ... wouldn't that be good (P9).
- One bloody bureaucracy one body. They should have a link they should link arms and represent two different fields and have unity in government and bureaucratic representation no question there ... So I believe that skilfully somebody should be able to bring both parties together to have

- a bureaucratic clout but let them have slightly to different profiles (P3).
- I think the industry as a whole, and with that I include photographers, manufacturers, and people who are suppliers of products and services to the industry as a whole; I think there is a crying need for all parties in the industry to get together and start to address what the future is with the industry rather than protecting the past. ... In my opinion there is an absolute crying need for an overriding governing body, a self-regulating body and we can only ever achieve that by having a unified representation (O2).
- Personally I think it would be good to see the ACMP and the MEAA work together a bit more (P1).

Many interviewees see amalgamation as not only possible but suggest ways of achieving it, with many existing bodies being represented under one umbrella group or secretariat that could speak with a single voice. The only negative opinion came from P2, who has a perspective that possibly explains the attitude of many of the photographers who do not belong to any organisation (45% industry survey), which is they just do not want to belong to any organization or trade union. Whether it is feasible to unite two or more groups is not known but given the strong support of the concept by interviewees it should be considered.

7.8 Changes in the industry

This research aims to explain any changes in the industry that interviewees may have observed. This questioning did not emerge directly from the quantitative analysis but evolved as a line of enquiry when the case study interview questions were being developed. It was seen as a way of getting interviewees to discuss their understanding of the industry, possible changes and their place within it.

Figure 7.8 was prepared to illustrate the theorised changes in the industry in the last few years. This diagram illustrates a possible decline in entry-level photographic work and its likely effect on the remainder of the industry; all interviewees were shown the diagram and asked to comment.

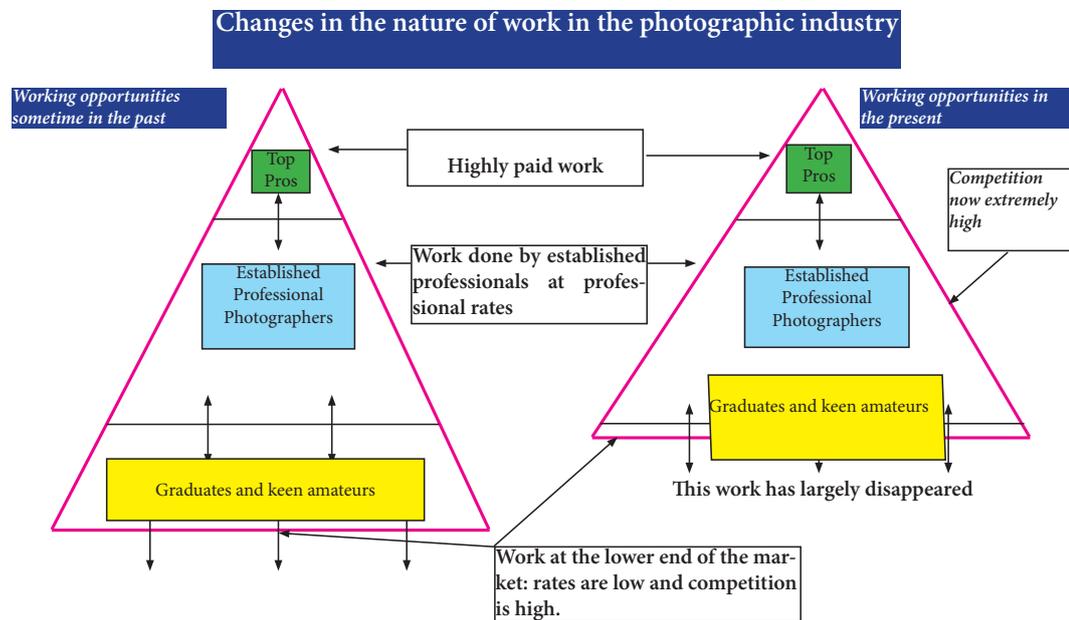


Figure 7.8 Changes in the availability of work opportunities

In Figure 7.8, the pyramid on the left represents how the industry may have looked in the pre-digital age prior to about 2000, and it is representative of both sectors of the industry. It shows that at the bottom of the pyramid much of the *bread-and-butter* photographic work, the least complicated, lower paid work was performed by recent graduates and keen amateur photographers. This work may have included lower priced wedding coverage or advertising catalogue photography. The middle of the pyramid includes the bulk of the profession, those photographers who were able to shoot large weddings or more complicated high quality commercial and advertising illustrations. At the top of the pyramid were those photographers who, through what ever means, were able to command the highest prices for their work. This group would have included the very creative and reliable photographers who could be trusted with large, expensive and complicated projects.

The pyramid on the right represents a theoretical picture of the industry today, where much of the *bread-and-butter* work no longer exists; P15 recognises ‘the complete hollowing out

of entry level and even mid level photography'. The theory proposes that today there are just as many graduates and keen amateur photographers entering the market and they are placing enormous pressures on the established professionals in the middle of the pyramid/market. This is confirmed by many interviewees including P12 who states:

[I]agree with you. I think that we have dropped in number, people have dropped out of the industry and the work that was done, the lowering work here, is now done by keen amateurs. The middle section has shrunk as well and is taken up by your graduates and the amateurs.

The state of the industry illustrated in Figure 7.8 is described, in a slightly different way, by Tuck (2012) who states,

[t]he landscape for commercial photography looks a lot like an inverse Bell Curve. A big spike near the "cheap/free" axis and another spike in the opposite "high tech/high touch" axis and a giant abyss in the middle. Which is decimating the traditional markets as the middle of the curve is where most of the job volume came from.

This comment describes a hollowing out in the middle of the market and this is another way of expressing the extreme pressures currently being faced by this sector of the industry.

The key finding is that all photographers who were shown the diagram agreed with the premise presented to them and the following quotations help to explain the current state of the industry and its possible causes. Additionally, Ibisworld industry analysis data is included where appropriate, to provide an alternate perspective; in many cases this will validate this analysis.

Photographic work is now done by *non-photographers*:

- Yes there is a lot of that basic work that has gone, real estate photography, progress photography on architectural building sites, a lot of work that people use to cut their teeth on and ... you can't do it now because the real estate agent has an iPhone (P11).
- Falling demand for commercial and advertising photography have been key drivers of the industry's decline over the past five years. Advertising agencies have discovered that they can cut costs by sourcing images cheaply or for free from online image databases. Others have avoided paying photographers' rates by assigning the task of taking photos to a creative professional not working as a photographer (Kelly 2012, p. 5).

Increasing price pressure:

- It is probably putting pressure on prices and jobs,

... everyone is getting squeezed (P9).

- Across all industry segments, the fall in demand for services will be exacerbated by dropping prices, as digital technology becomes cheaper and allows clients to purchase images in digital format, which they will be less inclined to pay full price for (Kelly 2012, p. 15).

Photographic rates and the top end of the industry:

- The top has now become so narrow it is not funny ... [rates are] down its always down ... because the volume has gone it's not just down the volume is not there. So what was a good healthy fee 10 years ago it a little bit more than that now but the volume is not there. Instead of working so many days a week you'd be now likely to work that many days a month. So photographers are working for less than normal wages over a period (P6).
- A fall in the average revenue of industry operators has been accompanied by a decline in the industry's average wages, in real terms (Kelly 2012, p. 7).

The lower end of the industry:

- I also think that in this area (indicating bottom of the pyramid) people don't want to do this work any more because they see themselves as better than that. I still think that there is a lot of money to be made in this area (indicating bottom of the pyramid) it may not be pretty work but I still think there is a lot of money to be made ... but I'm willing to say yes to these jobs (P5).
- The advent of digital imaging technology has dramatically changed the way the industry operates, increasing the quality, value and range of services provided, but also exposing the industry to greater competition or substitution by amateur photographers (Kelly 2012, p. 5).

The influence of digital photography:

- Digital has kind of fuzzed it all ... because people who are outside the box here and now inside the box because of mobile phones: don't worry boss you don't need a photographer I've got one on my mobile phone, Photoshop it, enhance it, so these people are being pulled from out there into here (indicating the big area below the line at the top the inverted rectangle) (P4).
- The falling price of digital technology has reduced costs for operators. However, increasing disposable income has led to increased ownership of professional-level digital photography equipment, as amateur photographers perform tasks previously monopolised by professionals (Kelly 2012 p. 24).

These quotations confirm, to a large extent the validity of Figure 6.8; the themes may be familiar and here they are seen in the context of a changing industry. They show that digital technology has had a big effect on the opportunities for work in the industry and explains much of the data presented in the quantitative analysis. These observations are

made by those working in the industry and represent not only their direct experiences but also those of the industry in a broader context. The additional analysis from Ibisworld consistently agrees with and reinforces the comments made by industry interviewees and help to validate the analysis.

There is far less work available in the bottom segment of the commercial market as this work is increasingly performed in-house (P17), but some opportunities still exist as industry and commerce still requires quality photography. The loss of this work has consequently put pressure on the middle sector of the commercial industry sector who are seeking replacement work. This pressure is coming from the 'hungry' emerging photographers who often are equipped with high quality digital equipment (P3). This pressure is in the form of cost cutting. The top end of the commercial market also seems to have been adversely affected with less photographers participating and photographic rates declining in real terms as the amount of work decreases (P6). It is also apparent that work in the middle and top of the industry sector is being lost to increasing use of computer generated images for advertising illustration (P1).

The last ten years have seen some big changes in the domestic sector. The business models that worked in the era of film are being challenged by an increasing number of part time participants who are supplying finished work only on digital discs; the so called *shoot and burners* (Tuck 2012). This can be done at a very low cost and is a direct result of the relative low cost of digital cameras and software and their ease of use. Many clients are no longer willing to buy expensive prints and albums, and want their work on a disc (P12, P9, P8 and P7). Selling wedding packages that included prints and albums is the traditional business model for the majority of domestic photographers. This seems to be affecting the entire wedding industry as bookings for weddings are in decline (P12, P9). While some are obviously suffering, others (P1) are embracing new technology and adapting their businesses take advantage of new opportunities.

Both the domestic and commercial sectors of the industry are evolving hand in hand with many new ways media content is delivered. This evolution may or may not include still photography as it is known today, 'there's not going to be any definition like there was', (P2). The industry will survive but there may be less to distinguish individual sectors as roles merge together, '[a]s in many businesses, some photographers handle the rapid change well and others do not' (P15).

7.9 The future of professional photography

Like the previous section, this investigation did not emerge directly from the quantitative analysis but it was seen as an important way for interviewees to explain their perceptions of the future of their industry. Additionally, some familiar themes reappear as interviewees contemplate the future. Exemplar quotations are shown beneath commonly mentioned themes.

Overview:

- The future of professional photography is more of the same. The creative end of the market will continue to evolve and the low end of the commercial market will remain dead! The future as with all small business will be positive for those willing to engage with the challenges (P15).

Increasing pressure:

- I think that the pressure is going to increase, I see prices coming down which is a worry. I think that it is going to be harder and a tougher industry I cannot see it getting easier (P1).

Positive future:

- I think photography has got a great future for those who are passionate about it, for the average person don't bother about it, don't bother applying (P6).

Domestic view:

- I think the print will survive and possibly still the album. Maybe we need to look at the album in a different way the album needs to be a digital presentation so that it explodes on your screen. If you have one print on the wall which is fantastic and you walk past it every day it's going to make you feel good. So I think that is still going to be around (P9).

Delivering to a changing market:

- Just as was the case in the past what we have to do as a professional community is to understand how to deliver our skills against the delivery requirements of what people need. And if they want something other than a picture on a wall or album then we have to get skilled in delivering that (O2).

Those quotations give some insight into a possible future, but it is just speculation and a few interviewees were unsure where the industry was headed. Some interviewees talked of more pressure and lower prices, and more digital delivery in the domestic sector. Some are optimistic and see that there will be a need for quality photography and passionate

people who can deliver 'magic' images (P4). On the other hand some interviewees see less of a role for the professional photographer.

Ibisworld offers these predictions of possible areas where professional photographers may be in some ways isolated from the general downturn in the industry. They suggest that:

[e]xperienced, reputable photographers with exceptional portfolios and access to a reliable network of clients will retain their position at the top end of the market. Wedding photographers specialising in niche markets, such as specific religious or ethnic communities, are positioned well. In addition, innovative operators can capitalise on new technology to expand into existing markets or enter new ones, particularly in the online environment (Kelly 2012, p. 9).

While these suggestions are helpful there are likely to be relatively few photographers working in these more specialised market segments. Of course the opportunities to capitalise in online environments are equally accessible to all participants.

Ricardo J. Motta (2010) in a recent paper entitled *The Future of photography* cites the case of General Motors (USA) decision to place half its advertising budget online as a pointer to where professional photography is headed. Online advertising incorporates motion-capture and motion-capture will challenge the traditional skills of many professional photographers. New cameras capable of high speed, high quality image capture will see advertising and other commercial photography more closely resemble cinematography. Post production workflows will also resemble motion picture production.

In the early part of the twenty first century it is likely that most photographers would be commenting on the future of digital technology and perhaps how it would be beneficial for their businesses. Although there is some optimism shown, there are many photographers who do not see a bright future for photography as they knew it. Most, however, acknowledge that the future will be full of change and some have attempted to describe where and how the industry is going.

7.10 Conclusions

The purpose of this analysis was to explore and explain many of the phenomena that arose from the quantitative analysis of the industry and new emerging themes. Although there are some differences both sectors of the industry have much in common.

The majority of interviewees down-play the role their photographic education has had on their success in the industry and put business and marketing skill, passion, enthusiasm and people skills as their most important attributes for survival and success. All interviewees agreed that business and marketing skills were vital for success in the industry and most believed that nearly all of those skills were picked up *on the job* despite some having had some training.

The transition to digital photography was seen by many in the quantitative surveys as a major impediment to finding new work but this was only partially supported in the qualitative analysis. Most photographers were aware of the effects digital technology was having on the industry, for example negative growth and price pressure, but were adapting their practice to meet the changing market. The domestic sector is certainly suffering from the effects of digital technology as more people enter the market, creating great price pressure on their businesses. Domestic photographers' business models will need to change in the future to accommodate these challenges.

One of the most alarming findings was the almost universal agreement that graduates were not well prepared to enter the industry. There is possibly some ignorance on the part of potential employers as to what is currently taught in higher education but there was certainly some evidence that graduates were lacking some basic photographic skills. Despite that, the most important attributes shown for employment as a photographic assistant were personality, presentation and attitude.

Interviewees who belonged to industry organizations were generally happy with the services they received but all agreed that their interests would be better served if there was an amalgamation between the major bodies. This was seen as vital for the long term management and representation of the broader industry.

Photography is an industry in transition as some of the work once done by professional photographers is now done by amateurs and part-timers. There is much pressure on prices caused by the increased competition. Digital technology has played a significant role in this phenomenon and will determine the future structure of the industry. There will undoubtedly be a future for the professional photographer/image technician but that role is likely to be different from the current models. The reality of the profession is summed up well by P15 when he states:

[t]he issue of creativity and artistic merit can be applied across a whole range of human pursuits and if one is obliged to make a living from photography it would serve them well not to try and elevate photography above other more so called trivial pursuits. The aim of successful serving of clients has many universal maxims.

In early 2013 P2 was contacted⁹ in order to ascertain if she had detected any change in the attitude of photographers to the industry since our initial interview in 2011. She was quite up-beat in her assessment of a new positive attitude within the industry. P2 said that photographers were looking for new ways of creating images, working methods and self-promotion. This positive sign may be an indication of an industry that is maturing to the challenges of technological change. So much has changed and this analysis has explained an industry that has evolved in so many ways since analogue techniques were abandoned. There will obviously be more change to come, there always has been, but at least now the industry is becoming more comfortable with the outcomes of the digital revolution.

⁹ Personal communication 30-01-13

CHAPTER 8

Mixing analysis of the four key identified themes

8.1 The context for identifying the extent of the alignment

The purpose of this analysis is to examine the extent of the alignment between education and industry. This analysis will concentrate on three significant areas where there appears to be a prima facie case that the needs of the industry are not being satisfactorily met by the skills being acquired by graduates seeking work in the industry. Additional analysis focuses on a fourth theme showing that non-union industry representative bodies may not be fully meeting their members needs nor its potential responsibility to the education of future practitioners. The four areas of analysis are:

- 1 The extent to which graduates are adequately prepared for roles in the professional photographic industry.
- 2 The extent to which curricula reflect the significance of the domestic photographic industry.
- 3 The extent to which business and marketing skills (enterprise skills) are necessary in university curricula.
- 4 The role of photography industry organisations with regard to member representation and a support role to higher education.

Each theme will be analysed in turn drawing data from the quantitative and qualitative stages of analysis. While points two and three are sub-sets of point one, each has its own unique propositions that will be analysed and explained.

8.2 The extent to which graduates are adequately prepared for roles in the professional photographic industry

8.2.1 The case for education

Table 5.6.2 presented the results to the survey question of teachers which asked them to rate how well their course met the needs of students seeking a career in professional photography. Just over half (53%) said well, 30% said moderately and 16% said to a limited extent. However, a conclusion could be drawn from the qualitative analysis of education that shows most teachers thought they were providing teaching that produced high quality graduates with photographic skills and broad generic skills. The results detected some qualifications regarding the changing role of the professional photographer, the possible lack of depth in understanding some fundamental principles of technology and that students' diverse needs were rarely discussed.

The quantitative survey of teachers did not directly address the core focus of courses, but this line of questioning was developed for the case studies. The responses to the survey questions were equivocal, with comments about courses meeting student needs ranging from 'very applicable' (respondent 13), through to 'a limited extent' (respondent 2). This widely divergent range of opinions may reflect the fact that anonymous survey respondents felt uninhibited in expressing their true opinions. Ultimately there were some educators who believe student outcomes were not being fully met. However, the qualitative analysis addressing the core aims of courses showed most were clearly focused on vocational outcomes and additionally there was an awareness that graduates needed skills that would equip them for a variety of career options.

Just as there are schools offering traditional photography education with defined photographic outcomes, there are an increasing number of schools in higher education offering broad based multi-media courses that offer photography as a component or as an option. These courses are providing vocational outcomes but the range of opportunities for graduates is possibly greater. The only possible downside to this is the lack of any thorough

speciality achievable in such broad ranging curricula, this sentiment was expressed by some interviewees and dismissed by others. Even within schools offering a more traditional photographic education there are certainly many opportunities for students to study new media alternatives.

It is possible that in Australia, because of higher enrolments in creative arts courses (T3) there are more people qualifying with creative degrees than ever before. It is not within the scope of this study to explore the employment opportunities for graduates beyond the realm of the photographic industry, but it is reasonable to assume that as the wave of innovation reduces traditional photographic opportunities, other openings are being created in the broad creative industry sector.

8.2.2 The case for industry

The Australian photographic industry is diverse in terms of specialist disciplines, participants and geography and is divided into these broad groups (Kelly 2012):

- **Commercial photography:**
 - › Commercial and industrial 12.5%
 - › Advertising and fashion 20%
- Domestic photography:
 - › Wedding 40%
 - › School and graduation 15%
 - › Portrait 10%
- **Other:**
 - › Represented by scientific, forensic and other specialist areas – 2.5%

These segments are divided between the consumer/domestic market 65%, and the commercial/advertising market, 32.5%, plus the *others*. The distribution of photographers is generally proportional to population densities but there is a greater concentration of commercial photographers in the major centres of business activity; mainly New South Wales (Sydney) and Victoria (Melbourne). The industry is still seen in terms of quite traditional categories (specialisations) and while helpful, the distinctions are becoming blurred, as many photographers are now chasing work in fields other than their area speciality both within and outside the industry (Table 5.3.8). It is worth remembering the quantitative data shows that 75% of survey respondents stated that photography was their main job but over 60% had other employment. Data analysis also showed that 76%

wanted more work in the industry. The relevance of this data is that it is difficult, perhaps more than ever before, to define a professional photographer. So as the definition of what it is to be a professional may be changing, so too could the description of graduates who are trying to find a place in the creative industries be expanding.

It could be assumed that photography industry professionals would be satisfied with the quality of graduates they were interviewing as potential studio and field assistants, as many have come from the similar institutions as themselves. This was not the case as the overwhelming view from case study interviewees showed that graduates were unprepared for the photographic industry. The quantitative analysis clearly identified the most important attributes and skills needed for employment (Figure 5.6.2). It would be fair to say that the photographers interviewed could be defined as conducting their businesses in fairly traditional ways.¹ This means conventional studio techniques for advertising photography, and fairly standard techniques for location photography like photojournalism and weddings. This is not to say new technology is not important, it is, especially in post production, but getting the picture is still, in most ways traditional—using a camera and lights.

Therefore, for people working in these sectors, the basic skills of lighting and camera craft are still predominant and these adequately covered in many texts, for example *Light it, Shoot it, Retouch it* by Scott Kelby. Many interviewees were quite experienced and they alluded to the importance of these basic skills. These are the skills that many of them learnt when they studied photography in institutions or taught themselves. These were the skills that were needed to produce an accurate image on a piece of film. There were some post production techniques in the film era but they were not nearly as widespread as current in-house digital techniques. So despite the changes in post film curricula much work that working photographers do today has not changed significantly. This may be a clue to the perception of graduates being poorly prepared for the industry.

8.2.3 Alignment phenomenon

The crux of this section hinges on why so many professional photographers interviewed believed graduates, presenting for employment, were not seen to be well prepared for the photographic industry. At this point it must be restated that some interviewees believed

¹ Most were interviewed at their places of work and described their practice.

this has always been the case, but most comments were quite emphatically negative. The explanation for this phenomenon has a lot to do with what actual skills professional photographers really require of an assistant, against the student outcomes designed by higher education institutions.

Many of those interviewed were keen to help graduates find work in the industry although most photographers surveyed said they had never employed a graduate. Many interviewees said that graduates lacked basic photographic skills, but they did not in most cases explain exactly what skills were absent. They often proceeded to list what they considered to be the more important criteria for employment, for example, personality, presentation and work ethic and these attributes reflected the quantitative survey results (see Figure 5.6.2). Several photographers said that much of what was taught were top end and advanced techniques and that students were not receiving instruction in basic down to earth procedures, but quite how students proceeded to the *top end* without doing the basics was not explained.

It is possible that graduates' basic photographic skills are lower today than in the past (T3) but it is also likely that graduates now possess a broader range of skills. Practicing photographers may be looking for assistants that mirror their own perception of themselves when they began looking for work; people that have strong basic skills, like they *thought* they had, when they graduated or started working. They may also be unaware of the scope of modern new-media curricula, even as taught in the more traditional schools. It was shown that some photographers employed people who could take on post production roles but it is more likely that studio and field assistants are employed to accomplish the more traditional/prosaic roles of carrying and setting up equipment.

The role of higher education and the role of the assistant are further explained by T10. He presents a slightly different explanation, but one that adds to and fits this scenario quite well. Like others, he also hears the complaint 'all the time' that graduates are not prepared for the industry but observes, '[I] have found that there is not a cohesive set of skills that everybody agrees are not being taught.' The explanation is that students are not ill-prepared at all, but employers have quite different expectations about the skills graduates should have. He believes that you cannot prepare students for all situations that may arise in work because photography it is such a diverse industry. This, he emphasises, should be the cue for higher education to do more to prepare students to learn on the job rather than preparing them for certain defined roles.

T10 also believes that some employers do not have the educational background to understand the learning process in higher education, 'I think there is also a certain failure amongst areas of the industry to acknowledge just how complicated the process is, to acknowledge the importance and the right and proper place of on-the-job training'. T10's explanation is possibly close to reality but this researcher still harbours a doubt that some basic skills may not be adequately addressed by some institutions, notwithstanding the diversity of the industry. Many basic skills are universal to all photography industry sectors.

One recently graduated photographer from an Australian university offered a perspective on finding work. She commented, that while she thought she had good technical skills when she graduated, this did not necessarily guarantee work as some clients believed, oddly, they thought she knew too much (Shine CV, 2012). On the other hand she found it difficult to get work as an assistant because photographers wanted people with no experience whom they could train from scratch. This photographer has gone on to establish a successful practice in London. There are so many variables that contribute to a graduate's chances of success and are beyond the scope of this research, but for this example, good basic training seems to have been important.

The paradox remains: on the one hand educators are doing their best to provide an education that has outcomes relevant to the realities of contemporary career options; on the other hand some industry practitioners are questioning the relevance of some aspects of contemporary photography education.

8.2.4 Summary of the proposition

There may be a case for schools to incorporate more thorough teaching of the basic skills of photography. The true extent of this teaching is not known but many interviewees mentioned the lack of these skills and several teachers pointed to a possible lack of rigor in the area of basic principles. While there was no consensus on the type of basic skills graduates lacked, photographers mentioned areas like: basic studio lighting (P13), that they were digitally prepared but not photographically ready (P8) and graduates were not able to work to a brief (P2). This contrasts with the quantitative data (Figure 5.6.1) that shows just how respondents rated graduate skills, where technical skills were quite highly rated.

Digital technology was seen as the biggest challenge to finding new work (55%, Figure 5.3.10) while some respondents viewed it as an opportunity (P1, P13). Modern curricula are evolving along side new technology and changing business practices. Business models and practices are evolving to meet new market demands in all sectors. While high quality image making will continue to be in demand by many sectors of the market (advertising/wedding) the fundamental role of the professional photographer is changing. The new paradigm will be that of the creative digital technician (P1, O2), someone who is able to creatively realise the ideas of a client in the most appropriate way and that may not always be with a stills camera.

Despite there being an apparent misalignment between education and the industry it is more likely to be, for the present, one of being out of step with the other; where some in industry may not be fully aware of new and changing curricula in higher education. Industry may have some expectations of the skills they believe graduates need while educators are many cases providing students opportunities to learn a far broader range of skills than ever before. This point was observed in a report by Professor Ian Harper (Deloitte, Access Economics 2012) for the Federal Government's new Workforce and Productivity Agency, whose key finding in an interview on the Australian Broadcasting Commission's programme 7.30 (ABC 2012) was:

In the case of industries and skills, there are lot of instances where the universities and the training colleges are producing graduates who aren't actually work-ready, but there are also employers who perhaps aren't ready for the sorts of skills that the graduates are coming out with.

While this comment was made within the context of skill shortages in the Australian workforce it is relevant to this research, as it shows the misalignment between educational outcomes and the skills needed by industry are not uncommon. Providing students with skills; trade skills and the skills to learn on the job and be able to adapt to new opportunities is vital for students entering the somewhat uncertain future of professional photography.

8.3 The extent to which curricula reflect the significance of the domestic photographic industry

8.3.1 The context for the misalignment

The purpose of this analysis is to explain the apparent misalignment of photography curricula in higher education which reflect upon the career opportunities in the domestic sector of the photographic industry. This analysis will explain why there is some reluctance on the part of educators in higher education to offer any significant tuition in domestic photography. The analysis will also examine the industry and explain the complex nature of this sector and the issues it faces in a challenging future.

The domestic sector is mostly comprised of full and part time wedding and portrait small business owners who are located in all populated areas of Australia (Table 5.3.3). The work these photographers perform will vary enormously depending on the whether they are very specialised or they seek work in other fields and it will also vary with location. In a small city or town, photographers tend to be generalists while in larger cities there is more of an opportunity to specialize. The size of this market is approximately 65% (including the school, sporting group and university graduation photographers) of all photography by revenue (Kelly 2012) but unlike much commercial photography it is not centralized in major metropolitan areas.

Choosing to become a wedding photographer is seen by some educators and commercial photographers as the least compelling segment of the market (T6, O4). The evidence shows that there are some strong negative attitudes towards this type of photography from both commercial photographers and educators. Some educators may have an elitist attitude towards domestic photography and believe it is the job of others to teach (T6), or for participants to teach themselves (T4), because the industry should be able look after itself (T9). One reason for this may be:

...primarily because the people who are involved in delivering the education are the course creators, the people who devised the courses have probably come

from a background that does not involve wedding and portrait photography, so they do not necessarily understand it as such (O2).

Some commercial photographers see a stigma attached to being identified as a wedding photographer by their commercial clients (P10, P13 and O4). Some may do wedding work but they maintain a separate website to promote it separate it from their core commercial work (P2 and O4). Some commercial photographers see wedding photography as incredibly skilful (P10) while others comment on fact that wedding photographers are only in it for the money (P2 and O4), ultimately strong attitudes abound among respondents.

What the evidence does show is that most photographers in Australia are self taught (64%, Table 5.4.2) and most (80%, Table 5.4.4) thought their education and training prepared them only moderately or less well for domestic photography. T4 suggests that most wedding photographers would not have formal training. Educators say that most students do not enrol in their courses to study wedding photography. What is also apparent is that domestic photography is not offered in curricula to any great extent, even though it represents the largest sector of the market and offers viable career opportunities in most parts of Australia.

8.3.2 The case for education

Educators do not appear to offer domestic photography in their courses because they do not see a demand for it, and therefore do not see it as something they need to teach (T4, T1, T8). Many acknowledge its importance as an industry sector (T4, T3) but do not see it as a relevant curriculum area. Certainly portrait photography is studied and students wishing to pursue wedding photography are encouraged to do so.

Photography in higher education has traditionally aligned itself with commercial photography including advertising and photojournalism and to some extent fine art and scientific photography. These have been seen as specialist areas where particular technical skills were required, for example the use of technical cameras and complex lighting set-ups. To some extent this is still the case for example, in scientific and medical imaging.

Specialist skills in domestic photography formally included the use of relatively expensive medium format film cameras for wedding and portrait work (P9). This was a barrier to

many amateur photographers. That technology has been almost entirely replaced with digital SLR cameras, often sold at very affordable prices. Observations confirm that many wedding photographers no longer use tripods and portable flash in the field, equipment once deemed as essential. In many ways the perceived necessity to go to university to learn advanced techniques may have passed.

What is clear is that when graduates with photography ambitions complete their courses many will not find sustainable employment in the areas for which they were trained (T1). This may be particularly true in regional areas where specialisation is less common. Graduates are often required to seek work in the domestic sector to supplement their incomes or to earn an income at all (T1). In fact, 76% of photographers surveyed stated a need for more work in the industry (Table 5.3.9). It would be fair to say that many graduates could shoot a basic wedding straight out of school, in fact many will have shot weddings before they had graduated. These students therefore have some idea of what is required to complete this work, but just like other areas of photography, domestic photography is a speciality that many experienced practitioners take to very high levels, even in regional areas.

In many ways shooting a wedding is like a long photojournalism assignment: it is a one-off event with time pressures (T6, T7). It involves much pre-planning and project management, which could include working with many people in several locations and in quite variable conditions. It can be stressful work and quality results are expected—it cannot be re-shot. All this is in addition to marketing and sales and the production of a product (P9). Experience can teach these skills but there is certainly a case for putting these skills formally in a photographic curriculum, at some level at least.

Is the domestic sector in need of more wedding and portrait photographers? There are two answers to this question. Possibly not, because of the industry downturn and possibly yes because there will be growth in line with population growth (Kelly 2012). The domestic sector is not affected in quite the same way as the commercial/advertising sector by digital technology; product illustrations for example, can now be created using computer generated images (CGI, P1) whereas brides and grooms are real people and require a real photographer to capture their ceremony. The same applies to portrait, school, and graduation photography. What needs to be considered is if the inclusion of domestic

photography skills in higher education would provide graduates with more employment opportunities in the industry?

As has already been discussed the long held standard of the wedding sector is of producing a wedding package of an album, photographs and large wall prints. This model is changing as the 'shoot and burn to disc' model becomes increasingly popular (P12), but one that reduces the possibility of profits from print and album sales. This model plays nicely into the hands of the less experienced amateur who may not have the expertise to manage large print and album orders (P12). A DVD of edited images, at a basic level, is relatively easy to produce (admittedly for professionals too), but what is more difficult, at least for professionals, is charging a fair and reasonable price for one DVD. Clients often do not understand the effort required to produce a disc of expertly edited images on professional software. Photographer P12 stated that 'shoot and burners' are destroying the industry. This may be an exaggeration, but quantitative survey data shows that photographers were worried by the number of amateurs operating in the market and the fact that they could no longer charge what they thought their work was worth (Table 5.3.10). So called shoot and burners may not be destroying the industry but they are certainly challenging it.

The future will possibly see an increase in the provision of digital-only wedding packages and the inclusion of video produced from high-definition capable digital still cameras. There will, in all likelihood, continue to be great pressure on the professional domestic photographer from amateurs. For professionals to survive they must have, what marketing gurus call a *point of difference*, something that distinguishes them from the less skilled (P2). While the self-taught domestic photographer is the norm there is a strong case for students wishing to enter this sector to learn these specialist skills in higher education and these would be the marketing skills necessary to promote the *point of difference*. There is possibly nothing a keen amateur cannot learn with some effort, but equally, there is possibly a case for high quality learning provided in higher education. Teaching the skills required to produce high quality creative media, and learning the skills to market those skills successfully may give graduates entering the domestic sector advantages particularly in the early stages of their career. Marketing skills may help develop the points of difference that will persuade clients to pay for high quality creative work instead of opting for a cheaper price point (O1, O2).

As has been stated in Chapter Six, many graduates will not find sustainable employment

in the fields of photography they originally aspired to, for example becoming a fashion photographer. The domestic sector is then used by these graduates as a *fall back option*. That is the case now and may well be in the future if changes to curricula are not made. Instead of almost disregarding the domestic sector, as higher education commonly does now, a curriculum should be provided to provide interested students with a professionally driven course in domestic sector photography. This is a sector that will be driven by population growth. Making real changes to accommodate studies for the large domestic sector will require a change in attitude by course designers, whom, as has been shown are not particularly interested in the sector. Educators need to understand that there are genuine career opportunities in the domestic sector, whereas other career options may no longer exist in the same numbers elsewhere. Equally it must be acknowledged that for various reasons, for example, location, resources or student cohort, this type of specialized education will not fit the teaching and learning objectives of many photography schools.

8.3.3 The case for industry

Estimating the number of people operating in the domestic sector of the market is difficult. Ibisworld estimate the total number of photographic businesses in Australia to be 6000 (Kelly 2012). The AIPP may have several thousand members² of whom a majority operate in the domestic sector. This research shows that approximately 38% of survey respondents (industry sample) claim to belong to the AIPP. Extrapolating that data: if 40% equals 3000 AIPP members (10% equals 750 members then 60%, non members, is $750 \times 6 = 4500$). Total photographers will equal 7500 professional photographers in Australia which is close to the ABS figure and somewhat close to the Ibisworld figure. Ibisworld (Kelly 2012) point out that many people operating in the domestic sector are the 'grey market'; amateurs who operate from home without a registered business. This is certainly confirmed by survey respondents in this research.

The main economic driver for this sector of the industry is real disposable household income which affects budget allocations for weddings and can therefore influences choices regarding the quality of photographer for example, professional or amateur. Other factors directly affecting this sector are population growth and number of weddings performed. The Ibisworld report (Kelly 2012) suggests that there has been steady demand for wedding and schools photography since the mid 2000s. They also state that there has been an

² P12 suggested the membership was about 3000 people across all categories.

increase in weddings performed, in line with population growth. According to Ibisworld most of this work is done by professionals. This is somewhat at odds with this research that points to professional photographers photographing fewer weddings and the increase of amateurs entering the market forcing prices down. Ibisworld acknowledge that professional photography has been 'eroded' by the increased availability of user friendly digital cameras used by amateurs. It is a 'sector dominated by small non-employing operators, many of whom work part time to supplement income from another job' (Kelly 2012, p. 4).

Approximately 36% of industry survey respondents claim to have some photography qualification, including cadetships (Table 5.3.4). Therefore the majority of photographers appear to be self taught (O2). This is not to be viewed as pejorative but in the context of the question put to industry representatives (are poorly trained photographers giving the wedding and portrait industry a bad name?), the AIPP representative (O2) and some others confirmed this. Although this is unlikely to be a new phenomenon O1 reports that the AIPP is currently receiving 'lots of complaints' from the public about poor quality wedding and portrait photography, 'we are starting to hear that more and more' (this is confirmed by P12 in section 7.6). The AIPP are very concerned about the professionalism of the industry and their members' professional reputations in particular. They provide ongoing education opportunities for their members and offer special accreditation for members who complete annual currency certification. The AIPP also have an education programme to assist their *emerging* photographer members, many of whom are keen amateurs. A survey of articles in their magazine *The Working Pro* clearly shows that AIPP are very serious about professional standards and on-going education.

The picture of the domestic sector, the one where a photographer's business is addressing the needs of the consumer is one of fragmentation. It is populated by practitioners of varying skill levels who are mainly self taught. While the industry is in decline there is a long term expectation of growth. While there is great talent within this sector there is also a minority who give it a bad name by performing poorly due to lack of skill and professional standards. The peak industry group represents many photographers in this sector and is actively trying to build professional standards within their group and promote those virtues to the public. It can be assumed that the public, in most cases, rarely deal with professional photographers and may not understand what makes one photographer better than another. One of the greatest influences on the choice of a photographer is a referral (O2) and the second is price. With the business model traditionally adopted by

wedding, portrait and school/graduation photographers rapidly changing there will be an even greater imperative for photographers in this sector to be well educated and able to market themselves well and display a point of difference that the market is willing to pay a premium.

8.3.4 The alignment phenomenon

There is a misalignment evident between the lack of higher education curricula catering for the domestic sector of the industry and the possible needs of the sector. This misalignment is possibly a detriment to graduates who have been offered few opportunities to learn the specialist skills needed to succeed in this sector. This sector is one of slow but steady long term growth and it is conceivable that many graduates, particularly in regional areas, may find themselves working in this area.

There is a demonstrated stigma associated with the domestic sector by some educators and some commercial photographers. Educators acknowledge the size and value of the sector but for what ever reasons, rightly choose to focus curricula on other areas of photography, predominantly the commercial and art disciplines. This stigma may have historic origins which have seen, as O2, pointed out, curricula designed by people with little knowledge of the sector and a belief that other parts of the industry are possibly more challenging and more worthy of teaching.

8.3.5 Summary of the proposition

While there are no entry requirements for entering the industry and while learning the basic skills of photography has never been easier there is an opportunity for some curriculum designers in higher education to include domestic skills in their courses. Not every school will want to teach these skills and not every student will want to enter this side of the industry. As the commercial sector continues to decline there will be employment opportunities in other areas. Domestic photography skills, including entrepreneurship skills, should not continue to be so largely disregarded in higher education, as this may deprive some students of viable career choices. Furthermore, courses in domestic photography should be promoted and students must be able to assess the domestic sector for what it is: one of growth, where there are opportunities to be creative and build a

viable career. The sector is in a state of evolution and it will be the educated graduates from higher education who choose the domestic sector, who will be in the best position to make the most of the future challenges and opportunities within the domestic sector.

8.4 The extent to which business and marketing skills (enterprise skills) are necessary in university curricula

8.4.1 The context for the alignment

The purpose of this analysis is to explain the clear non-alignment of the realities of running a photographic business and the lack of relevant business and marketing tuition at many higher education institutions teaching photography. To reiterate, not all people who learn photography will be looking for a career as a professional photographer, but many will, and they inevitably become small business operators.

Small business failure is common but it is difficult to measure as the definition of failure is ambiguous. Less than half of business owners have had any business training and only 12% had received any at tertiary level, but there was a positive correlation between business training and business survival (Peacock 2000). It appears obvious that business training is important for the survival of a small business. The Beddall Inquiry in 1990 suggested that small business training courses, as part of the education curriculum were the best way to provide basic management training (Peacock 2000).

Higher education has an important role to play in the provision of business management skills which appear so important for the survival of their graduates who seek to start up their own businesses (Peacock 2000). P1 supports this view and thought business training should be part of any course. Without these skills many graduates could face a high chance of business failure, not because of a lack of technical skills in the discipline they studied but because they were not adequately prepared for the real world running a photographic enterprise.

8.4.2 The case for education

Educators and industry professionals who were interviewed almost unanimously agreed that business and marketing skills were essential and important. Most arguments agreed with P8 who explained that you can be a great photographer but if you do not have the business and marketing skills then you will not have a business or an income and will just be taking photographs for fun.

Some educators stated that the business course content was too generic and should be changed to reflect the photography industry. T9 said he relied heavily on outsiders to come in and speak specifically about certain topics, but thought the content could be more targeted. However, some subject providers believe that running one business is like running another (T7). Another educator stated that they used to run a course that was so heavily criticised by students that it was dropped, which he suggested was ill advised (T6). This view was supported by T3 who confirmed that his school attempted many ways of introducing this teaching but it was always treated with apathy and antagonism and students performed poorly. One educator stated that business skills were taught and that these were specific to photography and it was compulsory but students usually did the minimum required to pass (T4). These views must be balanced against the quantitative results (Table 5.4.3) which shows the very low rating of business skills and work related skills learnt in formal education.

The quantitative data shows that there are relatively few graduates practicing as professional photographers, (24%, Table 5.4.2). This poses the question: why are there so few in the industry considering a large number of graduates? It was also pointed out by P1 that many self taught photographers in the industry may have had previous business experience with which to draw upon, perhaps helping them to survive in the industry. Therefore, could better business and marketing training improve the chances of graduates' survival in the industry?

8.4.3 The case for industry

It has already been shown that skills in business and marketing are positive contributors to business success therefore it is somewhat surprising that O2, the head of one of the largest photographic organisations, was shocked to discover just how many people in business had done only a weekend or one-day course in business management. P4 puts the photographers survival dilemma into perspective when he describes the Jekyll and Hyde syndrome where you must be a photographer and a businessman and travel together for a successful relationship.

As has been demonstrated the majority of photographers practicing in Australia are self taught and it is probable that a majority of the self taught photographers are in the domestic sector. What this may indicate, beyond the value of having these business skills, is the majority of photographers in Australia are not only self taught in the skills of photography but may have a background in business (P1). It is possibly their business acumen, more than their photographic skills that sees them as the dominant participants in the industry. There are no statistics that show where photography graduates career paths go, but given the high numbers of photography graduates that have been produced for many years it is reasonable to assume more would be industry participants. It is also possible that had those graduates possessed better business and marketing skills more may have survived in the industry.

8.4.4 The alignment phenomenon

The scope of this research did not consider graduates' success in business. Given that many may have established a small business as a photographer and the relatively low number of graduates in the industry, it could be assumed that many have tried and failed. Ibisworld analysis shows that 83% of photography businesses are non-employer establishments (Kelly 2012). It is also not known if better training in business and marketing skills would have helped but evidence shows that business skills contribute to success in business. Additionally this does not account for the individual and their aptitude for actually being business people/entrepreneurs. It is probable that some will have more aptitude than others and this probably applies to most business ventures. The only thing that is

quite incontrovertible is that all interviewees agree that business and marketing skills are important graduate skills.

8.4.5 Summary of the proposition

There is a clear case for business and marketing skills to be taught to students who may be planning a career as a small business owner. While some courses provide this tuition there was some doubt expressed by some educators about its relevance. There was also some concern expressed about student attitudes to learning these skills; teachers claimed some students found it too generic in some cases and could not see how it was important to their future as a creative individual.

The teaching of business and marketing skills therefore becomes a curriculum issue, one where those skills are taught from within the school as a highly relevant subject to add to overall graduate outcome strategies. If not a compulsory subject, and its relevance may be low for some students, the evidence suggests that it is important for any students wishing to go into business. Therefore, every effort should be made to encourage students with a business career in mind to see the importance of enterprise studies and encourage them to participate, possibly from their first year of study.

It is not within the scope of this research to recommend a curriculum design other than to emphasise that it should be designed so that it engages the student at a level where they can clearly see the short and long term benefits of doing an enterprise subject. It is only when the skills of business and marketing are being taught in an engaging and relevant way that graduates who are planning to enter the business world can be guaranteed a fighting chance—in what is a very competitive work environment. Without this, higher education is almost certainly making it more difficult for graduates find their way in the challenging world of business. Graduates may have all the technical and creative skills that are necessary for work, but without providing them with the chance to market those skills and make a living they will never achieve their full and deserved potential not to mention the fulfilment that goes with achieving success in a chosen field.

8.5 The role of the photography industry organisations will be examined with regard to member representation and a support role to higher education

8.5.1 The context for the alignment

There are two issues that will be analysed in this section. The first concerns the fragmented nature of organisations representing photographers in Australia. The second follows from the first. Because of the lack of one non-union representative organisation there is no single body capable of contributing to a framework of photographic outcomes that could guide course designers in developing appropriate curricula reflecting the true requirements of the Australian photographic industry.

Quantitative research has shown that industry survey respondents mentioned over twenty organisations to which they belonged. Case study research shows that while many photographers were quite loyal to their own organisation they overwhelmingly agreed that one unified organization would serve the industry better. It was even suggested that this unified organisation should include the groups that represent the wholesale and retail suppliers to the industry—a whole of industry body or secretariat.

Because there is at present no nationally recognised authority that has prescribed any framework or standards for photography education each institution creates their own according to their philosophic paradigms of education, and with reference to their particular industry advisory panels. These will include their unique view of appropriate student outcomes; both scholarly and vocational. This approach has seen all schools develop curricula that suits their student cohort and their demographic and geographic position.

8.5.2 The case for education

The proposition is that some national guidance could be of use to educators designing

photography curricula, and that one of the most appropriate place for this to come from could be a peak industry body. As has already been discussed TEQSA is soon to implement accreditation on all courses taught in Australian higher education. This will necessitate course providers having some external industry input. TEQSA is looking for consistency across all courses and will require external input from stakeholders (Threshold Standards, 2011). A peak industry body with a functioning education sub-committee could be seen as having a considerable stake in the quality of graduates entering the industry. Maintaining standards is a primary focus for the AIPP who already have an annual accreditation programme for practising members. The AIPP believe that recognised industry standards will help their members survive in an industry with so much grey market competition with dubious skills. They see that promoting their accredited members to the public will distinguish them from others who should be seen as the non-professionals, the ones without industry endorsement.

The AIPP and the ACMP both offer student membership categories and recognise graduates qualifications from many institutions. But being involved in the actual establishment of a national educational standard would certainly help to reinforce a graduate's standing as professional photographer within the industry, because there would be a measurable minimum standard of skills set by a national industry peak representative body. There are never likely to be legislated qualifications to practice photography. However, the more the industry and educators can do to raise the standard of photography across all sectors and its perception as a legitimate profession with consumers, the better the chance there will be of graduates surviving in a changing and competitive industry.

8.5.3 The case for industry

The case for industry is, on the face of it, simple: there is a compelling need for representative organizations to amalgamate—to form one unified body or establish a secretariat. At the very least a merger of the two largest non-trade union representative bodies is required: the ACMP and the AIPP. It would also be an advantage to the industry if some of the smaller specialist groups joined the amalgamated group, for example the Australian Institute of Medical and Biological Photographers. As O2, who believes that the fragmentation is historical argues, there should be an overriding governing body established as a matter of urgency. With some justification the AIPP does describe itself as 'the peak body for

Professional Photography in Australia' (Myers, Lyons, 2013).

The reason industry organizations exist is basically to serve its members so that they can serve their clients/customers better. The reasons for unified representation, according to interview responses include among others:

- Attracting sponsorship and lobbying power.
- Representing all interest groups and genres.
- Industrial and professional advocacy (legal government and business).
- Better representation and image to the public – image, promotion.
- Industry governance.
- More comprehensive membership services (internal education, awards, discounts on industry services).
- Possible standards framework for higher education.
- Accreditation of members.

To a large extent these points represent current practice but the issue is, as O3 from the MEAA explained, there are so many things a large well resourced body can do, for example, have a law firm on a retainer, that would be impossible for a small organization to finance. Large organizations would have economies of scale that would make many functions more economically viable.

It is difficult to understand why the two main organizations have not yet amalgamated as there is obvious good will on both sides for this to occur. There may be resistance from some members but this was not really evident from the interviews that were overwhelmingly in favour of amalgamation. The only note of dissent in this research came from P4 who, after first stating he was undecided about both the AIPP and the ACMP 'coming back together' said, the two bodies were 'different' and that if you viewed the material on both web sites you would clearly see that the [ACMP] had higher overall standards. This view is quite possibly held by members of both groups, but it is not really a good reason not to amalgamate. In any case, high quality work is being created by members in both these groups and reasons for amalgamation would seem to outweigh any petty jealousies and 'elitism' (P4) regarding the superiority of any individual's work.

There are many photographers who do not belong to any industry organization (45% general industry) and it is presumably an ongoing goal of most organizations to retain members and attract new ones. A single unified body may be seen as a more attractive product to more photographers if an amalgamated body is seen to offer greater member benefits at a

reasonable cost. The only argument against this was offered by P2, who stated that many ‘photographer[s] just don’t go into the photography industry to be a part of the union to be told what to do...[t]hey like to run their businesses separately and I don’t think it is ever going to change’. That is likely to be true for many but it is conceivable that a unified body would become more attractive for others.

8.5.4 The alignment phenomenon

The alignment concerns the possible responsibility of an industry peak body to set a framework of standards that could feed into the decisions made by course designers in higher education when they are creating curricula. The largest organizations already have some close associations with many schools and students are encouraged to become involved in the organization’s activities. This is possibly grooming students for membership. Nevertheless, it is possible that with the implementation of the TEQSA requirements for course accreditation there will be a role for industry input into curricula.

The precise role for the industry to provide curricula direction is unknown but it could stipulate basic skills required of graduates planning a role in various industry sectors. This is not unrealistic as it would set up a unified and measurable set of criteria that would be common to all relevant course offerings. The point is, the industry peak body would be in a position to influence higher education curricula to some extent and therefore, in the long term positively affect the quality and professionalism of their members. This would continue to improve the standing of the profession in the eyes of consumers and ultimately reinforce the *point of difference* that would exist between the educated practising photographer and the *grey market* photographer. The AIPP in particular already runs an internal professional quality assurance programme, but a unified peak body would be in a better position to advise bodies such as TEQSA and government at all levels than what exists at the moment.

8.5.5 Summary of the proposition

The industry, as has been shown, is in a period of change. There is overwhelming support for one unified body to represent professional photographers. The points discussed do

not seem difficult to accomplish and organisational leaders clearly identify the necessity of an amalgamation. Whether there will be a role for a peak industry body to provide formal input into higher education's curricula and what form it would take is unknown. It is the researcher's contention, that for the short and long term good of the industry a consolidation of representative bodies is imperative and long overdue.

8.6 Chapter conclusions

The four main themes discussed in this chapter have been explained and the issues substantially clarified. There is however one concept that, while circuitously addressed, was not made central to the grand unifying theme of student outcomes meeting the realities of industry. While business and marketing skills were discussed by most interviewees, no one mentioned entrepreneurship. It will be shown shortly that the provision of entrepreneurship education that would include business and marketing skills can, to a large extent, create better alignment between student outcomes and the world of work.

The photographic industry will continue and talent, whether creative or entrepreneurial, will continue to be rewarded. The successful participation of graduates in the industry will be governed in part by higher education's pursuit of innovative, challenging and relevant curricula. However, a curricula teaching creative and technical skills may no longer be enough. It would be natural that graduates would want to progress their careers and add value, in some way, to their community and society, either by creating profitable ventures or working in non-profit areas like teaching. To do this they must have the skills to understand these sometimes complex vocational landscapes. Entrepreneurship education could provide the tools for graduates to understand how they fit into their communities as creative participants and how to creatively exploit the opportunities that exist; this should be seen as a creative act. In broad terms EE embraces the attributes of adventure, risk taking, self motivation, lateral thinking, optimism, innovation and vision (Beckman 2011).

It is not within the scope of this research to suggest an EE curriculum but it does seem to offer a clear path to students wishing to maximise their career opportunities. There are two general models that the provision of EE may take, both philosophically different and delivered by different providers. The *New Venture Startup* is often seen in terms of

providing business and marketing training and is often provided by business schools. The *Transition model* provides a much broader view of the creative enterprise skills that could be offered to students from within their schools. This is clearly more closely aligned with the recommendations of this thesis; that of providing relevant skills as students transition from higher education to on-going meaningful employment.

Many educators will see these skills as important but difficult to develop into a popular course of subjects. This issue must be addressed with creative input from industry stakeholders, business school colleagues and curriculum developers. The ownership of the model must be in the hands of the provider arts school. Beckman (2011) and others believe strongly that arts students need to learn entrepreneurial skills that are dedicated to creative arts students' uniquely focused goals and creative outcomes. The mere model of business and marketing education is significantly expanded when it becomes targeted towards entrepreneurship in its broadest sense and, that is the point that unifies many of the misalignments discussed in this chapter.

Most student photographers are by nature creative people and they need to be shown the creative opportunities that exist by participating in EE and understanding its applications for their practice and future in general. EE is, as Jerry Gustafson (2011) suggests, a creative activity and should be taught as an art. This is the challenge curriculum designers should address; entrepreneurship must be seen in terms of creativity and it must be seen as the conduit through which graduates are able to successfully apply their creative ambitions.

If photography students are to have the best chance of leveraging their technical and creative talents they must be provided with a comprehensive set of entrepreneurial skills relevant to their discipline. This may require some curricula reform. Photography education may be booming but the industry is in decline and changing; greater effort must be made to provision graduates with the skills they need to give them the best opportunity to succeed in their chosen field. Entrepreneurship education will go a long way to enabling these possibilities.

CHAPTER 9

Conclusions

9.1 Introduction

At the inception, the researcher's aims were to discover and explain the alignment issues between photography teaching in higher education and the professional photographic industry. To a large extent the aims of this research have been fulfilled. Areas of alignment and misalignment have been identified and explained. While this research is unique in many ways it must be acknowledged that it only creates a partial view into the complexities of teaching photography in higher education and its relationship with a diverse photography industry. It was not possible to cover all issues of potential interest, for example students were not interviewed, statistics on graduate employment not explored and sectors such as the suppliers of photographic equipment and expendables were not included. Regardless of those and other limitations this research contributes valuable knowledge to both sectors. Additionally, it has created a rigorous methodological model by which further research could be applied to education and industry. This research could serve as a basis for a discourse that introduces the maturing phase of digital imaging technologies as it affects photographic education and industry.

9.2 Research outcomes

9.2.1 Findings: Locating the research within education and industry

One of the most important aspects of these research findings is the collective importance of both research streams as one reflective unit of investigation. Each research stream individually tells its own story but the real power lies in the way the two stories combine to create a unique picture of education and industry in the post-analogue era.

At this point it is important to reflect upon what this research offers higher education and industry. The quantitative research of higher education showed in detail that photography teachers are mostly highly experienced and have had solid industry experience while maintaining contact with the industry. Teachers also said that the courses have strong vocational focus although specific outcomes were not mentioned and most teachers suggested that the courses were meeting the needs of the students. The qualitative research reinforced to a large extent the quantitative data but added nuance that could not be obtained by quantitative methods alone. In particular it shows that teachers not only recognised the value of core skills, but they also were aware of the importance of obtaining broader generic skills. It was also interesting to note that schools took students' involvement in the workplace very seriously. While workplace experience was seen as an important part of students' educational experiences some teachers acknowledged that preparing students for employment in their chosen field without adequate entrepreneurial skills was problematic. However, this may be changing, a recent graduate (Macauley 2012) commented that he was able to access valuable business and marketing education while at university and also noted that the ACMP also provided good business training resources. This may reflect a resurgence of awareness by teachers and students of the important role those skills provide.

Research showed that schools teaching photography were focused more towards the commercial industrial sector than the domestic sector of the market. While most students were probably more interested in the commercial sector, denying them the opportunity to fully engage with over half the Australian photography market could be seen as a lost opportunity, one that offered graduates a viable work option. While curricula offering domestic subjects will not suit all school's teaching philosophies, there should be opportunities for developing these learning opportunities in some regions. Students need to be shown the creative possibilities and the career opportunities that exist in the domestic sector. In the long term the domestic sector would benefit greatly from highly skilled graduates pursuing careers in this industry.

Many teachers and photographers commented that there was, and possibly always had been, more photography graduates than the industry could absorb. There may be more

graduating today than ever before and the industry is in a down turn. While this may be seen as a negative it should not be because students study photography for a variety of reasons. Not all are vocational. However, the future may see government educational funding tied more closely to the skills needs of industry.

Each of the schools studied operates independently¹ and seeks advice from industry panels to assist in the development of curriculum and course design. However this research revealed that there is a lack of industry feedback on a national level that arguably, could be considered detrimental to achieving the best student outcomes, perhaps particularly in regional areas. Findings show that government now requires higher education to reflect industry stakeholder feedback in curriculum design through TEQSA and there may be a future role for a peak industry body to provide that feedback.

The qualitative research of the photography industry is particularly interesting as it encapsulates a detailed view of an industry as it undergoes significant change because of the adoption of digital technologies. It cannot be underestimated how profound an effect this has had on the industry and it has reached into every corner of photography. The analysis shows that there were relatively few university trained photographers in the industry—most are self-taught although the balance varies between the commercial/ industrial sector and the domestic sector. Many photographers expressed concerns about the difficulty they were having finding sufficient work within the industry and many blamed the proliferation of digital technology and increasing numbers of amateurs for the problems they were facing.

The qualitative research of industry has done a lot to identify how the industry is dealing with changes wrought by digital technology. While some photographers think that the digital camera has destroyed the industry, this is not a universally held view. In fact, many of the photographers interviewed were using digital technology to their advantage and were just getting on with business. The qualitative research identified many of the skills practising photographers attributed towards their success. While few mentioned their creative skills, it can be assumed that those succeeding in the industry did possess those talents, but more than that, they attributed their success to their communication skills, business skills and (just plain) hard work. Interviewees had to be prompted into acknowledging that their business acumen was a major part of their success, but it was,

¹ VET organisations are subject to government regulations.

as many reluctantly put it, their most valuable skill.

Graduates have never found trying to establish themselves in business easy or quick. Many do succeed and for many their first jobs are as photography assistants. Photographers who had employed photographic assistants, held a fairly common view that graduates were poorly prepared for the industry. This may or may not be true and the reasons have been discussed in the previous chapter. Nevertheless it would seem that personality and a good work ethic are the attributes that will get graduates work above all else. When that phase of their career has ended, the (apprenticed) graduate will have to fall back on much of what they learned in higher education, including a good folio of work, when they start to retain clients of their own.

The industry needs highly skilled graduates perhaps more than ever before. The industry is in a slow-rolling, disruptive evolution, from traditional analogue technologies towards creative industries that are immersed in a wide variety of digital skills and techniques. While the simple act of taking a photograph has never been easier, the creative industries of the future will go far beyond the mere capturing of an image and delivering it to a client. In future the industry will increasingly require highly skilled professionals to create the exciting new digital content for the societies of tomorrow.

This research shows that while high quality traditional still images continue to be in high demand, many photographers are expanding their repertoire and moving into areas they would have ignored in the past, for example moving images and computer generated imaging. As this is happening others are moving in on the traditional domain of the skilled stills photographer. This is precisely where new graduates need to place themselves; as image makers not necessarily as photographers, as professionals who are able to interpret and recreate the dreams of their clients into the media packages they require.

The issues surrounding industry organisations have been discussed at length but it is important for the industry, and therefore the people in it, that there is some consolidation. This is an ideal time for the consolidation to occur. It is time there was one industry peak body charged with the responsibility of representing all image makers, or one, funded

secretariat representing most industry bodies. While it was not within the scope of this research to explore issues surrounding copyright and licensing of images, these issues and many others, are certainly of real concern to photographers and their organisations. As photography morphs more and more with other forms of electronic image making these issues are likely to assume greater prominence to the industry. Therefore it is time that one organisation with members from all image making professions is formed. This organisation would represent not only the traditional stills photographers in all their subcategories but the growing number of electronic image makers who will increasingly inhabit the traditional sectors of stills photography. These people will include the creative graduates who are leaving higher education with a love of photography but who will be more engaged with less traditional innovative forms of image making. There will be significant issues to deal with and that will require strong leadership and adequate resourcing. Representation must be done by an organisation supporting all image makers not just specialist stills photographers. A divided representation (excluding the MEAA) is no longer a viable form of representation.

Possibly one of the most significant results of this research is the perceived need to provide entrepreneurship education at university. This will not only have significant benefits for graduates as they proceed with their careers, but it will have positive effects on the industry. As this research shows there is renewed interest both in Australia and overseas in entrepreneurship education in the creative arts. At this stage there does not appear to be much empirical evidence pointing to the effectiveness of this type of tuition. But, given that most of the practising photographers who were interviewed listed business and marketing skills as one of their top attributes of success, it is reasonable to assume that entrepreneurship education will have some real measurable value for graduates. Educators must do more than just graduate photographers, musicians or physiotherapists for that matter, equipped with core skills and some other generic graduate capabilities. There is a lot more to a successful life and career than just possessing core skills and ambition; graduates must be given the ability to take their skills and passions to new levels that benefit not only them but society in general.

9.3 Challenges encountered

This research has involved the limited examination of two separate, and quite distinct, enterprises—education and industry. The greatest early challenge of this research project was to develop a methodological model that was capable of fully explaining the research questions while at the same time maintaining rigorous discipline across both research areas. Without this tight control it would have been difficult to successfully analyse, mix and explain the outcomes: the methodology operating on each sector needed to mirror each other in most respects; hence the research model was a symmetrical design.

Initial investigation revealed that little academic literature was available on either how or why photography was being taught in higher education nor on the professional photography industry—not only in Australia but world wide. It was therefore necessary to create a baseline, a point of reference that described the populations under investigation. The researcher has had experience in both sectors which enabled some insights into the design of the two quantitative baseline surveys.

The main challenge encountered in the first quantitative research phases was collecting as many completed questionnaires as possible. Within the education stage the names and point of contact of teachers was known and the number of teachers was relatively low. However, it took considerable effort before a satisfactory number of responses were obtained. In the quantitative baseline survey of the photography industry the challenge was to reach as many and as diverse a sample as possible. While several large photography representative bodies and the union representing press and freelance photographers were immensely helpful, it was soon considered that a broader representation from without organisations was necessary. The final result was a satisfactory response from both industry surveys.

In the following qualitative phases the challenge was to interview as many qualified informants as possible in the limited time available. Generally speaking photographers were only too willing to participate in the interviews and were generally flexible in scheduling timeslots. Scheduling interviews with teachers was a little more problematic. Firstly, only three cities were chosen to conduct interviews, due to time and budget constraints. Consequently the number of institutions represented and teachers interviewed was limited.

Secondly, some requests for interviews were declined for reasons unknown. Nevertheless, those teachers who were interviewed were open and forthcoming and had no inhibitions at all in sharing their academic knowledge with the researcher.

The research literature that was discovered proved to be very useful in establishing the contemporary discourse that exist with academics teaching photography and the creative arts. Of particular interest was locating contemporary research on teaching and learning of photography in higher education. Strong evidence was found to support a contemporary discourse relating directly to the adoption of digital technologies in the photographic industry. This had the effect of challenging academics' beliefs about the role of photographic education in a networked world where high quality cameras and mobile devices make 'everyone' a photographer. This research provides a solid platform for future research as it establishes strong empiric data, insights and observations of both photography and higher education and its alignment with the photographic industry.

9.4 Limitations of the research

As discussed in the previous section on the research challenges, the qualitative sample size for both teachers and photographers was limited, mainly for logistical reasons. It would have been preferable to include more *units of analysis* in the case studies, however it is quite possible to generalise the findings from the data that was collected—even though the numbers were relatively low the quality was high and reliable.

One of the limitations of this research was the lack of any input from current students. It would have been valuable to ask students where they saw their future and how they intended to achieve their career goals in the photography industry. This would have been an additional perspective to teachers' perspectives and insights presented by industry practitioners. However it was considered that involving students in the research would extend the scope beyond that of a doctoral degree.

The industries that supply professional photographers with equipment and expendables, and the photo finishing industry were also not studied, again due to the scope of this research. These industries are closely linked to the fortunes of professional photographers and an understanding of their perspectives on the digital revolution would have been valuable.

None of the limitations mentioned diminish the validity of this research; the real value in highlighting the limitations is to open up new questions.

9.5 Implications for further research

This research opened a variety of avenues of exploration that are yet to be fully considered, but that other researchers may pick up and pursue.

9.5.1 Further research: higher education

One of the limitations of this research is the absence of students' perspectives on many relevant issues. Beyond that it is not known with certainty whether schools conduct longitudinal research on their former students' careers, but anecdotal evidence suggests that some schools may attempt it but it is not rigorously pursued. Therefore, the history of new graduates building careers is unknown. It would be of great interest to know how graduates' careers progressed; to learn of their success and frustrations. By building up such a profile it would be possible to feed this back into curriculum design. For example, it would be valuable to ascertain just what aspects of their learning were valued the most and which were not. It would be interesting to discover from those that choose a different career path why they did so.

Research findings showed some ambivalence towards the teaching and learning of creative subjects in the online environment. One teacher with considerable experience teaching in the Open University sector was very enthusiastic about the possibilities while others suggested that for example, teaching camera and lighting craft online was problematic. Regardless of these views it is likely that online teaching and learning options will become increasingly common—for a variety of reasons. There are opportunities to conduct research into the best ways to teach photography subjects on-line.

Entrepreneurship education has emerged as a major theme in this research. There is an opportunity, in Australia, to develop entrepreneurship education curricula specifically designed for students in the creative arts. Scholars in Australia are developing an interest in this field, but more work needs to be done to, 1) develop interesting and relevant

curricula and, 2) convince those concerned with creative arts curricula of the importance of introducing these skills to students.

To justify the introduction of entrepreneurship education into already busy course programmes will require evidence of its importance to graduates as they pursue their careers. As this research shows there is a belief by teachers of the value of teaching these skills and students may also be developing an awareness of the importance of, at the very least, learning business and marketing skills. It is no longer enough to just teach core creative practice to students, who will for the most part, be the self-employed. Research must be undertaken to prove that entrepreneurship education has a major role to play in any creative arts education.

9.5.2 Further research: industry

This research shows that the majority of photographers are self taught. There may be a dominance of the self taught in the domestic sector while graduates from higher education may be more prominent in the commercial and advertising sectors. Regardless of this, it would be interesting to study self taught photographers to discover what they did to learn their craft and establish a career. In a non-regulated industry there are no gatekeepers preventing anyone from pursuing a career in professional photography so, what is it that enables so many amateurs to enter the industry without having any formal photographic qualifications and succeed? It would be wrong to say that the self taught had any more or less creative skill than the formally trained but there is something that enables them to succeed in the industry and it is something that could be studied.

It is approximately ten years since the widespread adoption of digital technologies in professional photography and it would be appropriate to conduct research to discover how these innovations have been accepted and adopted into work practices. The history of photography has always embraced change and at this point in its history it would be extremely helpful to discover more about the transition to a new technology, for example, were early adopters at an advantage or a disadvantage in moving from analogue to digital.

This research showed widespread consensus to the establishment of one unified body to represent professional photographers in Australia (excluding the MEAA). There are many

benefits that such a body could have for members including a single lobbying voice to government, and greater resources brought about by economies of scale. Research could be undertaken to develop a model for the restructuring of all interested associations into one peak body. Such a body may not regulate the industry but could certainly represent it to government, educational institutions and client groups.

9.6 Conclusion

This research was conducted at an exciting time in the history of image making. It provides a snapshot of Australian photography at a time of innovation and transition. At the beginning of the twenty-first century image making was struggling to make a new life for itself in a digital world. The first decade has witnessed great change that saw the replacement of redundant technologies with magnificent new innovations. Innovation wave theory was used to contextualize much of what has occurred within the photography industry in recent years. Theorists like Bradfield Moody & Nogrady (2010) suggest that the fifth wave of innovation is in decline and the sixth wave, that of sustainability, recycling of resources, green chemistry, renewable energy and green nanotechnology is in the ascendancy. How this will effect photography is unknown but one thing is certain, as the history of photography has shown: change is inevitable.

The literature has catalogued the struggles of educators trying to make sense of these new technologies and make their teaching relevant to new industry paradigms. The role of the professional photographer has changed and will continue to change as digital publishing requires increasingly innovative content. It is likely that higher education will increasingly view their curricula from the perspective of the creative industries and the provision of exciting and innovative courses to satisfy the demand and opportunities that exist in these new industries. It may also see higher education in the creative arts specialize even more so that individual courses stand out as having a unique place in creative education.

Wennrich (1998) recognised that when he was redesigning the photography curriculum at RMIT in the 1970s, he was doing it not necessarily to satisfy a local industry, but in the realization that his graduates must be able to compete in a world-wide market. This research shows that many teachers have a world-view of their students' futures and are developing curriculum with this in mind. Having said that, higher education will face

challenges of its own in remaining viable in a rapidly changing educational environment. In the future universities will certainly be facing challenges from online content becoming increasingly available to prospective students. As the cost of tuition inevitably rises students will increasingly seek the best value alternatives for their education. It is highly likely that many high-quality low-cost alternatives to learning digital imaging will come from highly regarded institutions, with a high brand recognition, from Australia and overseas.

This research has combined two studies, the confluence of which explains much that is happening within education and the photography industry in Australia. Both these studies are in many ways, unique in their own right as very little literature exists on these subjects individually or collectively. The *big picture* is the unique insight that is available into both sectors by studying them together and assessing their alignment and integration. It is particularly poignant that this research has been conducted at a time when new technologies are revolutionising image making. The future is bright for creative people. Higher education will produce highly talented graduates, many of whom will find highly successful careers as professional image makers in, not only traditional industries but also in the establishment of creative new media enterprises. The industry will continue to adapt to reflect the needs of publishers for creative, innovative digital content.

This research has identified and explained the many threads that connect education with industry and in so doing provides a model which has universal applications. This research began with the premise that there were alignments and misalignments to be found between the outcomes of photography education and the needs of a changing industry. This research has, in great detail, identified and explained some of these connections and in so doing gives others the opportunity to investigate other research opportunities. This research has perhaps, more importantly, offered a contribution to improving the outcomes of graduates seeking rewarding lives as creative image makers and productive members of society.

REFERENCES

Australian Broadcasting Commission 2012, 7.30, Agency warns against Australian skills shortfall, viewed 08 August 2011, <<http://www.abc.net.au/7.30/content/2012/s3549446.htm>>.

Australian Bureau of Statistics 2006, *20680-Occupation - 1996 ASCO (unit groups) by sex - Australia*, ABS, Canberra, viewed 22 June 2010, <[http://www.censusdata.abs.gov.au/ABSNavigation/prenav/ViewData?action=404&documentproductno=0&documenttype=Details&order=1&tabname=Details&areacode=0&issue=2006&producttype=Census%20Tables&javascript=true&textversion=false&navmapdisplayed=true&breadcrumb=POLTD&collection=Census&period=2006&productlabel=Occupation%20-%201996%20ASCO%20\(unit%20groups\)%20by%20Sex&producttype=Census%20Tables&method=Place%20of%20Usual%20Residence&topic=Occupation&](http://www.censusdata.abs.gov.au/ABSNavigation/prenav/ViewData?action=404&documentproductno=0&documenttype=Details&order=1&tabname=Details&areacode=0&issue=2006&producttype=Census%20Tables&javascript=true&textversion=false&navmapdisplayed=true&breadcrumb=POLTD&collection=Census&period=2006&productlabel=Occupation%20-%201996%20ASCO%20(unit%20groups)%20by%20Sex&producttype=Census%20Tables&method=Place%20of%20Usual%20Residence&topic=Occupation&)>.

Australian Bureau of Statistics 2006, *Census of population and housing - 2001 classification counts*, ABS, Canberra, viewed 22 June 2012, <<http://www.censusdata.abs.gov.au/ABSNavigation/prenav/ViewData?action=404&documentproductno=CC0&documenttype=Details&order=1&tabname=Details&areacode=CC0&issue=2001&producttype=Community%20Profiles&producttype=Community%20Profiles&javascript=true&textversion=false&navmapdisplayed=true&breadcrumb=PD&collection=Census&period=2001&producttype=Community%20Profiles&>>.

Australian Bureau of Statistics 2006, *Census of population and housing, household form*, ABS, Canberra, viewed 18 February 2013, <[http://www.abs.gov.au/websitedbs/d3310114.nsf/4a256353001af3ed4b2562bb00121564/d14318a2e9282072ca25715d00177d17/\\$FILE/HHF%202006%20Sample%20only.pdf](http://www.abs.gov.au/websitedbs/d3310114.nsf/4a256353001af3ed4b2562bb00121564/d14318a2e9282072ca25715d00177d17/$FILE/HHF%202006%20Sample%20only.pdf)>

Australian Bureau of Statistics 2009, *Unit group 2532 photographers*, ABS, Canberra, viewed 28 October 2010, <<http://www.abs.gov.au/ausstats/ABS@.nsf/0/66EF123B42403466CA25697E00184F95?opendocument>>.

Australian Bureau of Statistics 2009, *Population by age and sex, Australian states and territories*, ABS, Canberra, viewed 28 October 2010, <<http://www.abs.gov.au/ausstats/abs@.nsf/mf/3201.0>>

Australian Bureau of Statistics 2006, *One in six Australians does culture and leisure work*, ABS, Canberra, viewed 28 October 2010, <<http://www.abs.gov.au/ausstats/abs@.nsf/mediareleasesbyReleaseDate/C0ACDE5A2CDE2DF0CA256B26007AAD24?OpenDocument>>.

Australian Bureau of Statistics 1997, *Cultural trends in Australia a statistical overview 1997, cultural trends, PDF*, ABS, Canberra, viewed 28 October 2010, <[http://www.ausstats.abs.gov.au/Ausstats/subscriber.nsf/Lookup/CA25687100069892CA256889002936F1/\\$File/41720_1997.pdf](http://www.ausstats.abs.gov.au/Ausstats/subscriber.nsf/Lookup/CA25687100069892CA256889002936F1/$File/41720_1997.pdf)>.

- Australian Bureau of Statistics 2001, *Work in selected culture and leisure activities, Australia, Apr 2001*, ABS, Canberra, viewed 28 October 2010, <<http://www.abs.gov.au/ausstats/abs@.nsf/mediareleasesbyReleaseDate/C0ACDE5A2CDE2DF0CA256B26007AAD24?OpenDocument>>
- Australian Learning and Teaching Council 2008, *History of the ALTC*, viewed 28 October 2008, <<http://www.altc.edu.au/carrick/go/home/about/pid/570>>.
- Australian National University School of Art 2012, The photomedia major, viewed 10 June 2012, <<http://soa-dev.anu.edu.au/photo-and-media-arts/photomedia-major/>>.
- Australian Vice-Chancellors Committee, 2005, Key statistics on higher education, Universities Australia, <<http://www.universitiesaustralia.edu.au/>>.
- Australian Vice-Chancellors Committee 2002, Quality through diversity, Universities Australia, <<http://www.universitiesaustralia.edu.au/>>.
- Bain, K 2003, Improving teaching and learning in universities, *Business and education roundtable*, Issue 18, viewed 10 November 2008, <<http://www.bhert.com/documents/b-hertnews18.pdf>>.
- Bainbridge, S 2012, School of 2012, *British Journal of Photography*, vol. June 2012, pp. 6.
- Bainbridge, S, 2009. Lessons to be Learned, *British Journal of Photography*, vol. 11 March 2009, pp. 10.
- Beaver, D 2008, Marketing vox, *Facebook becomes largest online photo storage site*, viewed 14 September 2013, <<http://www.marketingvox.com/facebook-becomes-largest-online-photo-storage-site-041509/>>.
- Beckman, G 2011, 'Disciplining the arts, teaching entrepreneurship in the arts: a call to action', in GD Beckman, (ed), *Disciplining the arts, teaching entrepreneurship in the arts*, Rowman and Littlefield Education, Maryland, pp.25-34.
- Beckman, GD 2007, "Adventuring" arts entrepreneurship curricula in higher education: an examination of present efforts, obstacles, and best practices. *The Journal of Arts Management, Law, and Society*, vol. 37, no. 2, pp 87-112, viewed 03 October 2012, <<http://www.tandfonline.com/doi/abs/10.3200/JAML.37.2.87-112?journalCode=vjam20#preview>>.
- Biggs, J 2003, *Teaching for quality learning at university*, 2nd edn, Open University Press, Berkshire.
- Blair, J, Czaja, R & Blair, E 2014, *Designing surveys: a guide to decisions and procedures*, Sage, Los Angeles.
- Bradfield-Moody, J, & Nogrady, B, 2010, *The Sixth Wave: How to succeed in a resource-limited world*, Australia: Vintage.
- Bridgestock, R. (2012) 'Not a dirty word: arts entrepreneurship and higher education', *Arts and Humanities in Higher Education*, DOI: 10.1177/1474022212465725, 1-16.

- Brown, R 2007, 'Promoting entrepreneurship in arts education', in C Henry (ed.), *Entrepreneurship in the creative industries*, Edward Elgar, UK, pp. 126-139.
- Bryman, A, 2007, Barriers to integrating quantitative and qualitative research, *Journal of mixed methods research*, vol. 1, no. 8, viewed 14 August 2013, < https://www.andrew.cmu.edu/user/skey/research_prev/reading/integrating%20quantitative%20and%20qualitative%20study.pdf>, DOI: 10.1177/2345678906290531.
- Bryman, A 2003, *Triangulation. The sage encyclopedia of social science research methods*. Sage, Thousand Oaks, California.
- Burnett, R 2009, *Art schools, culture and cultural change*, European League of Institutions of the Arts and University of Gothenburg, 10th Conference, pp 32-35, viewed 01 November 2012, <<http://www.elia-artschools.org/images/products/10/Reminder.pdf>>.
- Campbell, B 1978, *Exploring photography*, British Broadcasting Corporation, London.
- Cato, J 1977, *The story of the camera in Australia*, 2nd edition, Institute of Australian Photography, Melbourne.
- Charles Sturt University 2012, Bachelor of arts (photography), viewed 12 June 12, < [http://www.csu.edu.au/handbook/handbook12/undergraduate/BArts\(Photography\)ArticulatedSet.html](http://www.csu.edu.au/handbook/handbook12/undergraduate/BArts(Photography)ArticulatedSet.html)>.
- Clague, M 2011, 'Real-world musicology: integrating real world entrepreneurship throughout the music curriculum and beyond', in GD Beckman , (ed), *Disciplining the arts, teaching entrepreneurship in the arts*, Rowman and Littlefield Education, Maryland, pp. 167-176
- Coleman, AD, 1989. Identity crisis: the state of photographic education. *Photo review*, pp 17-19, viewed 08 November 2012, <http://74.220.207.133/~nearbyca/artandphoto/photocritic/wp-content/uploads/2009/06/Identity_Crisis_ADColeman4.pdf>, reprinted in Coleman, A. D., *Tarnished Silver:After the Photo Boom, Essays and Lectures 1979-1989*, New York: Midmarch Press, pp. 49-60.
- Commonwealth Government, 2011, *Explanatory Statement, Tertiary Education Quality Standards Act 2011, Higher Education Standards Framework (Threshold Standards)*, Canberra, viewed 08 March 2012, < [https://www.google.com.au/search?q=Explanatory+Statement%2C+Tertiary+Education+Quality+Standards+Act+2011%2C+Higher+Education+Standards+Framework+\(Threshold+Standards\)&oq=Explanatory+Statement%2C+Tertiary+Education+Quality+Standards+Act+2011%2C+Higher+Education+Standards+Framework+\(Threshold+Standards\)&aqs=chrome.69i57j69i61j69i62l3.1872j0&sourceid=chrome&ie=UTF-8](https://www.google.com.au/search?q=Explanatory+Statement%2C+Tertiary+Education+Quality+Standards+Act+2011%2C+Higher+Education+Standards+Framework+(Threshold+Standards)&oq=Explanatory+Statement%2C+Tertiary+Education+Quality+Standards+Act+2011%2C+Higher+Education+Standards+Framework+(Threshold+Standards)&aqs=chrome.69i57j69i61j69i62l3.1872j0&sourceid=chrome&ie=UTF-8)>.
- Commonwealth of Australia 2008, *Review of Australian Higher Education, Discussion Paper*, Bradley, Canberra, viewed 08 August 2013, < http://www.innovation.gov.au/HigherEducation/Pages/Library%20Card/Review/PDF/08_222_Review_AusHEd_Internals_100pp_FINAL_WEB.aspx>.

Commonwealth of Australia 2009, *Transforming Australia's higher education system*, Commonwealth Department of Education, Employment, and Workplace Relations, Canberra viewed 08 August 2013, <<http://www.innovation.gov.au/HigherEducation/Pages/Library%20Card/TransformingAusHigherED.aspx>>.

Creative Research Systems 2014, Sample Size Calculator, viewed 23 January 2014, <<http://www.surveysystem.com/sscalc.htm>>.

Creswell, J Plano Clark, V 2007, *Designing and conducting mixed method research*. Sage, California.

Curtin University 2012, Undergraduate (first degree) courses, viewed 29 July 2012, <http://courses.curtin.edu.au/course_overview/undergraduate/photography-communication>

Dall'Alba 2007, *Teachers duty is to enable learning*, The Australian, Higher Education, 21 November, p. 27, News Limited, Australia.

Dawkins, R 2003, *Improving teaching and learning in universities*, Business and education roundtable, Issue 18, viewed 10 November 2008, <<http://www.bhert.com/documents/b-hertnews18.pdf>>.

Dempster, D 2011, 'Some immodest proposals (and hunches) for conservatory educators', in GD Beckman, (ed), *Disciplining the arts, teaching entrepreneurship in the arts*, Rowman and Littlefield Education, Maryland, pp.3-16.

Commonwealth Department of Education, Employment, and Workplace Relations 2009, *Transforming Australia's higher education system*, viewed 1 April 2013, <<http://www.innovation.gov.au/HigherEducation/Documents/TransformingAusHigherED.pdf>>.

Dictionary.net, 2009, What does Kodak mean, viewed 26 October 2008, <<http://www.dictionary.net/kodak>>.

Dillman, D, Smyth, J, & Christian, L 2009, *Internet, mail and mixed-mode surveys, the tailored design method*, 3rd edn, Wiley, New Jersey.

de Baux, G, Improving response by using pre approach (pal) & follow up letters, viewed 21 May 2009, <[http://www.nss.gov.au/nss/home.NSF/533222ebfd5ac03aca25711000044c9e/61743489d51ade77ca2571ab002436be/\\$FILE/Improving%20questionnaire%20response%20by%20Primary%20Approach%20and%20Follow-up%20Letters_20%20August%202004.pdf](http://www.nss.gov.au/nss/home.NSF/533222ebfd5ac03aca25711000044c9e/61743489d51ade77ca2571ab002436be/$FILE/Improving%20questionnaire%20response%20by%20Primary%20Approach%20and%20Follow-up%20Letters_20%20August%202004.pdf)>.

Edge, S 2009, Photography, higher education and the skills adgena, *Photographies*, Vol. 2, no. 2, pp. 203-214, viewed 25 October 2012, <<http://dx.doi.org/10.1080/17540760903116663>>.

Edith Cowan University 2012, Communication and arts, viewed 12 June 2012, <<http://www.ecu.edu.au/future-students/study-areas/communications-and-arts>>.

Fink, DAG 1995, *The survey handbook* Sage Publications, Inc, London.

- Freeman, C & Louçá, F, 2001. *As time goes by : from the industrial revolutions to the Information revolution*, Oxford University Press, Oxford.
- Frizot, M (ed.), 1998. *A new history of photography*, Könemann, Paris.
- Gauld, RD 2008, 'An examination of the relevance of problem-based learning for teaching photography', Graduate diploma of research methods thesis, James Cook University, Townsville.
- Gavin, M 2011, Higher state. *British journal of photography*, June 2011, pp. 82-83.
- Gernsheim, H 1982, *The origins of photography*, Thames & Hudson, London.
- Gernsheim, H 1988, *The rise of photography, the age of collodian 1850 - 1880*, 3rd ed, Thames & Hudson, Great Britain.
- Goldstein, JS 1985, Kondratieff waves as war cycles, *International studies quarterly*, vol. 29, pp.411-444.
- Griffith University, 2011, *Undergraduate degrees program guide 2011*, Griffith University, Brisbane.
- Grundberg, A & Smigrod, C 2009, A new curriculum for a new generation. *Exposure*, vol. 40, no. 2, pp. 33-40.
- Gustafson, J 2011, 'Teaching entrepreneurship by conservatory methods', in GD Beckman, (ed), *Disciplining the arts, teaching entrepreneurship in the arts*, Rowman and Littlefield Education, Maryland, pp. 69-82.
- Harding, CT 2011, 'Why music entrepreneurship and why in college', in G Beckman, (ed), *Disciplining the arts, teaching entrepreneurship in the arts*, Rowman and Littlefield Education, Maryland, pp. 17-24.
- Hare, J 2011, *Learning the art of landing a job*, The Australian, 23 November 2011, Higher Education, p. 1, News Limited, Australia.
- Harper, I 2012, Agency warns against Australian skills shortfall, viewed 23 July 2012, <<http://www.abc.net.au/7.30/content/2012/s3549446.htm>>.
- Hativa, N 2000, *Teaching for effective learning in higher education*, Kluwer Academic Publishers, Dordrecht.
- Henry, C 2007, *Entrepreneurship in creative industries: an international perspective*, Edward Elgar, Cheltenham.
- Herald and Weekly Times 2008, Cadetships, viewed 7 November 2008, <<http://www.news.com.au/heraldsun/cadetship>>.
- Holmes, J 2010, *Learning and teaching academic standards project: creative & performing arts: learning & teaching academic standards Statement*, 2010, Australian Learning & Teaching Council, Sydney, viewed 07 August 2013, < [https://www.google.com.au/search?q=Learning+and+teaching+academic+standards+project%](https://www.google.com.au/search?q=Learning+and+teaching+academic+standards+project%20)

3A+creative+%26+performing+arts%3A+learning+%26+teaching+academic+standards+Statement&oq=Learning+and+teaching+academic+standards+project%3A+creative+%26+performing+arts%3A+learning+%26+teaching+academic+standards+Statement&aqs=chrome.0.69i57.906j0&sourceid=chrome&ie=UTF-8>.

Hirsch, R 2000, *Siezing the light: a history of photography*, McGraw-Hill Higher Education, Boston.

Ivankova, N, Creswell, J & Stick, S 2006, Using mixed-methods sequential explanatory design: from theory to practice, *Journal of Field methods*, vol. 18, no. 3, pp. 3-20, viewed 07 August 2013, < <http://fm.sagepub.com/content/18/1/3.abstract>>.

James Cook University 2012, Bachelor of new media arts (photo media), viewed 29 May 2012, <:http://www-public.jcu.edu.au/courses/course_info/index.htm?userText=15910-BNM-PME>.

Jones, C 2011, *Teaching entrepreneurship to undergraduates*, Edward Elgar, United Kingdom.

Karmel, T Mlotkowski, P & Awodeyi, T 2008, Is VET vocational? The relevance of training to the occupations of vocational education and training graduates, National centre for vocational education research, Adelaide, viewed 07 August 2013, <<https://www.google.com.au/search?q=Is+VET+vocational%3F+The+relevance+of+training+to+the+occupations+of+vocational+education+and+training+graduates&oq=Is+VET+vocational%3F+The+relevance+of+training+to+the+occupations+of+vocational+education+and+training+graduates&aqs=chrome.0.69i57j69i65j69i61.60j0&sourceid=chrome&ie=UTF-8>>.

Kelly, A 2011, Professional photography in Australia: market research report. viewed 20 September 2011, <:<http://www.ibisworld.com.au/industry/default.aspx?indid=674>>

Kelly, A, 2012, *Professional Photography in Australia*, Ibisworld industry report Q9523, Ibisworld, Sydney.

LaTrobe University 2012, Why study visual arts, viewed 12 June 2012, <:<http://www.latrobe.edu.au/courses/visual-arts>>.

Macauley, TA 2012, RMIT BA(Photography) Alumni, viewed 11 February 2013, <<https://www.facebook.com/groups/rmit.baphotography.alumni/>>

Mackenzie, N & Knipe, S 2006, Research dilemmas: paradigm, methods and methodologies, *Issues in education research*, vol. 16, pp. 1-11.

McGucken, E 2011, Introduction, in GD Beckman, (ed), *Disciplining the arts, teaching entrepreneurship in the arts*, Rowman and Littlefield Education, Maryland, pp. xi-xiv.

McInnis 2003, Improving teaching and learning in universities, *Business and education roundtable*, Issue 18, viewed 10 November 2008, <<http://www.bhert.com/documents/b-hertnews18.pdf>>

McWilliam, A Jackson, N 2008, *No longer tuned to his masters voice*, The Australian, 20 July, p.25, News Limited, Australia.

McWilliams, M 2009, The Historical antecedents of contemporary photography education: a British case study, 1966-1979, *Photographies*, vol. 2, no. 2, pp. 237-254, viewed 01 November 2012, <<http://dx.doi.org/10.1080/17540760903116697>>.

Motta, JM 2010, 'The future of digital photography', *Digital Photography VI SPIE-IS&T Electronic Imaging, Vol. 7537*, pp. 2-6, DIO: 10.1117/12.854918.

Myers, P, Lyons, K 2013, Australian institute of professional photographers, Facebook, 24 September 2013, <<https://www.facebook.com/AIPPOfficial/posts/10151721439763687>>.

Nasar, AR Gillett, M & Booth, T 1997, 'Do university teachers require qualifications in education?: An investigation of lecturers' attitudes towards teaching development', *Research and development in higher education*, pp. 529-534, viewed 15 August 2013, > <http://www.herdsa.org.au/wp-content/uploads/conference/1997/nasrar01.pdf>

Newbury, D 2009, Image, theory, practice: reflections on the past, present and future of photographic education, *Photographies*, vol. 2, no. 2, pp. 117-124, viewed 07 August 2013, < <http://www.tandfonline.com/doi/abs/10.1080/17540760903116556#.UgHOJGTbrkk>>.

Newton, G, 1980. *Silver and grey: fifty years of Australian photography*, Angus & Robertson, Sydney.

Nie, JN 2011, 'Music and entrepreneurship in the liberal arts: a model for an interdisciplinary minor to augment current music curricula', in GD Beckman, (ed), *Disciplining the arts, teaching entrepreneurship in the arts*, Rowman and Littlefield Education, Maryland, pp. 131-138.

Noël, V & Prizeman, G n.d., *Using cognitive question testing to pretest a questionnaire for a large-scale postal survey for non-profit organizations*, viewed 05 March 2010, <http://docs.google.com/viewer?a=v&q=cache:YQrSjP0bzCgJ:www.emes.net/fileadmin/emes/PDF_files/ISTR_EMES_Paris/Methodology/Mc_Prizeman.pdf+Using+cognitive+question+testing+to+pretest+a+questionnaire+for+a+large-scale+postal+survey+for+non-profit+organizations&hl=en&gl=au&pid=bl&rsrcid=ADGEESidYWsRNQAZeg7ncs_iCbrpfZv-5LaR0LIN3KKFGKiTsqovnUQIkJapbbeOhr6VmA1kCInQSiBwbNZf0NWy-82Z4EKtgYKID6IqO61j9sN03V_-fzs8KHvSxGCD3vfkxdc63Z&sig=AHIEtbQYODdHL_nzT_I6efS0joNd5lwHsw>.

Norton, A 2012, *Mapping Australian higher education*, Grattan Institute, Melbourne, viewed 07 August 2013, <<http://grattan.edu.au/publications/reports/post/mapping-australian-higher-education-2012/>>.

Newell, S, 2009, Time to recalibrate. *British Journal of Photography*, vol. 04 March 09, p. 9.

Parr, M Badger, G 2010, *The Photobook: a history*, Phaidon, London.

Peacock, R 2000, Failure and assistance of small firms, viewed 23 September 2010, <<http://www.sbeducation.info/downloads/sbfail.pdf>>

- Photography Studies College 2012, Undergraduate degrees programme guide 2011, viewed 29 May 2012, <[://www.psc.edu.au/course_options.html](http://www.psc.edu.au/course_options.html)>.
- Pollack, P 1977, *The picture history of photography*, Thames & Hudson, London.
- Pratt, J Pratt, G 2003, Reforming Australian higher education: from crisis to excellence? *4th MAAOE Conference 2003*, Melbourne, viewed 07 November 2012, <<http://epress.lib.uts.edu.au/dspace/handle/2100/345>>.
- Preacher 2001, Calculation for the chi-square test: An interactive calculation tool for chi-square tests of goodness of fit and independence, viewed 27 January 2014, <<http://www.quantpsy.org/chisq/chisq.htm>>.
- Punch, KF 2009, *Introduction to research methods in education*, Sage, London.
- Raffo, C Lovatt, A Banks, M & O'Connor, J 2000, Teaching and learning entrepreneurship for micro and small businesses in the cultural industries sector. *Education and Training*, vol. 42, no. 6, pp. 356 -364. viewed 11 June 2012, <<http://eprints.qut.edu.au/29901/1/29901.pdf>>.
- Ramsden, P 2003, *Learning to teach in higher education*, 2nd edn, Routledge Falmer, London.
- Ramsden, P 2003, Improving teaching and learning in universities, *Business and education roundtable*, Issue 18, viewed 10 November 2008, <<http://www.bhert.com/documents/b-hertnews18.pdf>>
- Rankin, J 1999, *Handbook on Problem-Based Learning*, Forbes, New York.
- RMIT University 2011, *Degree and diploma art and design*, RMIT University, Melbourne.
- Rohan, P & Bokor, J 2011, Higher education and the power of choice. Ernst & Young, Melbourne, viewed 07 August 2013, <[http://www.ey.com/Publication/vwLUAssets/Higher_education_and_the_power_of_choice_Australia/\\$File/Higher%20education%20and%20the%20power%20of%20choice%20Australia.pdf](http://www.ey.com/Publication/vwLUAssets/Higher_education_and_the_power_of_choice_Australia/$File/Higher%20education%20and%20the%20power%20of%20choice%20Australia.pdf)>.
- Routio, P 2007, Sampling, viewed 21 May 2010, <<http://www2.uiah.fi/projects/metodi/152.htm#otos>>.
- Rubin, HJ Rubin, I 1995, *Qualitative interviewing : the art of hearing data*, Sage Publications, Thousand Oaks, Calif.
- Rubinstein, D, 2009, Towards Photographic Education. *Photographies*, vol. 2, no. 2, pp. 135-142. viewed 01 November 2012, <<http://www.rhizomes.net/issue23/coley/index.html>>.
- Sapsford, R 2007, *Survey research*, 2nd edn, Sage, London.
- Scholz, RW. & Tietje, O 2002, *Embedded case study methods: Integrating quantitative and qualitative knowledge*, Sage, California.

Shapter, M Volery, T 2007, *Entrepreneurship and small business*, 2nd ed. John Wiley & Sons, Milton.

Shaw, DB 2008, *The key concepts: techoculture*, Berg, London.

Shine CV/Toms, K 2012, Starting a photography career – Shine CV interviews Marte Lundby Rekaa, viewed 09 August 2012, <<http://shinecv.co.uk/2011/11/starting-a-photography-career/>>

Southern Cross University, 2012, About this course, viewed 10 June 2012, <http://www.scu.edu.au/coursesin2013/?action=matrix&command=matrix_temp_load&spk_no=10147>..

Stuart, NM 2005, 'The history of photographic education in Rochester, New York 1960-1980', PhD. Buffalo, State University of New York, viewed 25 October 2012, <<http://search.proquest.com.elibrary.jcu.edu.au/docview/1320264327/13FC0C859F44D77FC0D/2?accountid=16285>>.

The University of Melbourne 2008, Nine principles guiding teaching and learning, viewed 3 November 2008, <<http://www.unimelb.edu.au/about/learningandteaching.html>>

Tarrant, J 2009, Photo education, *Photo Education. British Journal of Photography*, vol. 15-04-2009, p. 10.

The shorter Oxford English dictionary 1993, 3rd edn, Oxford University Press, USA.

Toms, K 2011, Starting a photography career – Shine CV interviews Marte Lundby Rekaa, viewed 07 July 2012, <[://shinecv.co.uk/2011/11/starting-a-photography-career/](http://shinecv.co.uk/2011/11/starting-a-photography-career/)>

Tuck, K 2012, Some predictions about the future of photography, viewed 26 June 2012, <<http://visualsciencelab.blogspot.com.au/2012/01/some-predictions-about-future-of.html>>.

University of Tasmania 2012, 2012 Bachelor of fine arts, viewed 29 May 2012, <http://courses.utas.edu.au/portal/page?_pageid=53,32959&_dad=portal&_schema=PORTAL&P_COURSE_CODE=13C&P_CONTEXT=NEW>.

University of South Australia 2012, Bachelor of visual arts (photography) DBVS, viewed 10 June 2012, <<http://programs.unisa.edu.au/public/pcms/Program.aspx?pageid=57&sid=340&tid=439&y=2012>>.

University of Technology Sydney 2012, Bachelor of design in photography and situated media, viewed 10 June 2012, <http://datasearch2.uts.edu.au/undergraduate/school/leavers/course/dab/detail.cfm?spk_cd=C10265&spk_ver_no=1>.

Victoria College of the Arts 2012, Bachelor of fine arts (visual arts), viewed 29 may 2012, <[://www.vca.unimelb.edu.au/bfavisualart](http://www.vca.unimelb.edu.au/bfavisualart)>.

Weatherson, D 2009, Nascent entrepreneurship and music students, *Learning and the creative industries*, vol. 1, no. 2, pp. 50-57, viewed 04 October 2012, <http://www.heacademy.ac.uk/resources/detail/evidencenet/Nascent_Entrepreneurship_and_Music_Students>.

Wennrich, M 1998, 25 years towards excellence in photo education at RMIT, *Photo Imaging Education Association*, Sydney, supplied by author.

Williams, A 2009, Identity Crisis. *Photographies*, vol. 2, no. 2, pp. 125-133. viewed, 25 October 2012, <<http://dx.doi.org/10.1080/17540760903116572>>.

Yin, RK 1993, *Applications of Case Study Research*, Sage Publications, California.

Yin, RK 2009, *Case study research: design and methods*, 4th ed Sage Publications, California.

APPENDICES

Appendix A: Survey of photography teachers

2009 survey of photography teachers working in Australian higher education.

Please tick or circle your answers and make comments where appropriate.

Please note that none of your answers will be used in any way to identify you but they may be of great use to the researcher if follow up for clarification is necessary.

1 What is your name?

2 What is the name of your university?

3 What is the name of your School/College or Faculty?

4 How long have you been teaching in higher education?

- Less than one year
- 1-5 years
- 6-10 years
- 11-15 years
- More than 15 years
- Other, please specify

5 I am:

- Full time academic staff
- Part time academic staff
- Sessional/casual academic staff
- What is your highest tertiary academic qualification?
- None
- Certificate
- Diploma
- Bachelor
- Bachelor (Hons)
- Masters by course work
- Masters by research
- PhD
- Other (please specify)

6 Do you hold any formal teaching qualification? (e.g. Dip. Ed. , Teaching Certificate)

- Yes
- No

Please name your qualification if you have one.

7 Have you been or are you (self) employed in the photographic industry?

- Yes
- No

8 At your school is photography taught as a:

- Full degree course?
- As a major or part of a degree?
- Other? Please elaborate.

A large, empty rectangular box with a thin black border, intended for a detailed response to question 8. The box is currently blank.

9 In what teaching and learning settings do you teach photography? You may choose as many as necessary.

- Lecture theatre
- Tutorial room
- Studio
- Computer lab
- Photographic darkroom
- Digital print facility
- Field
- Work place
- Online learning environment

10 Other, please specify

11 What teaching methods do you use? Choose as many as necessary. (brief definitions are provided for clarification of some terms)

- Action learning, (students study their own actions and experiences to improve performance)
- Case-based learning, (students study cases and their results are matched against exemplars)
- Group discussion
- Group work
- Inquiry-Based learning, (learning is based around students' questions, teachers facilitate the learning by guiding the student)
- Lecture
- On-line methods
- Peer teaching
- Practical
- Problem-Based learning, (students work in groups to solve real world problems, they create their own knowledge, it is not delivered prior to the problem)Project-Based learning, (students take a problem and apply it to a real life situation, they work in groups or alone to come up with realistic solutions and presentations)
- Role-play and simulations
- Scenario
- Team teaching
- Tutorial
- Workshop
- Work integrated learning, (students undertake authentic work place activities that reflect educational theory, the

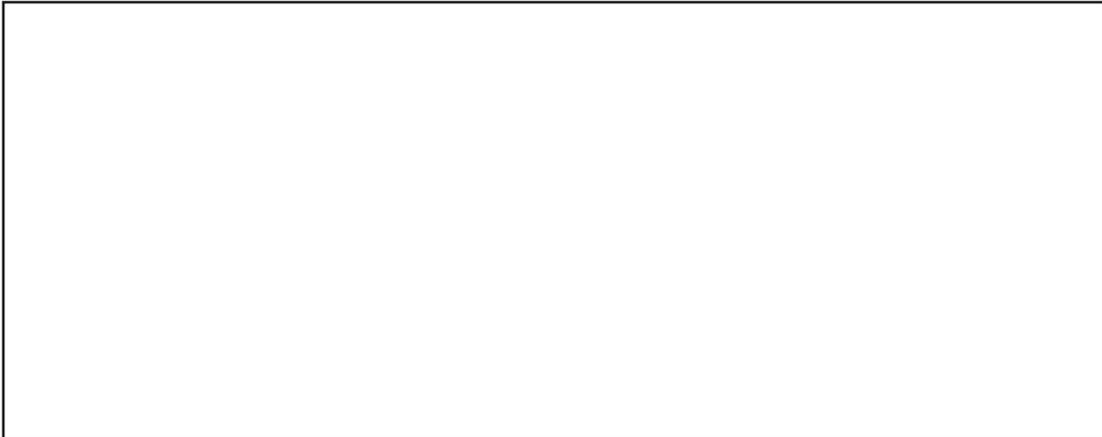
activities are aligned with course outcomes and are assessable).

- Other, please specify

12 Is the choice of teaching method used directed by (choose as many as are applicable):

- University policy?
- School policy?
- Individual preference?
- Subject content?
- Other? please elaborate

13 To what extent does your school actively encourage innovative teaching and learning activities?



14 Do you use different teaching methods to teach theoretical and practical subjects/content/areas?

- Yes
- No

Please explain your choice.



15 Are you actively involved in research leading to publication or exhibition?

- Yes
- No

16 What is your primary area of research?

17 What are the core aims of the course with which you are associated?

18 To what extent do you believe the course you are associated with meets the needs of students seeking a career in photography? Please comment.

19 To what extent does the course you are associated with have aims that reflect the needs of the region in which students will be working? Please comment.

Thank you for completing this questionnaire.

Appendix B: Letter of introduction, teachers



The 2009 SURVEY OF PHOTOGRAPHY TEACHING METHODS AT AUSTRALIAN UNIVERSITIES

Dear colleague,

As part of the Masters of Creative Arts by research degree at James Cook University I am investigating how photography is being taught at Australian universities. I believe this is an important base-line research project that will have long-term benefits for photography teachers and curriculum designers. No Australia wide published survey of this information currently exists. I view the gathering of evidence to support the integrity of the photography discipline as being of great importance to current higher education discourse.

As a teacher of photography your participation is important. I have prepared a confidential on-line survey the direct link is shown below.

https://www.surveymonkey.com/s.aspx?sm=AQTmq5k4nIrzyMphPNzIYQ_3d_3d

I estimate that this will take you 10-15 minutes to complete. ALL ON-LINE SURVEY DATA IS ENCRYPTED, this encodes the data in the survey for safe transmission.

This survey is significant because it will give me an important overview of how photography is being taught in the many different settings across Australia. The findings will be made available to all academics in the future through the finished research thesis and through a published article or conference paper.

You will note that I have asked for you to enter your name, this is optional but it will help if I need to clarify questions and possibly follow up with more specific questions. **No names will be published in the research.**

My survey is authorised by the Human Ethics Committee at JCU and the approval number is H3156 (2008). If you would like to contact me or my supervisor to discuss the matter further, please feel free to do so. My supervisor, Professor Ryan Daniel, can be contacted via email at Ryan.Daniel@jcu.edu.au or 'phone (07) 47813166. I can be contacted at Robin.Gauld@jcu.edu.au or by 'phone (07) 47242408.

May I reiterate the importance of your participation as the total number of respondents adds validity to the data and there are not that many teachers of photography in Australian higher education; every response is vital.

Yours faithfully,

A handwritten signature in black ink, appearing to read "R D Gauld", with a horizontal line extending to the right.

Robin D. Gauld.
B.A. Photography (Dist) R.M.I.T.
Grad. Cert. Education, JCU.
Grad. Dip. Research Methods JCU.

Appendix C: Letter of invitation, industry

Dear AIPP, ACMP, FreeRadicals, MEAA, Aust. Photographic Society.

I am writing to seek your assistance with my research project. I am a PhD student at the School of Creative Arts at James Cook University in North Queensland. My thesis is formally titled 'Photography in higher education and industry: a qualitative and quantitative study to explain the alignment between the sectors.' This is a study that seeks to find out whether the various methods of educating photographers is preparing them for a life of work in the industry.

I believe that this baseline study will provide valuable information about the state of photography education in Australia and the expectations of students about to enter the industry. It will seek the views of educators, recent graduates and people who work within the industry. I will be seeking their opinions on their photographic education experience, including aspects they found of value, and what they believe may have been missing. It will also seek the views of members who may not have had a formal photographic training or have been trained within a work place e.g. as a cadet. I believe these views will be of great interest.

I am asking for your help in supporting an anonymous on-line survey of your members. This survey will seek non-intrusive information about participants professional practice and experiences throughout their career. It will **not** seek any financial or confidential business information. This quantitative data will be used to build a profile of professional photographers in Australia and it will be used to inform a second qualitative phase of the study which will include individual case studies. Participants will be invited to leave their names if they wish to make comments or are willing to be included in a follow-up interview. I believe many will.

I am quite happy to provide you with the complete list of questions I intend to ask your members. I am happy to consider including any questions you think may improve the data collected. I do not need access to your data base of members contacts, all I would ask you to do is send an email to your members. This email would need to carry your endorsement and it would introduce me and my survey and invite your members to follow a link to the secure on-line survey site. After an initial invitation to participate I would ask you to send a final reminder email.

This research is authorised by the JCU Human Research Ethics Committee. You may discuss this research with my research supervisor, Professor Ryan Daniel on 4781 3166 or ryan.daniel@jcu.edu.au or me at robin.gauld@jcu.edu.au or 07 47242408.

The research will be available to the industry when it is published.

Appendix D: Industry questionnaire

The 2010 JCU survey of Australian professional photographers.

1. Background information about you.

The first section will just ask for some brief background information.

Definition: by photographic industry I include for example, people employed as photojournalists, photography teachers, government or industry photographers.

1. What is your age? This is important but not compulsory.

- 1-20 years
- 21-30 years
- 31-40 years
- 41-50 years
- 51-60 years
- Over 61 years

2. What is your gender? This is important but not compulsory.

- Female
- Male

3. In total, for how many years have you derived an income from photography? This does not have to be your primary income.

- 0-10 years
- 11-20 years
- 21-30 years
- 31-40 years
- 41-50 years
- Over 51 years

The 2010 JCU survey of Australian professional photographers.

4. How would you describe your current employment status or position in the photographic industry?

- Casual
- Contract
- Freelance
- In full time employment
- In part-time (permanent) employment
- Self employed
- Student

Other (please specify)

5. Where is your principal place of residence?

- Capital city
- Regional city
- Small town or rural area

6. Where is your principal place/area of work?

- Usually within the area where I live
- At different locations within Australia
- Within Australia and overseas

Other (please specify)

The 2010 JCU survey of Australian professional photographers.

2. Industry and work experience

7. Please indicate in what role(s) you currently work within the photographic industry. You may choose multiple answers.

- Advertising photographer
- Agent
- Archivist, restorer
- Art director
- Business manager or manage own business
- Commercial, industrial photographer
- Curator
- Designer
- Director
- Editorial photographer
- Educator
- Fashion photographer
- Forensic
- Medical or scientific photographer
- Photographic artist
- Photographic assistant
- Photographic educator
- Photographic lab professional
- Photographic printer
- Photojournalist
- Portrait photographer
- Post production professional
- Producer
- Public relations photographer
- Researcher
- Retail employee
- Stock photographer
- Student
- Wedding photographer

The 2010 JCU survey of Australian professional photographers.

Other (please specify)

8. Is your work in the photographic industry your principal employment?

- Yes (If yes skip to Q12)
- No (If no please continue on from here)

9. If you do other paid work outside the photographic industry what field is it in? (You may choose multiple responses)

- Administration
- Advertising,marketing,PR
- Agricultural activities
- Charity
- Clerical
- Construction
- Creative art and design
- Defence
- Education
- Engineering, manufacture and production
- Environment
- Finance
- Health care
- Hospitality and events management
- Human resources
- Information services
- Insurance
- Law enforcement and protection
- Legal profession
- Leisure, sport and tourism
- Management
- Media and broadcasting
- Mining
- Performing arts
- Publishing and journalism
- Retail

The 2010 JCU survey of Australian professional photographers.

- Scientific services
- Social work
- Transport, logistics and distribution

Other (please specify)

10. If you do other income producing work, other than photography, what percentage of your time do you spend on photography compared with other employment?

- 90% other 10% photography
- 80% other 20% photography
- 70% other 30% photography
- 60% other 40% photography
- 50% other 50% photography
- 40% other 60% photography
- 30% other 70% photography
- 20% other 80% photography
- 10% other 90% photography

11. If your work within the photographic industry is NOT your principal source of employment do you wish it was?

- Yes I would like more work within the industry.
- No, I am happy with the amount of work I do within the photographic industry.

The 2010 JCU survey of Australian professional photographers.

12. What are the challenges associated with gaining additional work within your sector(s) of the photographic industry?

- I have all the work I need, this is not applicable
- The market is over crowded
- Price cutting is pushing me out of the market
- Digital photography has enabled many more people to enter the market, this is putting pressure on professional photographers
- I do not have the skills to compete with other photographers
- I do not have the equipment to compete with other photographers
- I am not good at marketing my skills and services
- People will not pay for the quality of work that I do anymore
- There are limited employment opportunities in my area of photographic specialisation
- I do not have enough experience
- In my geographic area opportunities are limited
- In my area of the industry my work is increasingly being done by amateurs
- Keep up with new technology

Other (please specify)

The 2010 JCU survey of Australian professional photographers.

13. What attributes or qualities have enabled you to establish a successful career in the photographic industry?

Please tick as many as you like and make a comment if you wish.

- I am a good team worker
- I am good at solving problems
- I am very competitive
- I am very good at self marketing
- I am willing to do work that other people will not do
- I had a good education and training
- I have a unique talent that people are willing to pay for
- I have good management skills
- I have good retail skills
- I have specialised equipment that enables me to do work others can't do
- I have worked hard over many years and made a reputation for myself and my work
- I participate in industry awards competitions and that keeps me up with industry best practice
- I work well alone
- My particular niche in the market is not crowded

Comment here please.

14. What do you believe are the defining attributes/features/skills of a professional photographer?

- 1
- 2
- 3

The 2010 JCU survey of Australian professional photographers.

3. Education, training and ongoing professional development

15. How did you learn your photographic skills?

You may choose multiple responses.

- Apprenticeship
- Cadetship
- Self taught
- Short courses conducted by Universities, Tafe colleges, photographic school or industry bodies
- Tafe course
- University course

Other (please specify)

16. What is your highest or most advanced qualification in photography?

Please skip if not applicable.

17. Where did you obtain your qualification? Please skip if not applicable.

The 2010 JCU survey of Australian professional photographers.

19. Wedding and portrait photography is one of Australia's largest industry sectors. It is practiced in almost every city and town in Australia.

If you are a wedding and portrait photographer, how well did your education or training prepare you to enter the industry?

- Extremely well prepared
- Very well prepared
- Moderately well prepared
- Somewhat well prepared
- Not well prepared

Other (please specify)

20. To which of the following organizations do you belong?

- ACMP
- AIPP
- Australian Photographic Society
- Free Radical
- MEAA
- None
- PMA
- The Institute of Photographic Technology

Other (please specify)

21. Do you participate in any on-going training or professional development that is offered by professional organization(s) you belong to?

- Yes
- No

The 2010 JCU survey of Australian professional photographers.

22. How important is it for the profession that professional bodies (eg. AIPP, ACMP) introduce continuing professional skills development as a requirement to maintain professional accreditation and membership?

Skip if not applicable.

- Extremely important
- Very important
- Moderately important
- Somewhat important
- Not at all important

23. Which of the following do you regularly (approximately annually) engage with?

Please tick as many as you like.

- Trade shows eg PMA
- Industry award competition
- Industry conventions
- Visitor to art galleries
- Academic research
- Academic conferences
- Industry seminars
- Creative workshops
- Online tutorials
- Webinars
- Trade magazines
- Relevant books and magazines
- Exhibitor at art galleries
- Industry shows, eg. wedding shows

Other (please specify)

The 2010 JCU survey of Australian professional photographers.

4. Views on employment, job seekers and training.

24. Have you ever employed people who graduated from university photography or creative art schools?

Yes

No (skip to Q 27)

Other (please specify)

25. When selecting graduates for work, how skilled are they in general? Please rate the following graduate attributes. Use N/A if necessary.

	Highly skilled	Well skilled	Adequately skilled	Less than adequately skilled	Poorly skilled	N/A
Business skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Communication skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Creativity	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
IT skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
People skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Research and problem solving skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Technical skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Theoretical skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Work skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
Writing skills	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Comment here please

The 2010 JCU survey of Australian professional photographers.

26. If you were to employ a graduate from a Photography or Creative Arts school how would you rate the importance and necessity of the following attributes or skills? Use N/A if necessary.

	Essential	Very valuable	Valuable	Somewhat valuable	Not at all valuable	N/A
Creativity	<input type="radio"/>					
Design skills	<input type="radio"/>					
IT skills	<input type="radio"/>					
Management skills	<input type="radio"/>					
Office skills	<input type="radio"/>					
People skills	<input type="radio"/>					
Practical skills	<input type="radio"/>					
Problem solving skills	<input type="radio"/>					
Research skills	<input type="radio"/>					
Retail skills	<input type="radio"/>					
Studio and lighting skills	<input type="radio"/>					
Technical skills	<input type="radio"/>					
Web skills	<input type="radio"/>					
Writing skills	<input type="radio"/>					

Other (please specify)

27. If you are an employee (not self employed) in the photographic industry are you provided with adequate and ongoing professional skills development?

Yes

No

28. My study involves follow-up interviews with those people that are keen to offer a range of detailed insights into their experiences in the industry or their education experiences.

Please note that if you are willing to help me or have an opinion your personal details will never be identified or released.

Name:

Company:

Address:

City/Town:

State:

Postal Code:

Email Address:

Phone Number:

Appendix E: Case study questionnaire, teachers

QUESTIONS FOR EDUCATION CASE STUDY INFORMANTS

Do I have your permission to record this interview: all informants will remain anonymous?

- ▷ Q1 What is your name?

- ▷ Q2 What is your age range?: Just a 10 year range will do.

- ▷ Q3 What is your institution?

- ▷ Q4 What is your position?

▷ Q 5 How are you preparing your students for their future?

Probes:

There are many futures.

How do you determine student's needs?

Are you aware of your students future ambitions?

How has the effect of the digital innovation affected your attitude to the needs of photographic industry?

Questions about the core aims of the curriculum.

▷ Q 6 40% of teachers say that their teaching/course has a definite vocational outcome and 50% said it was not a specific one. Can you explain the core aims of the course(s) you are involved with?

Probes:

Generic outcomes, specific outcomes

Is your answer based on your school's or university's stated objective?

▷ **Q 7** Photography course structures have changed greatly in the last ten years as the culture of the digital age and its new media methods proliferate. While new course content is offered to meet these demands some teachers expressed concerns that the new curricula may not be serving professional photography well. What is your opinion?

Probes:

“Diminishing. Structural changes from stand alone degree to major in generic degree resulted in reduction of taught units in the major. Current structure encourages ‘multi skilling’ at expense of depth in one specific discipline.”

“So far - totally - but not much longer if it is dismantled further and turns into another soft option generic photography program”

Has practice of professional photography changed.

Is this changing to meet a changing industry?

▷ Q 8 It has been said that the courses that have photography taught as a major do not provide enough depth to students who wish to pursue photography as a career, compared with full photography degree courses. What is your opinion on the advantages and disadvantages of both types of curricula?

Probes:

Do broad based, more generic courses have better vocational opportunities?

▷ Q 9 It has been said that there are too many graduates for the number of possible photography jobs that exist. Do you make your students aware of the difficulties that they may face entering the industry?

Probes: 'Like so many industries there are to many graduates to cater for demand; commercial and conceptual.'

▷ Q 10 Survey data shows that 24% of people employed in the photographic industry have had a university education (63% say they are self taught). Would you consider that a satisfactory figure?

Probes:

Graduates pursue many career paths.

Do you monitor the career paths your graduates take?

What other careers do they pursue?

▷ Q 11 There is a large drop out rate in industry in the first ten years of employment, it is 74% by year 5. My statistics show that most people believed they were well trained in the traditional photographic skills and poorly trained in business and marketing skills. Does your course teach these business and marketing skills? Is this teaching designed specifically for photographers or is it generic in nature across many disciplines?

Probes:

It has been said that arts based students are not interested in business and marketing skills, do you believe this is true?

▷ Q 12 What importance do you place on business and marketing skills?

Probes:

If so few graduates are represented in the industry where are all the other successful practitioners coming from?

▷ **Q 13** **Wedding and portrait photography represents over 50% of the industry do you provide any special training so that students can enter this industry?**

Probes:

Few respondents said that they were well trained to enter the wedding and portrait industry. Do you think this large area of the market is overlooked by educators?

Questions about teaching methods

▷ Q 14 What teaching methods do you use to deliver your subjects?

Probes:

Ask questions about methods to determine understanding, E.g. PBL etc..... Verification question

▷ Q 15 Most teachers teaching methods are governed by subject content (45%) or personal preference (36%), do you believe this is the best approach and why?

Probes:

Do you believe there would be advantages in the school imposing a specific pedagogy on all teaching, for example Project-Based learning?

▷ Q 16 Most teachers said they were encouraged to use innovative teaching methods, but most said innovation was up to them to implement, is this true at your

school.

Probes: Do you have 'pet' pedagogies?

Does your school have an active T&L department?

▷ **Q 17** Most teaching is still done in traditional settings, do you see this changing much in the future and do you see any advantages or disadvantages in the subjects you are involved with?

Probes:

Are you involved with any on-line teaching projects?

▷ **Q 18** Do your students have close/ casual/ structured involvement with real work environments within their learning programmes?

Probes:

WIL, mentor programmes, work experience

Investigate how students are involved in real working environments.

Are there any regional differences in work experiences?

▷ **Q 19** Do you teach theory and practical skills in different ways?

Probes. This question will explain some of the diverse answers in the survey. Some teachers didn't see a difference while others did.

Questions about the university's place in society.

▷ **Q 20** Does your university/school see itself as providing an education that responds to the needs of its geographic and demographic position.

Probes:

Indigenous population

How do teachers define their region and why.

Do they make a distinction between local and world?

▷ **Q 21** How do you meet the needs of
your region?

Probes:

*As a regional campus do you see any need to provide an education
that meets the specific needs of a regional community?*

*Are the needs of students any different in regional areas than
metro areas?*

What are the regional needs?

▷ **Q 22** What are the specific needs
of the/your region and does your
curriculum reflect the particular needs of
the region?

Probes.

Explore how this is done

Is there a University policy reflecting regionality?

▶ **Q 23** Is curriculum design in any way driven by a need to attract overseas students?

Probes:

Does this reflect the schools educational aspirations as being relevant to a world wide creative community.

Where do your students mainly come from?

What attracts overseas students to your school?

Questions about industry experience

▶ **Q 24** 71% of teachers have some industry experience. What is your view on the value of industry experience in teaching photography?

Probes:

▷ Q 25 Do you have ongoing contact with the industry?

Probes:

How deep is this contact? Is it with industry stars and past students or more broadly based.

Does the school consult an industry advisory panel?

How do you assess the trends within the industry?

7. Questions about teaching and academic qualifications

▷ Q 26 Teachers are in general very experienced (50% have over 15 years experience, 73% are full time, 94 have bachelor or higher) but only 55% have any teaching qualifications and just one had any tertiary teaching qualification, how do you see the importance of teachers having teaching training?

Probes:

Is there any incentive for teachers to do a Grad. Cert. In Tertiary teaching? From school or institution? How do you view its value in your practice?

▷ **Q 27** Most teachers have graduate qualifications and some have post graduate qualifications but few have doctorates. Does your school encourage research qualifications for staff?

Probe:

Look for different opinions from full-time and sessional's.

▷ **Q 28** Only 38% of casual/sessional have any industry experience, do you know what criteria your school uses when choosing sessional teachers?

Probes:

What importance do you place upon industry experience within a teaching team?

▷ **Q 29** Where do you see photographic education heading in the next few years?

Probes:

On-line, less specialised approach, less emphasis on photography, more business and marketing skills, more integration with other faculties/disciplines (Harvard approach)

▷ **Q 30** In a 2008 paper published by the Centre for Vocational Education Research, which looked at the relevance of training to the occupations of vocational education and training graduates; it looked at mis matches between what people study and the jobs they get. They conclude with the most extreme example of a mis-match,... “The obvious example here is courses for arts and media professionals, where graduated did not end up in jobs where training is relevant.

This must be of concern to to planners and potential students. The obvious example here is courses for arts and media professionals. They be very good courses and provide good technical training, but they are clear examples of wasted training effort- if training is focused on the needs of the labour market”. Do you have any comments about this?

▶ Q 36!! Finally is there anything you would like to add?

Questions for Head of School.

▶ Q 31 What is the schools approach to curriculum management?

Probes: review, design, pedagogy, consult with industry?

▶ Q 32 What is the schools philosophy on creating ‘life long learners verses ‘work ready’ graduates?

Probes: Is this philosophy reflected in the choices of teaching methods?

▷ Q 33 What messages do you hear from your graduates in the community?

Probes:

Ask about the ones that do not succeed in the industry.

Have they pursued other career paths?

What other career paths are graduates taking?

▷ Q 34 What are the challenges in resourcing photographic education?

Probes:

Has this changed in the last ten years or so?

▷ Q 35 Where do you see photographic education heading in the next few years?

Probes:

On-line, less specialised approach, less emphasis on photography, more business and marketing skills, more integration with other faculties/disciplines (Harvard approach).

▶ **Q 36** Finally is there anything you would like to add?

Appendix F: Case study questions for industry

QUESTIONS FOR INDUSTRY CASE STUDY INFORMANTS

Do I have your permission to record this interview: all informants will remain anonymous?

▷ Q 1 What is your name?

▷ Q 2 What is your age: within a 10 year range ie. 20-29?

▷ Q 37 Where is your business located?

Probe. Home, stand alone business/studio

Questions about who is working in the photographic industry and what are they doing?

▷ Q 38 How would you describe your practice or profile in the industry?

Probes.

How did you teach yourself?

Do see advantages in being self taught?

Do formally trained photographers have advantages or disadvantages?

What training did you receive?

Was your training useful?

▷ Q 40 What are your greatest strengths as a photographer?

Probes.

Can you have talent without a keen business sense or do the talent photographers with no business skills just fade away?

▷ Q 41 Have you had any business and marketing training?

Probes.

When did you get your training?

Where did you get your training?

Was it relevant to photography or generic in nature?

What importance do you place on business and marketing skills.

Questions about changes in practice in the digital age.

▷ Q 42 Many people have said that digital photography has had an adverse effect on their business. What is your opinion on this?

Probes.

Can you tell me what have been the biggest changes in your business in the last 10 years?

Have you any ideas about what the next ten years will be like?

What have you done in your practice to adapt to digital innovation?

Questions about skills

▷ **Q 43** What do you perceive to be the most important skills a photographer needs today?

Probes.

Have these skills changes in the last ten years?

▷ **Q 44** In your experience how well prepared for the industry are recent graduates?

Probes.

What do you think are the basic skills that should be taught to students studying photography.

▷ **Q 45** If you were to employ someone, say as an assistant, how would you choose them?

Probes:

Ask how valuable certain attributes are and get them to explain... need understanding here.

▷ **Q 46** Wedding and portrait photography represents about half the industry by dollars; where did you learn your skills as a W&P photographer?

Probes.

Is that the best way to learn?

Are poorly trained W&P photographers giving the industry a bad name?

Is this new?

How do you maintain a healthy W&P business with so many digital amateurs out there?

▶ Q 47 Can you tell me what skills and attributes people need to survive in the photographic industry?

Probes.

Ask people to expand on their answers as they are likely to have some vague ideas about this.

Questions about organizations

▶ Q 48 Do you or have you ever belonged to a photographic organization?

Probes.

What do you get out of your membership?

How would you describe the way the organization to which you belong represents the business you are in; as an advocate and lobby group?

Why did you cease membership?

▶ **Q 49** There are many organizations that represent photographers in Australia, including the MEAA. How well do you feel these various groups represent the industry?

Probes. The industry rather than individual members.

Governments are reluctant to talk to industry organizations that do not fully represent the industry.

▶ **Q 50** How should industry organizations better represent their members interests.

Probes:

▷ Q 51 It has been said that photographers should have a licence to practice commercially. Do you think this could work?

Probes: This is a move to protect professionals from amateurs.

Wedding and portrait industry.

▷ Q 52 Show 'changes in industry' diagram and discuss.

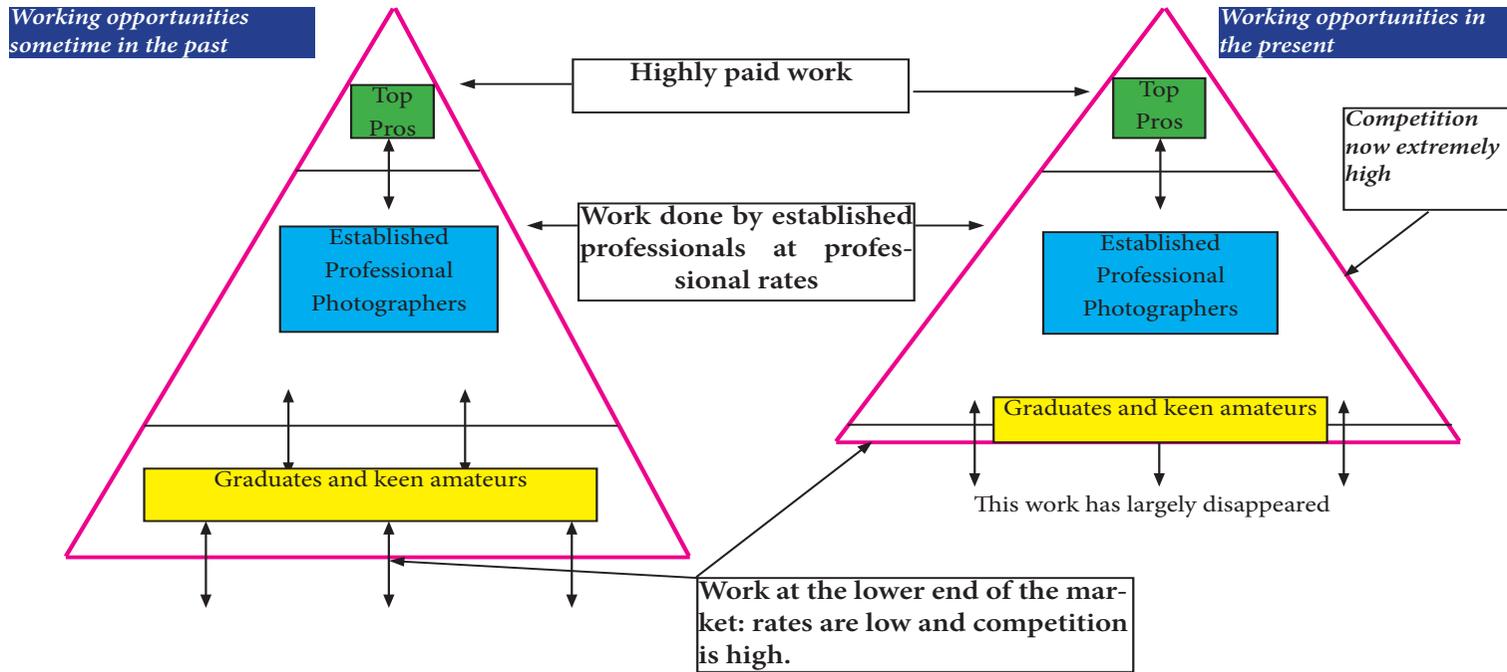
Probes:

Time in industry will affect responses.

Ask about specific experience from then to now.

How have photographers adapted.

Changes in the nature of work in the photographic industry



▷ Q 53 What is your opinion of the future of photography?

Probes: the end of the still photograph,

▷ Q 54.... Finally, is there anything else you would like to add?

Appendix G: Case study questions for organizations

QUESTIONS FOR ORGANIZATION CASE STUDY INFORMANTS

Do I have your permission to record this interview:
all informants will remain anonymous?

▷ Q 1 What is your name?

▷ Q 2 What is your age: within a 10
year range ie. 20-29?

▷ Q 55 What organization do you
represent?

▷ Q 56 What is your position in the
organization?

▷ Q 57 How many members does the organization represent?

▷ Q 58 How is the membership organized?

▷ Q 59 What services does your organization offer members?

▷ Q 60 Do you monitor member participation and satisfaction?

▷ Q 61 Many people have said that digital photography has had an adverse effect on their business. What is your opinion on this?

Probes.

Can you tell me what have been the biggest changes in your business in the last 10 years?

Have you any ideas about what the next ten years will be like?

What have you done in your practice to adapt to digital innovation?

▷ Q 62 What do you perceive to be the most important skills a photographer needs today?

Probes.

Have these skills changes in the last ten years?

▷ Q 63 In your experience how well prepared for the industry are recent graduates?

Probes.

What do you think are the basic skills that should be taught to students studying photography.

▷ **Q 64** If you were to employ someone, say as an photography assistant, how would choose them?

Probes:

Ask how valuable certain attributes are and get them to explain... need understanding here.

▷ **Q 65** Wedding and portrait photography represents about half the industry by dollars; do you believe graduates are well prepared for this speciality?

Probes.

Are poorly trained W&P photographers giving the industry a bad name?

Is this new?

How do photographers maintain a healthy W&P business with so many digital amateurs out there?

▷ **Q 66** Can you tell me what skills and attributes people need to survive in the photographic industry?

▷ **Q 67** There are many organizations that represent photographers in Australia. How well do you feel these various groups represent the industry?

Probes. The industry rather than individual members.

Governments are reluctant to talk to industry organizations that do not fully represent the industry.

▷ **Q 68** How should industry organizations better represent their

members interests, for example should there be just one peak body representing all eligible photographers. As well as perhaps the MEAA.

Probes: Representations to government

▷ Q 69 It has been said that photographers should have a licence to practice commercially. Do you think this could work?

Probes: This is a move to protect professionals from amateurs.

Wedding and portrait industry.

▷ Q 70 Show 'changes in industry' diagram and discuss.

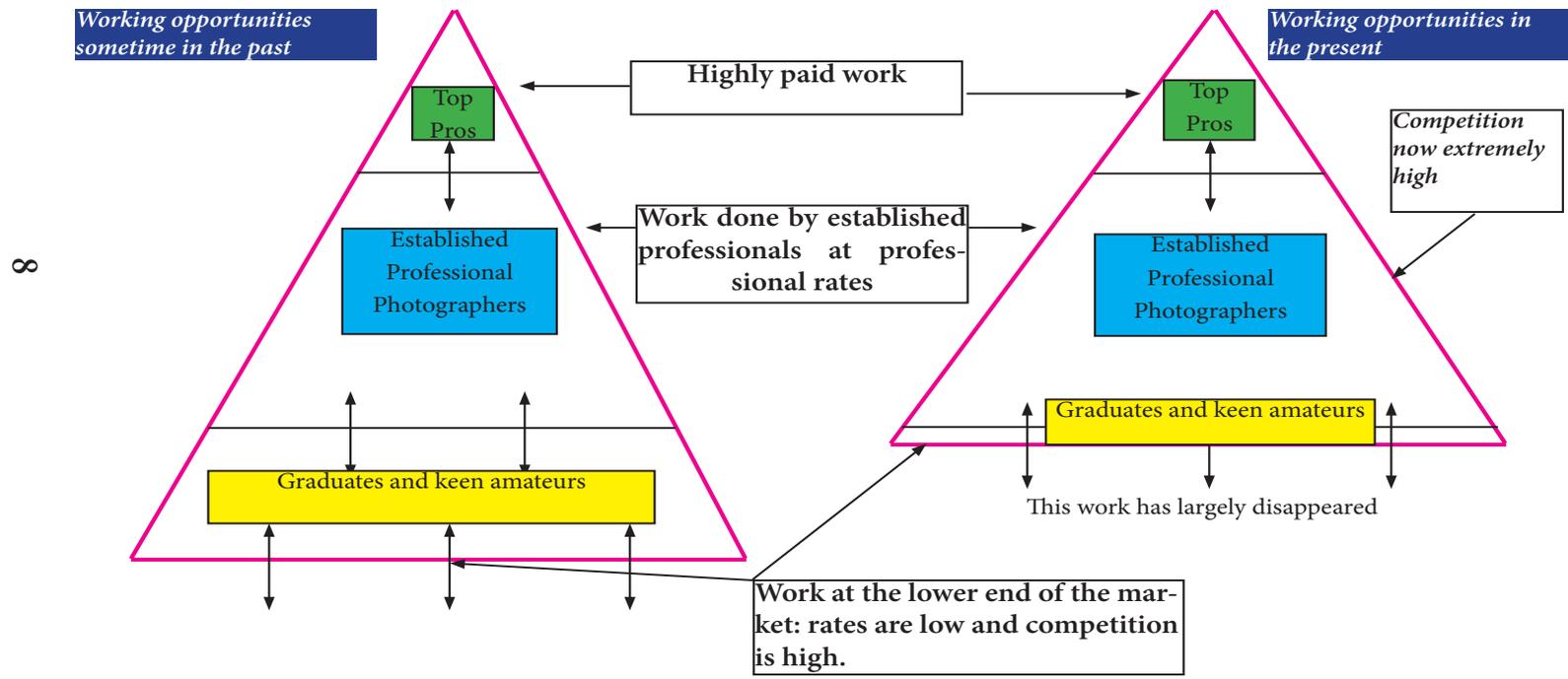
Probes:

Time in industry will affect responses.

Ask about specific experience from then to now.

How have photographers adapted.

Changes in the nature of work in the photographic industry



▷ Q 71 Survey data shows that 24% of people employed in the photographic industry have had a university education the remaining majority are self taught of have taken some minor training courses. Have you any explanation for the aparent suces of self taught photographers?

▷ Q 72 How important are specific business and marketing skills to graduates?

▷ Q 73 There are now basically two types of degree being offered to students. It has been said that the more broad based cources do not offer people wanting to pursue a career in photography sufficient specialized skill to survive. Do you think that is true?

▷ Q 74 Are there too many people graduating with ideas of becoming a photographer for places that do not exist?

▷ Q 75 What is your opinion of the future of photography?

Probes: the end of the still photograph,

▷ **Q 76** Finally, is there anything else
you would like to add?

**Appendix H: Comparison of years deriving an income from
photography.**

Appendix H: Comparison of years deriving an income from photography.						
Group/years	0 - 10	11 - 20	21 - 30	31 - 40	41 - 50	Over 50
Organizations %/number	42.8/127	17.5/52	23.9/71	11.1/33	3.4/10	1.3/4
Industry %	25.5/24	20.2/19	36.2/34	12.8/12	2.1/2	3.2/3
Mean %/ number	34.2/155	18.9/71	30.1/105	12.0/45	2.8/12	2.3/7
(n= 391)	Group data arithmetic mean (based on group mean) = 25.7 years					

Appendix I: Employment status in industry.

Appendix I: Employment status within the industry, (n= 381).							
Group	Full time	Part time (permanent)	Self employed	Freelance	Contract	Casual	Student
Organizations %/Number	23.9/68	4.2/12	38.2/109	28.4/81	2.5/7	11.6/33	3.5/10
Industry %/Number	16.3/15	2.2/2	81.5/75	23.9/22	1.1/1	1.1/1	0.0/0
Mean %/Number	20.1/83	3.2/14	59.9/184	26.2/103	1.8/8	6.4/34	1.8/10

Appendix J: Photographers participation in other paid work.

Appendix J: What other employment do photographers have. n=102			
Job type (n=102)	Organizations% /Number	Industry /Number	Combined mean/ Number
Administration	14.4/13	16.7/2	15.6/15
Creative art and design	15.8/14	8.3/1	12.1/15
Publishing and journalism	14.4/13	8.3/1	11.4/14
Education	15.6/14	8.3/1	12.0/15
Media and broadcasting	13.3/12	8.3/1	10.8/13
Construction	1.1/1	16.7/2	8.9/3
Hospitality and events management	6.7/6	8.3/1	7.5/5
Management	5.6/5	8.3/1	7.0/6
Advertising,marketing, PR	12.2/11	0.0/0	6.1/11
Information services	3.3/3	8.3/1	5.8/4
Leisure, sport and tourism	2.2/2	8.3/1	5.3/3
Legal profession	1.1	0.0	0.55
Mining	0.0	0.0	0.0
Performing arts	2.2	0.0	1.1
Retail	4.4	0.0	2.2
Scientific services	3.3	0.0	1.7
Social work	4.4	0.0	2.2

Appendix K: Photographers defining attributes and skills.

Appendix K: Choice of professional attributes by keyword				
Attribute by key words	First choice n=313 %/Total	Second choice n=300 %/Total	Third choice n=279 %/Total	Mean %
Knowledge, creativity, technique, quality, passion	34.4/90	30.8/91	33.3/92	32.8
Communication & people skills	15.5/46	22.7/76	20.7/57	19.6
Talent, skill, eye, style	26.4/78	16.3/48	6.2/17	16.3
Experience, commitment, professional	12.8/38	15.6/46	18.5/51	15.6
Marketing skill	6.1/18	7.1/21	9.4/26	7.5
Business skill	3.7/11	4.1/12	6.9/19	4.9
Education	2.0/6	2.4/7	2.9/8	2.4
Other	0/0	1.0/3	2.2/6	1.1

Appendix L: The success of education provided skills.

Appendix L: Success of education providing skills: Organizations/ Industry by %.						
Skill	Extremely well	Very well	Moderately well	Somewhat well	Not well	N/A
Theoretical	14.5/20.5	37.2/31.8	21.4/20.5	13.8/9.1	6.2/4.5	6.9/13.6
Business Practice	0.0/2.3	6.9/0.0	16.7/15.9	15.3/13.6	47.9/54.5	13.2/13.6
Creative	10.1/4.7	35.1/37.2	27.0/23.3	12.2/23.3	10.8/4.7	4.7/7.0
Problem solving	9.6/6.7	30.1/28.9	18.5/15.9	24.7/20.0	10.3/20.0	6.8/8.9
Technical & practical	19.4/25.6	34.7/27.9	22.2/18.6	11.8/7.0	4.9/9.3	6.9/11.6
Communication	2.8/2.3	17.2/7.0	27.6/20.9	21.4/25.6	21.4/ 34.9	9.7/9.3
IT	0.7/4.5	7.60/6.8	12.5/9.1	15.3/2.3	21.5/22.7	42.4/54.5
Design	7.5/0.0	20.4/ 24.4	20.4/20.0	21.1/24.4	18.4/15.6	12.2/15.6
Digital	5.5/2.4	15.2/9.4	13.8/7.1	9.0/4.8	11.7/14.3	44.8/61.9
Darkroom	25.2/28.9	37.4/33.3	9.5/4.4	6.1/17.8	5.4/0.0	16.3/15.6
History of Photography	13.3/10.9	20.3/26.1	23.3/30.4	13.3/10.9	10.0/8.7	10.7/13.0
Job seeking	2.7/2.3	2.1/2.3	11.0/9.3	18.5/18.6	47.9/41.9	17.8/25.6
Management	1.4/2.3	5.5/2.3	13.8/4.5	15.2/20.5	48.3/56.8	15.9/13.6
Research	6.8/9.3	26.4/14.0	19.6/23.3	19.6/ 25.6	18.9/18.6	8.8/9.3
Photo studio & lighting	21.4/23.3	33.1/27.9	21.4/20.9	10.3/9.3	4.8/2.3	9.0/16.3
Traditional art skills eg. painting & drawing	4.9/0.0	10.4/9.3	11.1/14.0	10.4/16.3	31.9/30.2	31.3/ 30.2
Web	2.8/4.7	4.9/2.3	14.0/9.3	13.3/2.3	21.0/27.9	44.1/53.3
Sales & Marketing	0.0/2.3	4.8/2.3	11.0/6.8	19.3/15.9	49.7/52.3	15.2/20.5
Networking	3.5/2.3	7.1/7.0	24.1/11.6	19.1/11.6	34.0/48.8	12.1/18.6
Legal (copyright, OH&S, contract, leases, working with minors)	0.7/2.3	7.6/4.7	18.1/7.0	16.7/20.9	43.1/41.9	13.9/23.3
Taxation obligations	0.7/0.0	3.4/2.3	4.8/9.3	12.4/14.0	56.6/51.2	22.1/23.3
Digital workflow	3.5/2.3	9.8/4.5	12.6/6.8	11.9/4.5	14.7/20.5	47.6/61.4
Assisting	9.1/2.3	15.4/20.5	21.0/ 29.5	10.5/9.1	27.3/11.4	16.8/27.3
Working with stylists, make-up artists, models	2.1/0.0	5.5/6.8	9.7/4.5	15.9/9.1	43.4/50.0	23.4/27.3
Working with editors, art directors, picture editors, agencies.	1.4/0.0	3.5/4.4	7.6/11.1	15.3/13.3	50.0/44.4	22.2/26.7

Appendix M: How skilled are employed graduates?

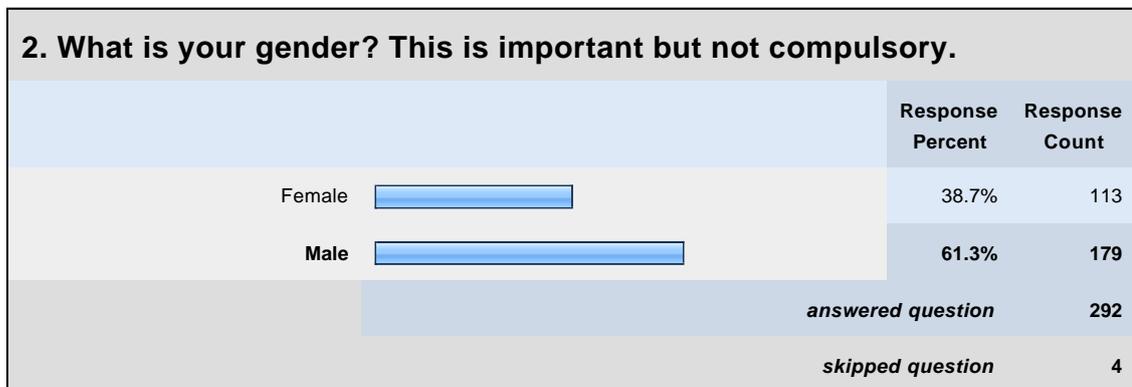
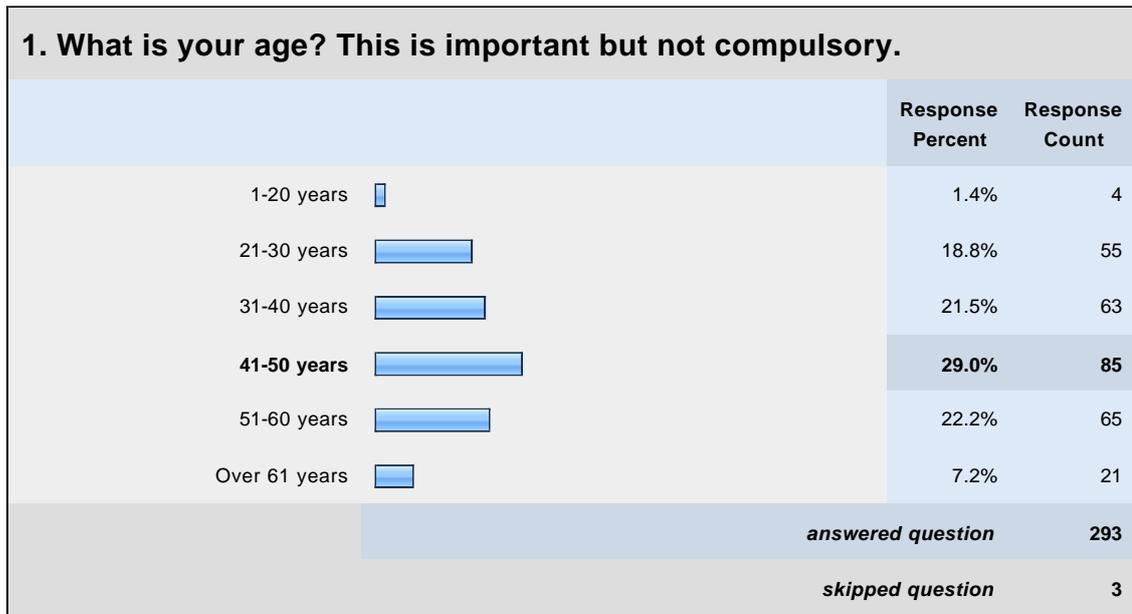
Appendix M: How well skilled are graduates: Organizations% / Industry%, n= 263.						
Skill	Highly Skilled	Well skilled	Adequately skilled	Less than adequately skilled	Poorly skilled	N/A
Technical	6.2/3.4	32.3/13.8	33.8/48.3	15.4/17.2	7.7/10.3	4.6/6.9
Theoretical	1.6/0.0	22.2/20.7	41.3/48.3	20.6/20.7	4.8/0.0	9.5/10.3
Research & problem solving	3.1/0.0	21.9/17.2	42.2/44.8	20.3/24.1	4.7/3.4	7.8/10.3
Business	1.6/0.0	1.6/0.0	30.2/ 31.0	31.1/31.0	19.0/24.1	15.9/13.8
People	6.3/10.3	20.9/6.9	38.1/69.0	25.4/6.9	6.3/3.4	6.3/3.4
Work	6.3/6.7	21.9/13.3	42.2/53.3	18.8/16.7	4.7/3.3	6.3/6.7
Creative	9.4/10.3	34.4/41.4	42.2/44.8	4.7/0.0	3.1/0.0	6.3/3.4
IT	4.8/3.4	46.0/27.6	31.7/ 41.4	6.3/20.7	4.8/3.4	4.8/3.4
Writing	0.0/0.0	17.2/13.3	28.1/46.7	21.9/10.0	15.8/16.7	17.2/13.3
Communication	1.6/3.4	32.8/13.8	40.6/58.6	15.6/13.8	4.7/6.9	4.7/3.4
mean/median	3.92/3.4	21.68/20.7	42.3/41.8	24.6/19.5	7.7/4.8	7.9/6.5

Appendix N: The importance of graduate skills

Appendix N: Importance of graduate skills: Organization %, Industry %, n=248						
Skill	Essential	Very valuable	Valuable	Somewhat valuable	Not at all valuable	N/A
Technical	30.4/30.0	46.8/43.3	19.0/23.3	3.8/3.3	0.0/0.0	0.0/0.0
Practical	41.3/48.4	43.8/38.7	12.5/9.7	0.0/3.2	1.3/0.0	1.3/0.0
Problem solving	32.5/35.5	47.4/54.8	17.5/6.5	2.5/3.2	0.0/0.0	0.0/0.0
IT	29.6/20.0	38.3/30.0	25.9/ 43.3	6.2/6.7	0.0/0.0	0.0/0.0
Design	14.8/6.5	38.3/45.2	32.1/38.7	12.3/9.7	1.2/0.0	1.2/0.0
Office	7.9/6.5	21.1/35.5	40.8/41.9	27.6/12.9	1.3/3.2	1.3/0.0
Creative	42.5/25.8	28.8/ 35.5	16.3/20.0	12.5/9.7	0.0/0.0	0.0/0.0
Retail	5.3/3.3	18.4/20.0	27.6/36.7	30.3/26.7	9.2/10.0	9.2/3.3
People	61.7/54.8	29.6/41.9	7.4/3.2	0.0/0.0	0.0/0.0	1.2/0.0
Web	7.6/3.2	41.8/48.4	35.4/25.8	11.4/12.9	2.5/6.5	1.3/3.2
Studio & lighting	30.4/29.0	32.9/41.9	25.3/22.6	8.9/6.5	2.5/0.0	0.0/3.2
Writing	10.3/3.3	24.4/ 43.3	50.0/16.7	11.5/30.0	3.8/6.7	0.0/0.0
Research	3.9/0.0	32.5/29.0	39/48.4	19.5/12.9	3.9/9.7	1.3/0.0
Management	10.0/0.0	22.5/ 43.3	38.8/26.7	23.8/23.3	1.3/6.7	3.8/0.0

Appendix O: Complete Surveymonkey.com survey data summary of Organizations

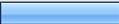
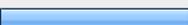
The 2010 JCU survey of Australian professional photographers: Organizations



3. In total, for how many years have you derived an income from photography? This does not have to be your primary income.

	Response Percent	Response Count
0-10 years 	42.9%	126
11-20 years 	17.7%	52
21-30 years 	23.5%	69
31-40 years 	11.2%	33
41-50 years 	3.4%	10
Over 51 years 	1.4%	4
answered question		294
skipped question		2

4. How would you describe your current employment status or position in the photographic industry?

	Response Percent	Response Count
In full time employment 	24.1%	68
In part-time (permanent) employment 	4.3%	12
Self employed 	37.9%	107
Freelance 	28.7%	81
Contract 	2.5%	7
Casual 	11.3%	32
Student 	3.5%	10
Other (please specify)		18
answered question		282
skipped question		14

5. Where is your principal place of residence?		
	Response Percent	Response Count
Capital city 	69.3%	203
Regional city 	20.5%	60
Small town or rural area 	10.2%	30
answered question		293
skipped question		3

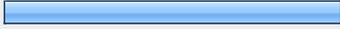
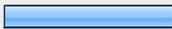
6. Where is your principal place/area of work?		
	Response Percent	Response Count
Usually within the area where I live 	66.1%	189
At different locations within Australia 	16.8%	48
Within Australia and overseas 	17.1%	49
Other (please specify)		13
answered question		286
skipped question		10

7. Please indicate in what role(s) you currently work within the photographic industry. You may choose multiple answers.

	Response Percent	Response Count
Advertising photographer	19.6%	52
Commercial, industrial photographer	26.0%	69
Medical or scientific photographer	8.7%	23
Wedding photographer	32.5%	86
Portrait photographer	46.0%	122
Editorial photographer	36.6%	97
Photojournalist	27.5%	73
Photographic educator	8.7%	23
Photographic assistant	4.9%	13
Photographic printer	4.5%	12
Photographic lab professional	0.4%	1
Post production professional	8.3%	22
Photographic artist	20.0%	53
Curator	2.6%	7
Archivist, restorer	2.3%	6
Stock photographer	9.4%	25
Public relations photographer	13.2%	35
Business manager or manage own business	19.2%	51
Retail employee	1.9%	5
Educator	6.0%	16
Forensic	1.1%	3
Art director	1.1%	3
Designer	5.3%	14
Agent	0.4%	1
Researcher	2.3%	6

Producer		1.9%	5
Director		2.6%	7
Fashion photographer		10.2%	27
Student		6.4%	17
Other (please specify)			24
		answered question	265
		skipped question	31

8. Is your work in the photographic industry your principal employment?

		Response Percent	Response Count
Yes (If yes skip to Q12)		66.8%	177
No (If no please continue on from here)		33.2%	88
		answered question	265
		skipped question	31

9. If you do other paid work outside the photographic industry what field is it in? (You may choose multiple responses)

	Response Percent	Response Count
Administration	14.4%	13
Advertising,marketing,PR	12.2%	11
Agricultural activities	5.6%	5
Charity	6.7%	6
Clerical	1.1%	1
Construction	1.1%	1
Creative art and design	15.6%	14
Defence	3.3%	3
Education	15.6%	14
Engineering, manufacture and production	5.6%	5
Environment	0.0%	0
Finance	4.4%	4
Health care	7.8%	7
Hospitality and events management	6.7%	6
Human resources	0.0%	0
Information services	3.3%	3
Insurance	0.0%	0
Law enforcement and protection	0.0%	0
Legal profession	1.1%	1
Leisure, sport and tourism	2.2%	2
Management	5.6%	5
Media and broadcasting	13.3%	12
Mining	0.0%	0
Performing arts	2.2%	2
Publishing and journalism	14.4%	13

Retail		4.4%	4
Scientific services		3.3%	3
Social work		4.4%	4
Transport, logistics and distribution		1.1%	1
Other (please specify)			15
		answered question	90
		skipped question	206

10. If you do other income producing work, other than photography, what percentage of your time do you spend on photography compared with other employment?

	Response Percent	Response Count	
90% other 10% photography 	14.4%	14	
80% other 20% photography 	15.5%	15	
70% other 30% photography 	10.3%	10	
60% other 40% photography 	26.8%	26	
50% other 50% photography 	8.2%	8	
40% other 60% photography 	6.2%	6	
30% other 70% photography 	6.2%	6	
20% other 80% photography 	9.3%	9	
10% other 90% photography 	3.1%	3	
		answered question	97
		skipped question	199

11. If your work within the photographic industry is NOT your principal source of employment do you wish it was?

		Response Percent	Response Count
Yes I would like more work within the industry.		74.5%	70
No, I am happy with the amount of work I do within the photographic industry.		25.5%	24
		<i>answered question</i>	94
		<i>skipped question</i>	202

12. What are the challenges associated with gaining additional work within your sector(s) of the photographic industry?

	Response Percent	Response Count
I have all the work I need, this is not applicable	19.8%	52
The market is over crowded	32.4%	85
Price cutting is pushing me out of the market	24.0%	63
Digital photography has enabled many more people to enter the market, this is putting pressure on professional photographers	43.5%	114
I do not have the skills to compete with other photographers	5.0%	13
I do not have the equipment to compete with other photographers	9.5%	25
I am not good at marketing my skills and services	23.3%	61
People will not pay for the quality of work that I do anymore	21.0%	55
There are limited employment opportunities in my area of photographic specialisation	18.3%	48
I do not have enough experience	12.2%	32
In my geographic area opportunities are limited	10.7%	28
In my area of the industry my work is increasingly being done by amateurs	27.5%	72
Keep up with new technology	5.3%	14
Other (please specify)		18
answered question		262
skipped question		34

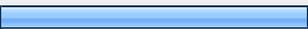
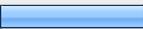
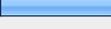
13. What attributes or qualities have enabled you to establish a successful career in the photographic industry? Please tick as many as you like and make a comment if you wish.

	Response Percent	Response Count
I have a unique talent that people are willing to pay for	40.7%	105
My particular niche in the market is not crowded	12.8%	33
I have worked hard over many years and made a reputation for myself and my work	57.0%	147
I am very competitive	22.9%	59
I am very good at self marketing	22.9%	59
I am willing to do work that other people will not do	26.7%	69
I am good at solving problems	54.7%	141
I am a good team worker	41.5%	107
I work well alone	49.2%	127
I have specialised equipment that enables me to do work others can't do	10.5%	27
I have good management skills	25.6%	66
I have good retail skills	10.5%	27
I participate in industry awards competitions and that keeps me up with industry best practice	17.1%	44
I had a good education and training	45.3%	117
Comment here please.		27
answered question		258
skipped question		38

14. What do you believe are the defining attributes/features/skills of a professional photographer?

		Response Percent	Response Count
1		100.0%	234
2		96.6%	226
3		88.9%	208
answered question			234
skipped question			62

15. How did you learn your photographic skills? You may choose multiple responses.

		Response Percent	Response Count
Self taught		61.5%	155
Cadetship		12.3%	31
University course		28.6%	72
Tafe course		19.0%	48
Apprenticeship		4.4%	11
Short courses conducted by Universities, Tafe colleges, photographic school or industry bodies		22.2%	56
Other (please specify)			56
answered question			252
skipped question			44

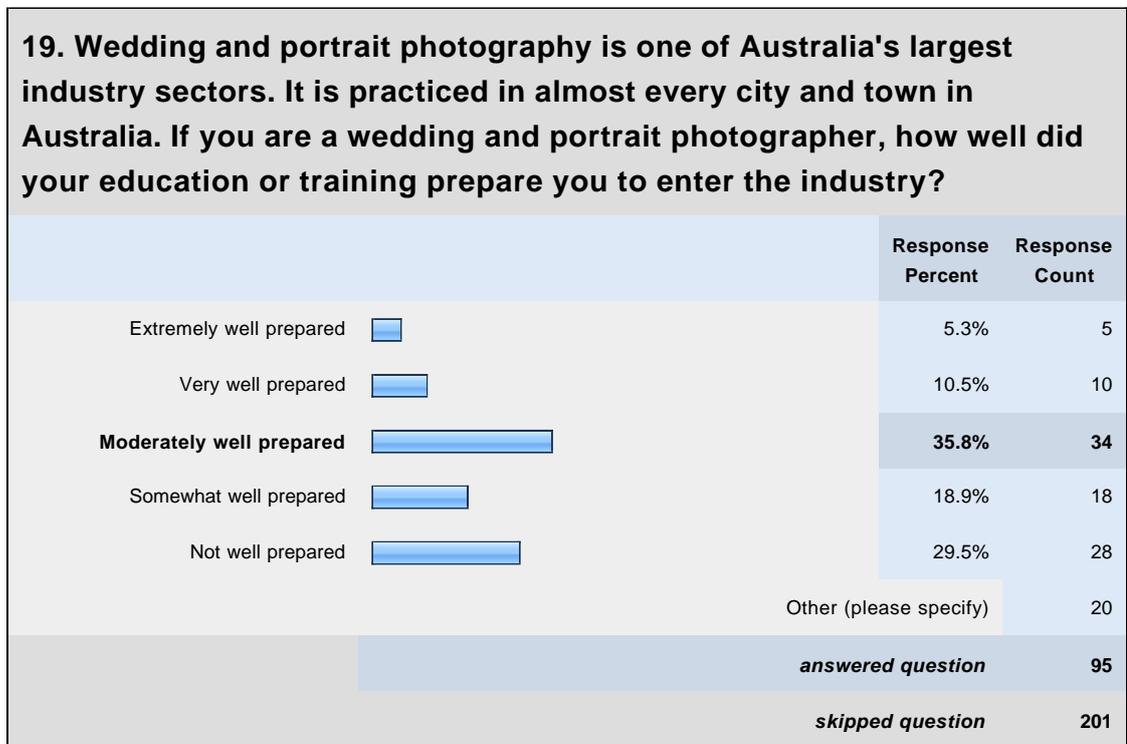
16. What is your highest or most advanced qualification in photography? Please skip if not applicable.	
	Response Count
	142
<i>answered question</i>	142
<i>skipped question</i>	154

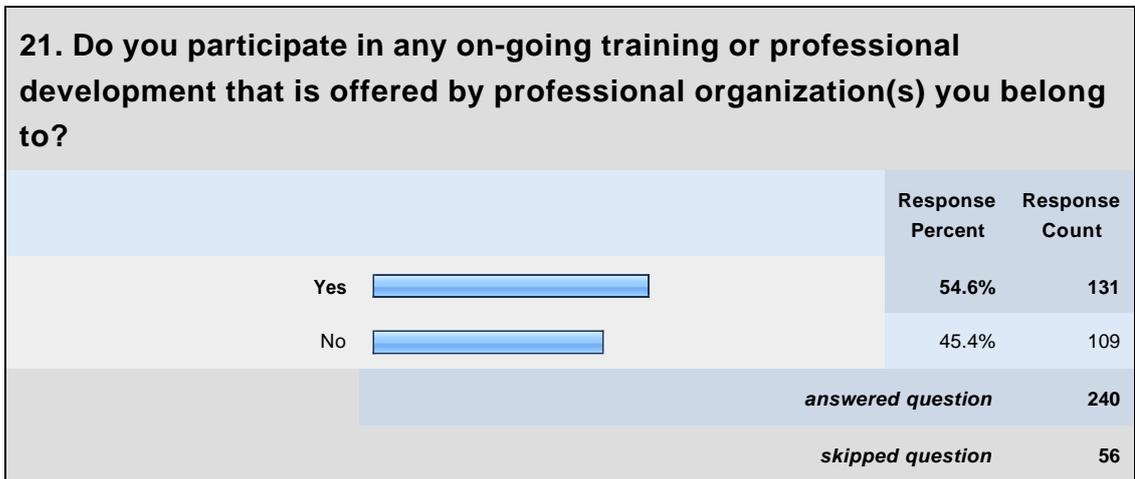
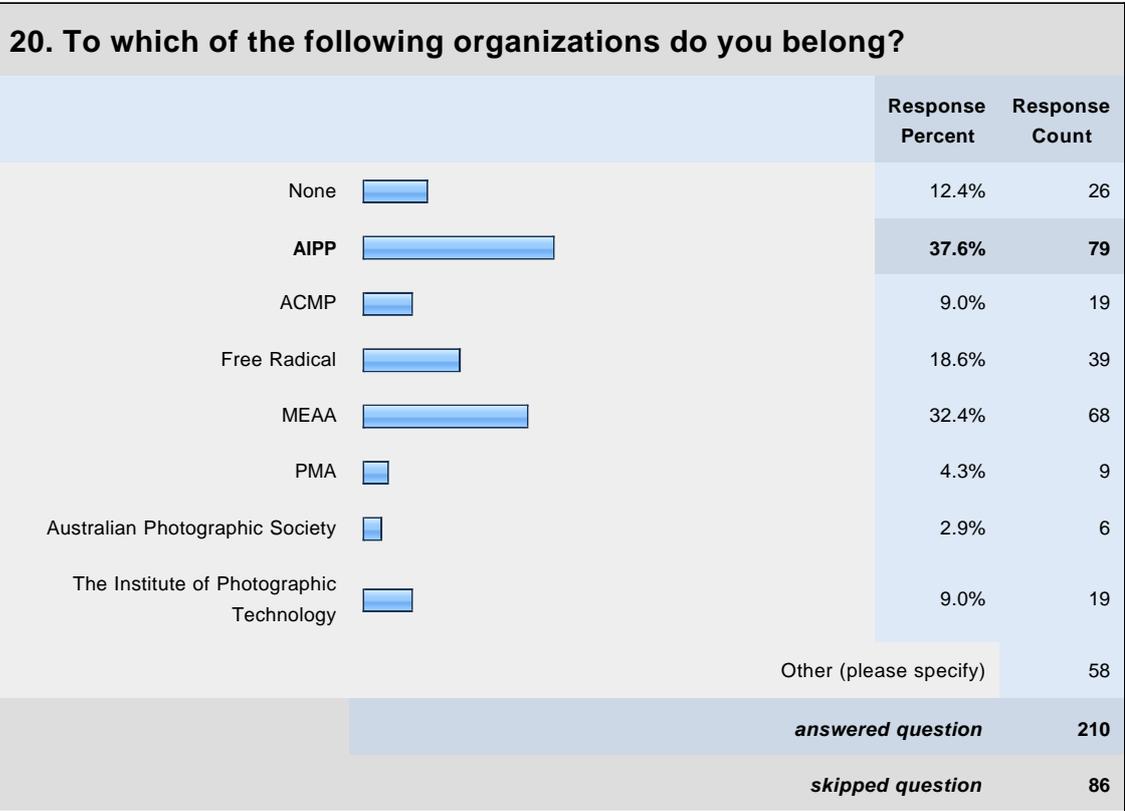
17. Where did you obtain your qualification? Please skip if not applicable.	
	Response Count
	134
<i>answered question</i>	134
<i>skipped question</i>	162

18. If you received a formal (university/technical institute/photographic college) education, how well did your education provide you with the following skills?

	Extremely well	Very well	Moderately well	Somewhat well	Not well	N/A	Rating Average	Res C
Theoretical	14.6% (21)	36.8% (53)	21.5% (31)	13.9% (20)	6.3% (9)	6.9% (10)	2.57	
Business practice	0.0% (0)	7.0% (10)	16.8% (24)	15.4% (22)	47.6% (68)	13.3% (19)	4.19	
Creative	10.2% (15)	34.7% (51)	27.2% (40)	12.2% (18)	10.9% (16)	4.8% (7)	2.78	
Problem solving	9.7% (14)	29.7% (43)	18.6% (27)	24.8% (36)	10.3% (15)	6.9% (10)	2.96	
Technical and practical	19.6% (28)	34.3% (49)	22.4% (32)	11.9% (17)	4.9% (7)	7.0% (10)	2.44	
Communication	2.8% (4)	17.4% (25)	27.8% (40)	20.8% (30)	21.5% (31)	9.7% (14)	3.45	
IT	0.7% (1)	7.7% (11)	12.6% (18)	15.4% (22)	21.7% (31)	42.0% (60)	3.86	
Design	7.5% (11)	19.9% (29)	20.5% (30)	21.2% (31)	18.5% (27)	12.3% (18)	3.27	
Digital	5.6% (8)	15.3% (22)	13.9% (20)	9.0% (13)	11.8% (17)	44.4% (64)	3.11	
Darkroom	25.3% (37)	37.0% (54)	9.6% (14)	6.2% (9)	5.5% (8)	16.4% (24)	2.16	
History of photography/art	13.4% (20)	28.9% (43)	23.5% (35)	13.4% (20)	10.1% (15)	10.7% (16)	2.75	
Job seeking	2.8% (4)	2.1% (3)	11.0% (16)	18.6% (27)	48.3% (70)	17.2% (25)	4.30	
Management	1.4% (2)	5.6% (8)	13.9% (20)	15.3% (22)	47.9% (69)	16.0% (23)	4.22	
Research	6.8% (10)	26.5% (39)	19.7% (29)	19.7% (29)	18.4% (27)	8.8% (13)	3.18	
Photo studio and lighting	21.5% (31)	32.6% (47)	21.5% (31)	10.4% (15)	4.9% (7)	9.0% (13)	2.39	
Traditional art skills like painting and drawing	4.9% (7)	10.5% (15)	10.5% (15)	10.5% (15)	32.2% (46)	31.5% (45)	3.80	

Web	2.8% (4)	4.9% (7)	14.1% (20)	13.4% (19)	21.1% (30)	43.7% (62)	3.80
Sales and marketing	0.0% (0)	4.9% (7)	11.1% (16)	19.4% (28)	49.3% (71)	15.3% (22)	4.34
Networking	3.6% (5)	7.1% (10)	24.3% (34)	19.3% (27)	33.6% (47)	12.1% (17)	3.82
Legal (copyright, OH&S, contracts, leases, working with minors etc.)	0.7% (1)	7.7% (11)	18.2% (26)	16.8% (24)	42.7% (61)	14.0% (20)	4.08
Taxation obligations	0.7% (1)	3.5% (5)	4.9% (7)	11.8% (17)	56.9% (82)	22.2% (32)	4.55
Digital workflow	3.5% (5)	9.9% (14)	12.7% (18)	12.0% (17)	14.8% (21)	47.2% (67)	3.47
Assisting	9.2% (13)	15.5% (22)	21.1% (30)	10.6% (15)	27.5% (39)	16.2% (23)	3.38
Working with stylists, make-up artists, models	2.1% (3)	5.6% (8)	9.7% (14)	16.0% (23)	43.1% (62)	23.6% (34)	4.21
Working with editors, art directors, picture editors, agencies	1.4% (2)	3.5% (5)	7.7% (11)	15.4% (22)	49.7% (71)	22.4% (32)	4.40
<i>answered question</i>							
<i>skipped question</i>							





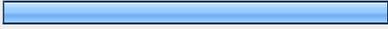
**22. How important is it for the profession that professional bodies (eg. AIPP, ACMP) introduce continuing professional skills development as a requirement to maintain professional accreditation and membership?
Skip if not applicable.**

	Response Percent	Response Count
Extremely important 	37.9%	85
Very important 	25.0%	56
Moderately important 	17.0%	38
Somewhat important 	6.7%	15
Not at all important 	13.4%	30
	answered question	224
	skipped question	72

23. Which of the following do you regularly (approximately annually) engage with? Please tick as many as you like.

		Response Percent	Response Count
Trade shows eg PMA	<input type="checkbox"/>	37.1%	92
Industry award competition	<input type="checkbox"/>	37.5%	93
Industry conventions	<input type="checkbox"/>	22.6%	56
Visitor to art galleries	<input type="checkbox"/>	71.8%	178
Academic research	<input type="checkbox"/>	23.8%	59
Academic conferences	<input type="checkbox"/>	11.7%	29
Industry seminars	<input type="checkbox"/>	42.7%	106
Creative workshops	<input type="checkbox"/>	46.4%	115
Online tutorials	<input type="checkbox"/>	49.2%	122
Webinars	<input type="checkbox"/>	16.5%	41
Trade magazines	<input type="checkbox"/>	52.8%	131
Relevant books and magazines	<input type="checkbox"/>	73.4%	182
Exhibitor at art galleries	<input type="checkbox"/>	33.1%	82
Industry shows, eg. wedding shows	<input type="checkbox"/>	17.7%	44
	Other (please specify)		13
answered question			248
skipped question			48

24. Have you ever employed people who graduated from university photography or creative art schools?

	Response Percent	Response Count
Yes 	23.8%	58
No (skip to Q 27) 	76.2%	186
Other (please specify)		1
answered question		244
skipped question		52

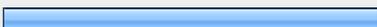
**25. When selecting graduates for work, how skilled are they in general?
Please rate the following graduate attributes. Use N/A if necessary.**

	Highly skilled	Well skilled	Adequately skilled	Less than adequately skilled	Poorly skilled	N/A	Rating Average	Response Count
Technical skills	6.2% (4)	32.3% (21)	33.8% (22)	15.4% (10)	7.7% (5)	4.6% (3)	2.85	
Theoretical skills	1.6% (1)	22.2% (14)	41.3% (26)	20.6% (13)	4.8% (3)	9.5% (6)	3.05	
Research and problem solving skills	3.1% (2)	21.9% (14)	42.2% (27)	20.3% (13)	4.7% (3)	7.8% (5)	3.02	
Business skills	1.6% (1)	1.6% (1)	30.2% (19)	31.7% (20)	19.0% (12)	15.9% (10)	3.77	
People skills	6.3% (4)	20.6% (13)	38.1% (24)	25.4% (16)	3.2% (2)	6.3% (4)	2.98	
Work skills	6.3% (4)	21.9% (14)	42.2% (27)	18.8% (12)	4.7% (3)	6.3% (4)	2.93	
Creativity	9.4% (6)	34.4% (22)	42.2% (27)	4.7% (3)	3.1% (2)	6.3% (4)	2.55	
IT skills	4.8% (3)	46.0% (29)	31.7% (20)	6.3% (4)	6.3% (4)	4.8% (3)	2.62	
Writing skills	0.0% (0)	17.2% (11)	28.1% (18)	21.9% (14)	15.6% (10)	17.2% (11)	3.43	
Communication skills	1.6% (1)	32.8% (21)	40.6% (26)	15.6% (10)	4.7% (3)	4.7% (3)	2.89	
Comment here please								
answered question								
skipped question								

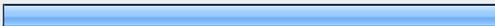
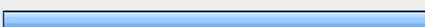
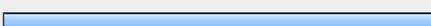
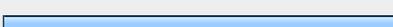
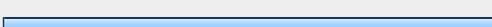
26. If you were to employ a graduate from a Photography or Creative Arts school how would you rate the importance and necessity of the following attributes or skills? Use N/A if necessary.

	Essential	Very valuable	Valuable	Somewhat valuable	Not at all valuable	N/A	Rating Average	Re
Technical skills	30.4% (24)	46.8% (37)	19.0% (15)	3.8% (3)	0.0% (0)	0.0% (0)	1.96	
Practical skills	41.3% (33)	43.8% (35)	12.5% (10)	0.0% (0)	1.3% (1)	1.3% (1)	1.75	
Problem solving skills	32.5% (26)	47.5% (38)	17.5% (14)	2.5% (2)	0.0% (0)	0.0% (0)	1.90	
IT skills	29.6% (24)	38.3% (31)	25.9% (21)	6.2% (5)	0.0% (0)	0.0% (0)	2.09	
Design skills	14.8% (12)	38.3% (31)	32.1% (26)	12.3% (10)	1.2% (1)	1.2% (1)	2.46	
Office skills	7.9% (6)	21.1% (16)	40.8% (31)	27.6% (21)	1.3% (1)	1.3% (1)	2.93	
Creativity	42.5% (34)	28.8% (23)	16.3% (13)	12.5% (10)	0.0% (0)	0.0% (0)	1.99	
Retail skills	5.3% (4)	18.4% (14)	27.6% (21)	30.3% (23)	9.2% (7)	9.2% (7)	3.22	
People skills	61.7% (50)	29.6% (24)	7.4% (6)	0.0% (0)	0.0% (0)	1.2% (1)	1.45	
Web skills	7.6% (6)	41.8% (33)	35.4% (28)	11.4% (9)	2.5% (2)	1.3% (1)	2.59	
Studio and lighting skills	30.4% (24)	32.9% (26)	25.3% (20)	8.9% (7)	2.5% (2)	0.0% (0)	2.20	
Writing skills	10.3% (8)	24.4% (19)	50.0% (39)	11.5% (9)	3.8% (3)	0.0% (0)	2.74	
Research skills	3.9% (3)	32.5% (25)	39.0% (30)	19.5% (15)	3.9% (3)	1.3% (1)	2.87	
Management skills	10.0% (8)	22.5% (18)	38.8% (31)	23.8% (19)	1.3% (1)	3.8% (3)	2.83	
						Other (please specify)		
						answered question		
						skipped question		

27. If you are an employee (not self employed) in the photographic industry are you provided with adequate and ongoing professional skills development?

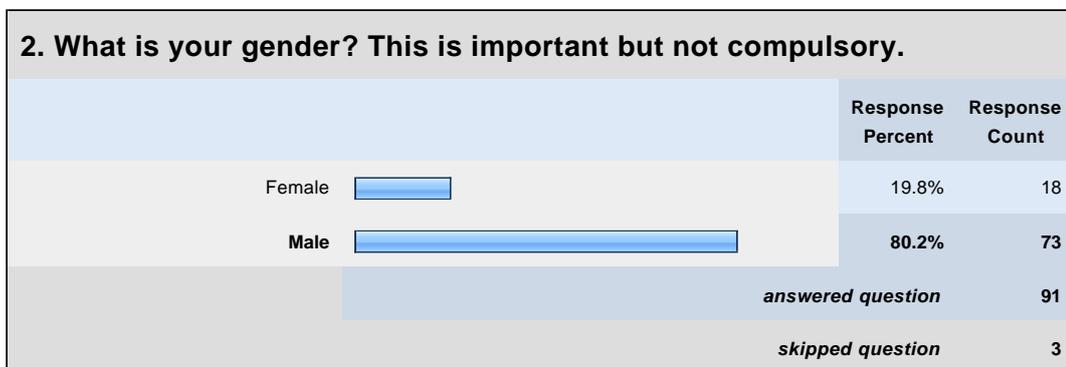
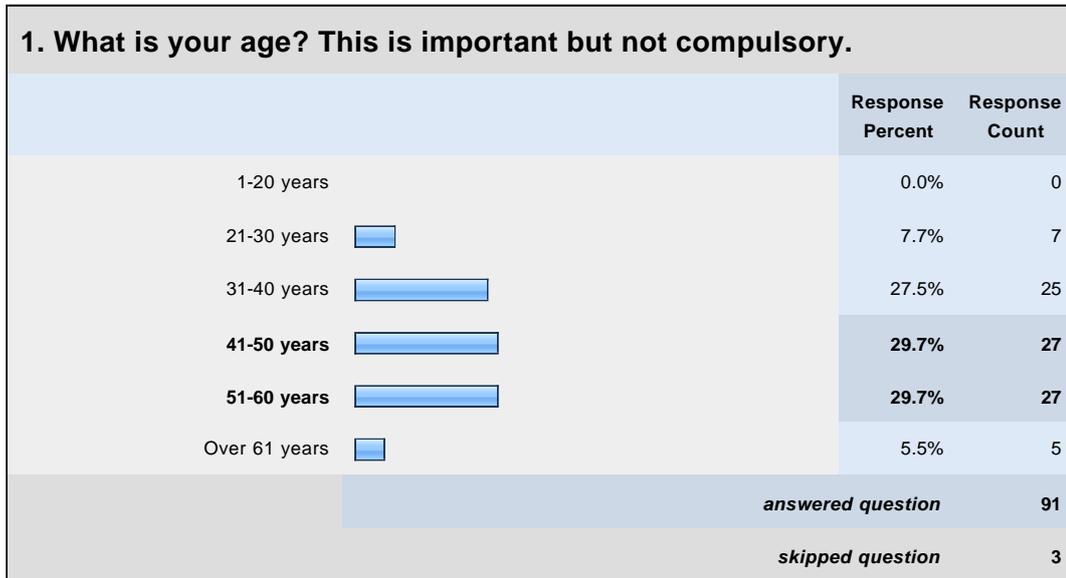
	Response Percent	Response Count
Yes 	24.7%	22
No 	75.3%	67
<i>answered question</i>		89
<i>skipped question</i>		207

28. My study involves follow-up interviews with those people that are keen to offer a range of detailed insights into their experiences in the industry or their education experiences. Please note that if you are willing to help me or have an opinion your personal details will never be identified or released.

	Response Percent	Response Count
Name: 	99.3%	152
Company: 	70.6%	108
Address: 	76.5%	117
City/Town: 	85.0%	130
State: 	86.3%	132
Postal Code: 	79.1%	121
Email Address: 	98.7%	151
Phone Number: 	86.9%	133
<i>answered question</i>		153
<i>skipped question</i>		143

Appendix P: Complete Surveymonkey.com survey data summary of Industry.

The 2010 JCU survey of Australian professional photographers: Industry



3. In total, for how many years have you derived an income from photography? This does not have to be your primary income.

	Response Percent	Response Count
0-10 years	25.5%	24
11-20 years	20.2%	19
21-30 years	36.2%	34
31-40 years	12.8%	12
41-50 years	2.1%	2
Over 51 years	3.2%	3
answered question		94
skipped question		0

4. How would you describe your current employment status or position in the photographic industry?

	Response Percent	Response Count
In full time employment	16.3%	15
In part-time (permanent) employment	2.2%	2
Self employed	81.5%	75
Freelance	23.9%	22
Contract	1.1%	1
Casual	1.1%	1
Student	0.0%	0
Other (please specify)		2
answered question		92
skipped question		2

5. Where is your principal place of residence?

	Response Percent	Response Count
Capital city	68.8%	64
Regional city	24.7%	23
Small town or rural area	6.5%	6
answered question		93
skipped question		1

6. Where is your principal place/area of work?

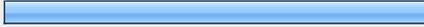
	Response Percent	Response Count
Usually within the area where I live	71.3%	67
At different locations within Australia	18.1%	17
Within Australia and overseas	10.6%	10
Other (please specify)		1
answered question		94
skipped question		0

7. Please indicate in what role(s) you currently work within the photographic industry. You may choose multiple answers.

	Response Percent	Response Count
Advertising photographer	48.2%	41
Commercial, industrial photographer	67.1%	57
Medical or scientific photographer	2.4%	2
Wedding photographer	37.6%	32
Portrait photographer	55.3%	47
Editorial photographer	22.4%	19
Photojournalist	10.6%	9
Photographic educator	4.7%	4
Photographic assistant	2.4%	2
Photographic printer	3.5%	3
Photographic lab professional	1.2%	1
Post production professional	15.3%	13
Photographic artist	16.5%	14
Curator	2.4%	2
Archivist, restorer	4.7%	4
Stock photographer	22.4%	19
Public relations photographer	17.6%	15
Business manager or manage own business	43.5%	37
Retail employee	0.0%	0
Educator	2.4%	2
Forensic	0.0%	0
Art director	3.5%	3
Designer	9.4%	8
Agent	1.2%	1
Researcher	0.0%	0

Producer		1.2%	1
Director		7.1%	6
Fashion photographer		16.5%	14
Student		0.0%	0
		Other (please specify)	9
		answered question	85
		skipped question	9

8. Is your work in the photographic industry your principal employment?

		Response Percent	Response Count
Yes (If yes skip to Q12)		84.3%	75
No (If no please continue on from here)		15.7%	14
		answered question	89
		skipped question	5

9. If you do other paid work outside the photographic industry what field is it in? (You may choose multiple responses)

	Response Percent	Response Count
Administration <input type="checkbox"/>	16.7%	2
Advertising,marketing,PR	0.0%	0
Agricultural activities	0.0%	0
Charity	0.0%	0
Clerical	0.0%	0
Construction <input type="checkbox"/>	16.7%	2
Creative art and design <input type="checkbox"/>	8.3%	1
Defence	0.0%	0
Education <input type="checkbox"/>	8.3%	1
Engineering, manufacture and production	0.0%	0
Environment <input type="checkbox"/>	8.3%	1
Finance	0.0%	0
Health care	0.0%	0
Hospitality and events management <input type="checkbox"/>	8.3%	1
Human resources	0.0%	0
Information services <input type="checkbox"/>	8.3%	1
Insurance	0.0%	0
Law enforcement and protection	0.0%	0
Legal profession	0.0%	0
Leisure, sport and tourism <input type="checkbox"/>	8.3%	1
Management <input type="checkbox"/>	8.3%	1
Media and broadcasting <input type="checkbox"/>	8.3%	1
Mining	0.0%	0
Performing arts	0.0%	0
Publishing and journalism <input type="checkbox"/>	8.3%	1

Retail	0.0%	0
Scientific services	0.0%	0
Social work	0.0%	0
Transport, logistics and distribution <input type="checkbox"/>	8.3%	1
Other (please specify)		4
answered question		12
skipped question		82

10. If you do other income producing work, other than photography, what percentage of your time do you spend on photography compared with other employment?

	Response Percent	Response Count
90% other 10% photography <input type="checkbox"/>	16.7%	3
80% other 20% photography <input type="checkbox"/>	11.1%	2
70% other 30% photography <input checked="" type="checkbox"/>	33.3%	6
60% other 40% photography	0.0%	0
50% other 50% photography <input type="checkbox"/>	16.7%	3
40% other 60% photography	0.0%	0
30% other 70% photography <input type="checkbox"/>	11.1%	2
20% other 80% photography	0.0%	0
10% other 90% photography <input type="checkbox"/>	11.1%	2
answered question		18
skipped question		76

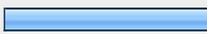
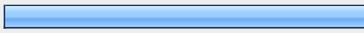
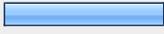
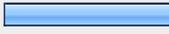
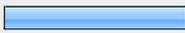
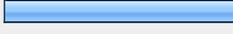
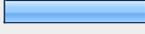
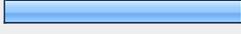
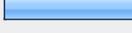
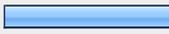
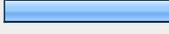
11. If your work within the photographic industry is NOT your principal source of employment do you wish it was?

		Response Percent	Response Count
Yes I would like more work within the industry.		76.5%	13
No, I am happy with the amount of work I do within the photographic industry.		23.5%	4
		<i>answered question</i>	17
		<i>skipped question</i>	77

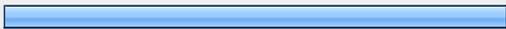
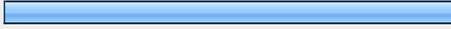
12. What are the challenges associated with gaining additional work within your sector(s) of the photographic industry?

	Response Percent	Response Count
I have all the work I need, this is not applicable	16.9%	15
The market is over crowded	43.8%	39
Price cutting is pushing me out of the market	31.5%	28
Digital photography has enabled many more people to enter the market, this is putting pressure on professional photographers	66.3%	59
I do not have the skills to compete with other photographers	0.0%	0
I do not have the equipment to compete with other photographers	1.1%	1
I am not good at marketing my skills and services	13.5%	12
People will not pay for the quality of work that I do anymore	31.5%	28
There are limited employment opportunities in my area of photographic specialisation	6.7%	6
I do not have enough experience	0.0%	0
In my geographic area opportunities are limited	2.2%	2
In my area of the industry my work is increasingly being done by amateurs	40.4%	36
Keep up with new technology	7.9%	7
Other (please specify)		7
answered question		89
skipped question		5

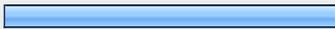
13. What attributes or qualities have enabled you to establish a successful career in the photographic industry? Please tick as many as you like and make a comment if you wish.

	Response Percent	Response Count
I have a unique talent that people are willing to pay for 	40.4%	36
My particular niche in the market is not crowded 	10.1%	9
I have worked hard over many years and made a reputation for myself and my work 	71.9%	64
I am very competitive 	31.5%	28
I am very good at self marketing 	32.6%	29
I am willing to do work that other people will not do 	36.0%	32
I am good at solving problems 	46.1%	41
I am a good team worker 	28.1%	25
I work well alone 	47.2%	42
I have specialised equipment that enables me to do work others can't do 	25.8%	23
I have good management skills 	32.6%	29
I have good retail skills 	13.5%	12
I participate in industry awards competitions and that keeps me up with industry best practice 	7.9%	7
I had a good education and training 	32.6%	29
Comment here please.		4
answered question		89
skipped question		5

14. What do you believe are the defining attributes/features/skills of a professional photographer?

		Response Percent	Response Count
1		100.0%	77
2		93.5%	72
3		89.6%	69
<i>answered question</i>			77
<i>skipped question</i>			17

15. How did you learn your photographic skills? You may choose multiple responses.

		Response Percent	Response Count
Self taught		65.8%	50
Cadetship		10.5%	8
University course		18.4%	14
Tafe course		22.4%	17
Apprenticeship		6.6%	5
Short courses conducted by Universities, Tafe colleges, photographic school or industry bodies		27.6%	21
Other (please specify)			18
<i>answered question</i>			76
<i>skipped question</i>			18

16. What is your highest or most advanced qualification in photography? Please skip if not applicable.	
	Response Count
	40
<i>answered question</i>	40
<i>skipped question</i>	54

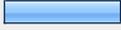
17. Where did you obtain your qualification? Please skip if not applicable.	
	Response Count
	39
<i>answered question</i>	39
<i>skipped question</i>	55

18. If you received a formal (university/technical institute/photographic college) education, how well did your education provide you with the following skills?

	Extremely well	Very well	Moderately well	Somewhat well	Not well	N/A	Rating Average	Res C
Theoretical	20.5% (9)	31.8% (14)	20.5% (9)	9.1% (4)	4.5% (2)	13.6% (6)	2.37	
Business practice	2.3% (1)	0.0% (0)	15.9% (7)	13.6% (6)	54.5% (24)	13.6% (6)	4.37	
Creative	4.7% (2)	37.2% (16)	23.3% (10)	23.3% (10)	4.7% (2)	7.0% (3)	2.85	
Problem solving	6.7% (3)	28.9% (13)	15.6% (7)	20.0% (9)	20.0% (9)	8.9% (4)	3.20	
Technical and practical	25.6% (11)	27.9% (12)	18.6% (8)	7.0% (3)	9.3% (4)	11.6% (5)	2.39	
Communication	2.3% (1)	7.0% (3)	20.9% (9)	25.6% (11)	34.9% (15)	9.3% (4)	3.92	
IT	4.5% (2)	6.8% (3)	9.1% (4)	2.3% (1)	22.7% (10)	54.5% (24)	3.70	
Design	0.0% (0)	24.4% (11)	20.0% (9)	24.4% (11)	15.6% (7)	15.6% (7)	3.37	
Digital	2.4% (1)	9.5% (4)	7.1% (3)	4.8% (2)	14.3% (6)	61.9% (26)	3.50	
Darkroom	28.9% (13)	33.3% (15)	4.4% (2)	17.8% (8)	0.0% (0)	15.6% (7)	2.13	
History of photography/art	10.9% (5)	26.1% (12)	30.4% (14)	10.9% (5)	8.7% (4)	13.0% (6)	2.78	
Job seeking	2.3% (1)	2.3% (1)	9.3% (4)	18.6% (8)	41.9% (18)	25.6% (11)	4.28	
Management	2.3% (1)	2.3% (1)	4.5% (2)	20.5% (9)	56.8% (25)	13.6% (6)	4.47	
Research	9.3% (4)	14.0% (6)	23.3% (10)	25.6% (11)	18.6% (8)	9.3% (4)	3.33	
Photo studio and lighting	23.3% (10)	27.9% (12)	20.9% (9)	9.3% (4)	2.3% (1)	16.3% (7)	2.28	
Traditional art skills like painting and drawing	0.0% (0)	9.3% (4)	14.0% (6)	16.3% (7)	30.2% (13)	30.2% (13)	3.97	

Web	4.7% (2)	2.3% (1)	9.3% (4)	2.3% (1)	27.9% (12)	53.5% (23)	4.00
Sales and marketing	2.3% (1)	2.3% (1)	6.8% (3)	15.9% (7)	52.3% (23)	20.5% (9)	4.43
Networking	2.3% (1)	7.0% (3)	11.6% (5)	11.6% (5)	48.8% (21)	18.6% (8)	4.20
Legal (copyright, OH&S, contracts, leases, working with minors etc.)	2.3% (1)	4.7% (2)	7.0% (3)	20.9% (9)	41.9% (18)	23.3% (10)	4.24
Taxation obligations	0.0% (0)	2.3% (1)	9.3% (4)	14.0% (6)	51.2% (22)	23.3% (10)	4.48
Digital workflow	2.3% (1)	4.5% (2)	6.8% (3)	4.5% (2)	20.5% (9)	61.4% (27)	3.94
Assisting	2.3% (1)	20.5% (9)	29.5% (13)	9.1% (4)	11.4% (5)	27.3% (12)	3.09
Working with stylists, make-up artists, models	0.0% (0)	6.8% (3)	4.5% (2)	9.1% (4)	50.0% (22)	29.5% (13)	4.45
Working with editors, art directors, picture editors, agencies	0.0% (0)	4.4% (2)	11.1% (5)	13.3% (6)	44.4% (20)	26.7% (12)	4.33
<i>answered question</i>							
<i>skipped question</i>							

19. Wedding and portrait photography is one of Australia's largest industry sectors. It is practiced in almost every city and town in Australia. If you are a wedding and portrait photographer, how well did your education or training prepare you to enter the industry?

	Response Percent	Response Count
Extremely well prepared 	8.6%	3
Very well prepared 	14.3%	5
Moderately well prepared 	31.4%	11
Somewhat well prepared 	22.9%	8
Not well prepared 	22.9%	8
Other (please specify)		9
<i>answered question</i>		35
<i>skipped question</i>		59

20. To which of the following organizations do you belong?

	Response Percent	Response Count
None	45.3%	29
AIPP	39.1%	25
ACMP	14.1%	9
Free Radical	4.7%	3
MEAA	0.0%	0
PMA	9.4%	6
Australian Photographic Society	1.6%	1
The Institute of Photographic Technology	0.0%	0
Other (please specify)		11
answered question		64
skipped question		30

21. Do you participate in any on-going training or professional development that is offered by professional organization(s) you belong to?

	Response Percent	Response Count
Yes	47.4%	36
No	52.6%	40
answered question		76
skipped question		18

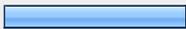
**22. How important is it for the profession that professional bodies (eg. AIPP, ACMP) introduce continuing professional skills development as a requirement to maintain professional accreditation and membership?
Skip if not applicable.**

		Response Percent	Response Count
Extremely important		36.2%	25
Very important		23.2%	16
Moderately important		13.0%	9
Somewhat important		15.9%	11
Not at all important		11.6%	8
<i>answered question</i>			69
<i>skipped question</i>			25

23. Which of the following do you regularly (approximately annually) engage with? Please tick as many as you like.

		Response Percent	Response Count
Trade shows eg PMA		54.4%	43
Industry award competition		13.9%	11
Industry conventions		21.5%	17
Visitor to art galleries		51.9%	41
Academic research		7.6%	6
Academic conferences		2.5%	2
Industry seminars		44.3%	35
Creative workshops		40.5%	32
Online tutorials		51.9%	41
Webinars		22.8%	18
Trade magazines		49.4%	39
Relevant books and magazines		51.9%	41
Exhibitor at art galleries		20.3%	16
Industry shows, eg. wedding shows		27.8%	22
	Other (please specify)		4
answered question			79
skipped question			15

24. Have you ever employed people who graduated from university photography or creative art schools?

	Response Percent	Response Count
Yes 	35.8%	29
No (skip to Q 27) 	64.2%	52
Other (please specify)		2
answered question		81
skipped question		13

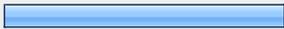
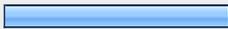
**25. When selecting graduates for work, how skilled are they in general?
Please rate the following graduate attributes. Use N/A if necessary.**

	Highly skilled	Well skilled	Adequately skilled	Less than adequately skilled	Poorly skilled	N/A	Rating Average	Respon
Technical skills	3.4% (1)	13.8% (4)	48.3% (14)	17.2% (5)	10.3% (3)	6.9% (2)	3.19	
Theoretical skills	0.0% (0)	20.7% (6)	48.3% (14)	20.7% (6)	0.0% (0)	10.3% (3)	3.00	
Research and problem solving skills	0.0% (0)	17.2% (5)	44.8% (13)	24.1% (7)	3.4% (1)	10.3% (3)	3.15	
Business skills	0.0% (0)	0.0% (0)	31.0% (9)	31.0% (9)	24.1% (7)	13.8% (4)	3.92	
People skills	10.3% (3)	6.9% (2)	69.0% (20)	6.9% (2)	3.4% (1)	3.4% (1)	2.86	
Work skills	6.7% (2)	13.3% (4)	53.3% (16)	16.7% (5)	3.3% (1)	6.7% (2)	2.96	
Creativity	10.3% (3)	41.4% (12)	44.8% (13)	0.0% (0)	0.0% (0)	3.4% (1)	2.36	
IT skills	3.4% (1)	27.6% (8)	41.4% (12)	20.7% (6)	3.4% (1)	3.4% (1)	2.93	
Writing skills	0.0% (0)	13.3% (4)	46.7% (14)	10.0% (3)	16.7% (5)	13.3% (4)	3.35	
Communication skills	3.4% (1)	13.8% (4)	58.6% (17)	13.8% (4)	6.9% (2)	3.4% (1)	3.07	
Comment here please								
<i>answered question</i>								
<i>skipped question</i>								

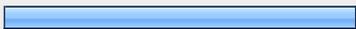
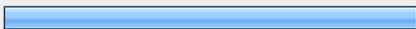
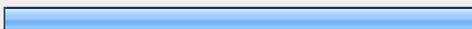
26. If you were to employ a graduate from a Photography or Creative Arts school how would you rate the importance and necessity of the following attributes or skills? Use N/A if necessary.

	Essential	Very valuable	Valuable	Somewhat valuable	Not at all valuable	N/A	Rating Average	Re
Technical skills	30.0% (9)	43.3% (13)	23.3% (7)	3.3% (1)	0.0% (0)	0.0% (0)	2.00	
Practical skills	48.4% (15)	38.7% (12)	9.7% (3)	3.2% (1)	0.0% (0)	0.0% (0)	1.68	
Problem solving skills	35.5% (11)	54.8% (17)	6.5% (2)	3.2% (1)	0.0% (0)	0.0% (0)	1.77	
IT skills	20.0% (6)	30.0% (9)	43.3% (13)	6.7% (2)	0.0% (0)	0.0% (0)	2.37	
Design skills	6.5% (2)	45.2% (14)	38.7% (12)	9.7% (3)	0.0% (0)	0.0% (0)	2.52	
Office skills	6.5% (2)	35.5% (11)	41.9% (13)	12.9% (4)	3.2% (1)	0.0% (0)	2.71	
Creativity	25.8% (8)	35.5% (11)	29.0% (9)	9.7% (3)	0.0% (0)	0.0% (0)	2.23	
Retail skills	3.3% (1)	20.0% (6)	36.7% (11)	26.7% (8)	10.0% (3)	3.3% (1)	3.21	
People skills	54.8% (17)	41.9% (13)	3.2% (1)	0.0% (0)	0.0% (0)	0.0% (0)	1.48	
Web skills	3.2% (1)	48.4% (15)	25.8% (8)	12.9% (4)	6.5% (2)	3.2% (1)	2.70	
Studio and lighting skills	29.0% (9)	41.9% (13)	22.6% (7)	6.5% (2)	0.0% (0)	0.0% (0)	2.06	
Writing skills	3.3% (1)	43.3% (13)	16.7% (5)	30.0% (9)	6.7% (2)	0.0% (0)	2.93	
Research skills	0.0% (0)	29.0% (9)	48.4% (15)	12.9% (4)	9.7% (3)	0.0% (0)	3.03	
Management skills	0.0% (0)	43.3% (13)	26.7% (8)	23.3% (7)	6.7% (2)	0.0% (0)	2.93	
Other (please specify)								
<i>answered question</i>								
<i>skipped question</i>								

27. If you are an employee (not self employed) in the photographic industry are you provided with adequate and ongoing professional skills development?

	Response Percent	Response Count
Yes 	55.6%	5
No 	44.4%	4
<i>answered question</i>		9
<i>skipped question</i>		85

28. My study involves follow-up interviews with those people that are keen to offer a range of detailed insights into their experiences in the industry or their education experiences. Please note that if you are willing to help me or have an opinion your personal details will never be identified or released.

	Response Percent	Response Count
Name: 	100.0%	50
Company: 	92.0%	46
Address: 	70.0%	35
City/Town: 	82.0%	41
State: 	90.0%	45
Postal Code: 	84.0%	42
Email Address: 	94.0%	47
Phone Number: 	88.0%	44
<i>answered question</i>		50
<i>skipped question</i>		44

Appendix Q: Complete Surveymonkey.com survey data summary of Higher Education.

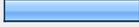
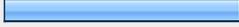
Photography Teachers Questionnaire

1. What is your name? (this is not compulsory and will never be published but it could be extremely useful if follow-up for clarification is needed)	
	Response Count
	29
<i>answered question</i>	29
<i>skipped question</i>	1

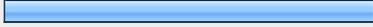
2. What is the name of your university?	
	Response Count
	30
<i>answered question</i>	30
<i>skipped question</i>	0

3. What is the name of your school/college?	
	Response Count
	30
<i>answered question</i>	30
<i>skipped question</i>	0

4. How long have you been teaching in higher education?

	Response Percent	Response Count
Less than one year. 	3.3%	1
1-5 years. 	6.7%	2
6-10 years. 	13.3%	4
11-15 years. 	26.7%	8
more than 15 years. 	46.7%	14
Other (please specify). 	3.3%	1
answered question		30
skipped question		0

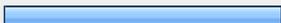
5. I am a :

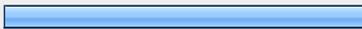
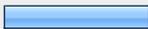
	Response Percent	Response Count
Full time academic. 	73.3%	22
Part time academic. 	10.0%	3
Sessional academic, (casual). 	16.7%	5
answered question		30
skipped question		0

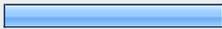
6. What is your highest tertiary academic qualification?

	Response Percent	Response Count
None.	0.0%	0
Certificate.	0.0%	0
Diploma. 	3.3%	1
Bachelor. 	6.7%	2
Bachelor (Hons). 	23.3%	7
Masters by course work. 	13.3%	4
Masters by research. 	36.7%	11
PhD. 	13.3%	4
Other (please specify). 	3.3%	1
answered question		30
skipped question		0

7. Do you hold any formal teaching qualification? (eg. Dip. Ed., Teaching Certificate).

	Response Percent	Response Count
Yes. 	44.8%	13
No. 	55.2%	16
Please name your qualification if you have one.		12
answered question		29
skipped question		1

8. Have you been or are you (self) employed in the photographic industry?		
	Response Percent	Response Count
Yes. 	71.4%	20
No. 	28.6%	8
<i>answered question</i>		28
<i>skipped question</i>		2

9. At your school is photography taught as a:		
	Response Percent	Response Count
Full Degree course. 	53.3%	16
As a Major or as part of a degree. 	43.3%	13
Other (please specify) 	10.0%	3
<i>answered question</i>		30
<i>skipped question</i>		0

**10. In what teaching and learning settings do you teach photography?
You may choose as many as needed.**

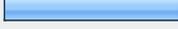
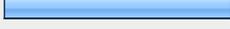
	Response Percent	Response Count
Lecture theatre.	76.7%	23
Tutorial room.	96.7%	29
Studio.	90.0%	27
Computer lab.	86.7%	26
Photographic darkroom.	63.3%	19
Digital print facility.	66.7%	20
Field.	76.7%	23
Work-place.	23.3%	7
Online learning environment.	36.7%	11
Other (please specify).	0.0%	0
answered question		30
skipped question		0

**11. What teaching methods do you use? Choose as many as necessary.
(brief definitions are provided for clarification of some terms)**

	Response Percent	Response Count
Action learning. (students study their own actions and experiences to improve performance)	60.0%	18
Case-based learning. (students study cases and the results are matched against exemplars)	33.3%	10
Group discussion.	90.0%	27
Group work.	60.0%	18
Inquiry-based learning. (learning is based around students' questions, teachers facilitate the learning by guiding the student)	63.3%	19
Lecture.	83.3%	25
On-line methods.	30.0%	9
Peer teaching.	43.3%	13
Practical.	90.0%	27
Problem-based learning. (students work in groups to solve real-world problems, they create their own knowledge, it is not delivered prior to the problem)	50.0%	15
Project-based learning. (students take a problem and apply it to a real life situation, they work in groups or alone to come up with realistic solutions and presentations)	80.0%	24
Role play and simulations.	10.0%	3
Scenario.	6.7%	2
Team teaching.	36.7%	11
Tutorial.	76.7%	23
Work Integrated Learning (students undertake authentic work place activities that reflect educational theory, the activities are aligned	33.3%	10

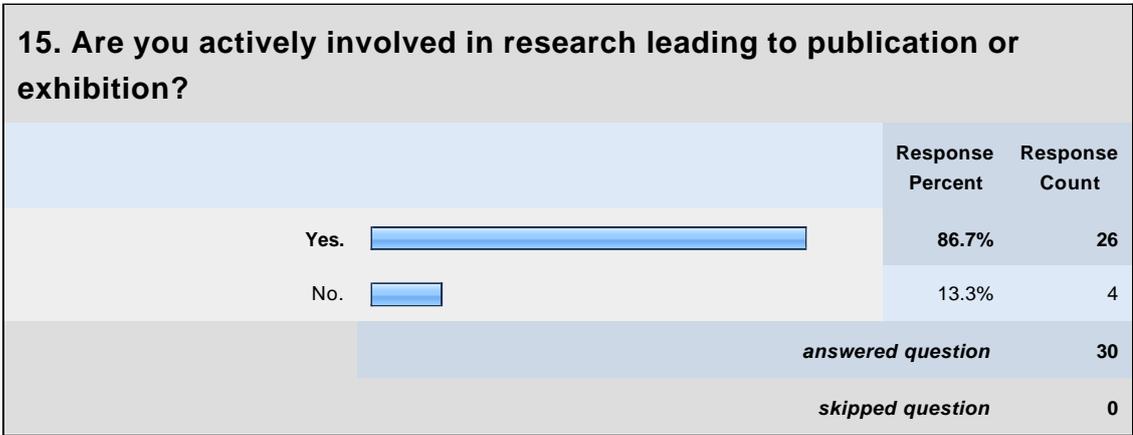
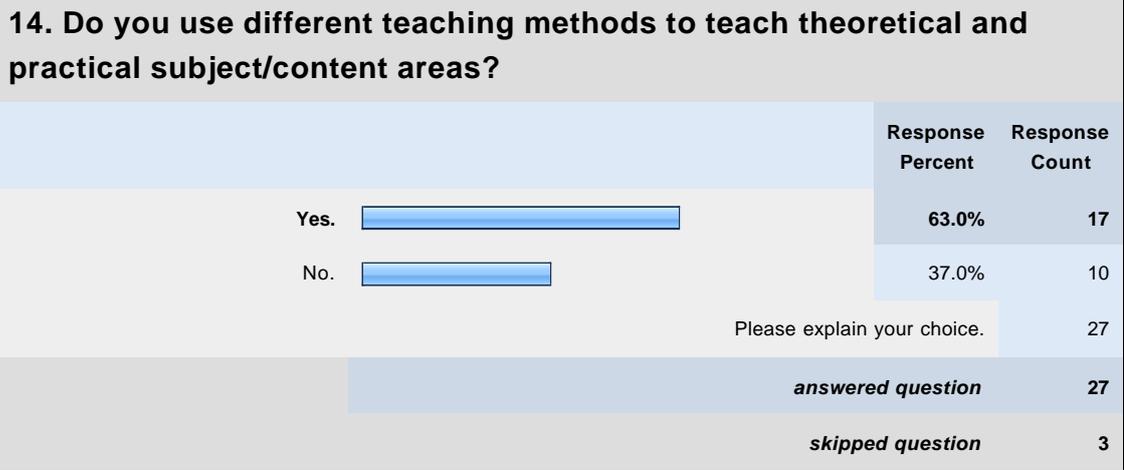
with course outcomes and are assessable).			
Workshop.		73.3%	22
Other (please specify).		16.7%	5
answered question			30
skipped question			0

12. What is the dominant influence on your choice of teaching method?

		Response Percent	Response Count
University policy.		10.3%	3
School policy.		10.3%	3
Individual preference.		34.5%	10
Subject content.		44.8%	13
Other (please specify)			6
answered question			29
skipped question			1

13. To what extent does your school actively encourage innovative teaching and learning activities?

	Response Count
	28
answered question	28
skipped question	2



17. What are the core aims of the course with which you are associated?

	Response Count
	30
<i>answered question</i>	30
<i>skipped question</i>	0

18. To what extent do you believe the course you are associated with meets the needs of students seeking a career in photography?

	Response Count
	30
<i>answered question</i>	30
<i>skipped question</i>	0

19. To what extent does the course you are associated with have aims that reflect the needs of the region in which the students will be working?

	Response Count
	27
<i>answered question</i>	27
<i>skipped question</i>	3