Economic Value of the Doctorates: Findings from a Systematic Literature Review

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Following human capital theory, the investment in education should result in wage gains over time and increased productivity. Thuswise, some governments became more active in stimulating citizens into pursuing advanced degrees by introducing loans and other support schemes. British policy makers went further by first launching graduate loans for students pursuing Master degrees followed by announcing the loan scheme for PhD students to start in 2018. Will keeping more young professionals away from joining the labour force and increasing their educational debt pay off in economic terms for those students? This systematic literature review is motivated by the possible contradiction in governmental objective to increase the number of doctoral students, while their ability to find the jobs which fit their qualifications and payment expectations might be questioned.

This review shows that systematic data on doctoral graduates and the labour market is quite limited, with employers outside academia mostly being unsatisfied with lack of 'commercial awareness', flexibility and adaptivity to new environments in young PhD degree holders. At the same time the role of the degree and expectations coming with it are changing and doctorate students are expected not only to produce a thesis, but to teach, publish papers and develop transferable skills.

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Introduction

In 2018 British government introduced PhD loans of up to 25 000 pounds. Authorities of Northern Ireland earlier proclaimed a double increase in the doctoral students in order to meet the need to maintain a competitive world class research system (Review of Postgraduate Education - Policy and Funding in Northern Ireland, 2009) . While there is still debate on whether this initiative will target applicants both on the basis of merit and need, the question of whether the increasing participation in the doctoral training is necessary and the government is not producing overskilled workers. It is hard to argue with the fact that PhD degree is meant to provide an advanced research training and is considered by many governments to be an important research investment. Leitch (2006) is among many to suggest that higher level skills, which PhD, MBA and postgraduate degree holders possess will provide significant returns to the employers and the economy overall, but there is a striking absence of systematic research into the multivariate impact of the doctorate.

Card (1999) and Ashenfelter et al. (2000) provide a review of the research on the estimates of the returns to education. Most of the studies focus on comparing either having the first degree or at least completed A levels with a non degree or non A levels completion or only focus on the economic returns to an additional year of studies. The purpose of this paper is to provide a systematic review of the literature on the economic benefits of receiving a PhD degree in the UK, linked to the introduction of the governmental PhD loan scheme in 2018.

The objective of this present study is twofold:

1. Estimate the effects the receiving a doctorate has on graduate earnings
2. Analyse the trend of the development of the discipline, identify gaps and pave some crucial directions for future research.

Since this literature review is part of a larger study on the wages premium of doctorate degree holders, we only focused on the studies, which included statistical analysis of the wages differentials of PhD and non PhD degree holders. The next stage of research will focus on

conducting a meta regression analysis on the available data to identify groups of graduates, who earn more after receiving a PhD degree in comparison to Master and Bachelor degree holders. This will enable not only to contribute to the existing literature, but generate recommendations to better inform governmental decision to support and drive more students into doctoral education programs.

Literature Search Methodology

Blaug (1967) when conducting his research on the rates of return of education in the UK back in the 70s mentioned that unlike the USA Great Britain does not collect data on incomes or earnings by age and education levels, thus limiting the opportunities for analysis and research. Not much has changed since then. The majority of research, which we were able to locate, investigate mostly the impact of the US and European doctorates. UK studies tend to provide less information on wages differentials and data driven economic outcomes, but rather make emphasis on skills, which doctorate students develop during their studies, personal impact and motivations vs outcomes after the conferral of the degree.

Broadly the identified research related to the impact of PhD graduates touched on the following topics:

- Earnings returns to lifelong learning in the UK/returns to adults' education (Dorsett et al., 2010; Field, 2006; Jenkins et al., 2003).
- Skills gained while conducting a PhD/personal impact and value of the PhD over a lifetime: (Millard, 2015; Mowbray and Halse, 2010; Harris, 1996)
- Exploring career paths of PhD graduates/satisfaction in long term career progression by PhDs: (Neumann and Tan, 2011; Raddon and Sung, 2009)
- Social and cultural impact of the PhDs: (Taysum, 2013).
- Impact of professional doctorates/PhDs vs professional doctorates: motivations, background, outcomes: (Costley and Armsby, 2007; Powell and Long, 2005; Bourner et al., 2001).

- Perceptions of the PhDs by employers/issue of overqualification/impact of PhD graduates in the workplace: (Jackson, 2007; Warry, 2006; Souter, 2005)
- Gender pay gap: (Schulze, 2015; Blackaby et al., 2005)
- Studies of wage premiums and returns to investment for doctoral students/ PhDs vs holders of other degrees: (Casey, 2009).

In the current literature review we focused on the last two themes.

The literature review was conducted from June to November 2017 in an attempt to understand prevailing trends and detect existing gaps in the literature addressing the returns to education of doctorate degree holders in the UK. The systematic literature review method was chosen to answer a specific research question 'What are the economic benefits of pursuing a doctorate degree in Great Britain?'. This type or review enables to focus on identifying relevant studies, assess their quality and summarize the available evidence (Petticrew and Roberts, 2008).

Step one: search strategy, inclusion/exclusion criteria

The literature review was conducted from June to November 2017 in an attempt to understand prevailing trends and detect existing gaps in the literature addressing the returns to education of doctorate degree holders in the UK. The systematic literature review method was chosen to answer a specific research question 'What are the economic benefits of pursuing a doctorate degree in Great Britain?'. This type or review enables to focus on identifying relevant studies, assess their quality and summarize the available evidence (Petticrew and Roberts, 2008). The literature review was conducted from June to November 2017 in an attempt to understand prevailing trends and detect existing gaps in the literature addressing the returns to education of doctorate degree holders in the UK. The systematic literature review method was chosen to answer a specific research question 'What are the economic benefits of pursuing a doctorate degree in Great Britain?'. This type or review enables to focus on identifying relevant studies, assess their quality and summarize the available evidence (Petticrew and Roberts, 2008)

The literature research was conducted using electronic database searching, hand searching of key journals, searching of specialist websites, and using general search engines on the internet such as 'Google' and 'Google scholar'. The databases included EBSCO, British Education Index, Jstor, Business Source Complete, ERIC and E-book collection. Some manual searches of a number of economic journals' archives were also conducted. 1267 papers were considered after abstracts and titles were read. Papers which focused on the countries other than the UK, provided no distinction among the higher education degrees, focused on the returns to education based on the number of the years of full time study, or provided no statistics on wages were excluded from the review. 448 manuscripts moved to the final stage, were fully read and considered for inclusion. At the latest stage the papers were assessed against the inclusion criteria as well as if they contributed to answering the research question of the current review.

More specific criteria for inclusion were:

- research conducted in the UK or using UK data;
- only papers using quantitative methodology were considered;
- publication dates: years 1992 – 2017;
- papers in English;
- papers, which provided wage differentials between PhD and non PhD holders.

The papers were excluded based on the following criteria:

- non quantitative methodology;
- research focusing on assessing other than economic impact of the doctorates;
- papers based on the surveys of employers of doctorate graduates;
- papers, focusing on the returns on investment per an additional year or studies, rather than by degrees or qualifications;
- research, which did not compare PhD holders with other qualifications;
- studies conducted in countries other than the UK;
- studies, which provided a distinction between undergraduate and postgraduate students only were excluded.

Table 1. Literature review search strategy and coding

	1		2		3		4		5		6
A	Return on investment	AND	education	OR	doctoral	OR	PhD				
B	impact	AND	education	OR	qualifications	OR	doctoral	OR	PhD		
C	results	OR	effects	OR	outcomes	AND	doctoral	OR	PhD	OR	education
D	economic	AND	doctoral	OR	PhD						
E	return	AND	qualifications	OR	diploma	OR	degree	OR	doctoral (PhD)	OR	education

1. Stage 1 searches: A1; A1+A2; A1+A2+A3; A1 +A2+A3+A4;

2. Stage 2 searches: B1+B2; B1+B2+B3, B1+B2+B3+B4; B1+B2+B3+B5; B1+B2+B3+B4+B5;

3. Stage 3 searches: C1+C4; C1+C5; C1+C6; C2+C4; C2+C5; C2+C6; C3+C4; C3+C5; C3+C6; C1+C2+C3+C4+C5+C6;

4. Stage 4 searches: D1+D2; D1+D3;

5. Stage 5 searches: E1+E3; E1+E4; E1+E5; E1+E6; E1+E2.

Operators defining pay, such as wages differentials, salary, etc. were tested, but excluded, as they provided massive results, not related to the doctoral education.

Step 2: screening titles and abstracts

After the search keywords were applied the abstracts and titles of selected papers were reviewed. Papers, which covered areas beyond the scope of research or matched some of the exclusion criteria, which could be noticed from first sight (e.g. country of research, methodology) were removed from further review. 106 studies were screened, but excluded from the review because most of them did not include doctoral students in the research, while focusing on whether the respondents had received higher education, or less often comparing Bachelor and Master students. Other studies were devoted to countries others than the UK. We also excluded

non quantitative studies or studies addressing societal impact of the doctorates, as the next stage of research was to conduct a meta regression analysis of the available research.

Step 3: full texts and snowballing technique

At the final stage the papers were read in full and the final list of selected research was defined. 437 papers were excluded. Then the references of selected papers were cross checked and their references as well (i.e. snowballing technique) in order to locate additional research. Several authors of articles included in the review were contacted in an effort to locate additional literature (e.g. Casey, B. H, Dr. O'Leary, N.C.), but no reply was received after 2 months from the initial email. The selection protocol is summarized in PRISMA Diagram 1. 11 papers were selected for the review (see Table 2).

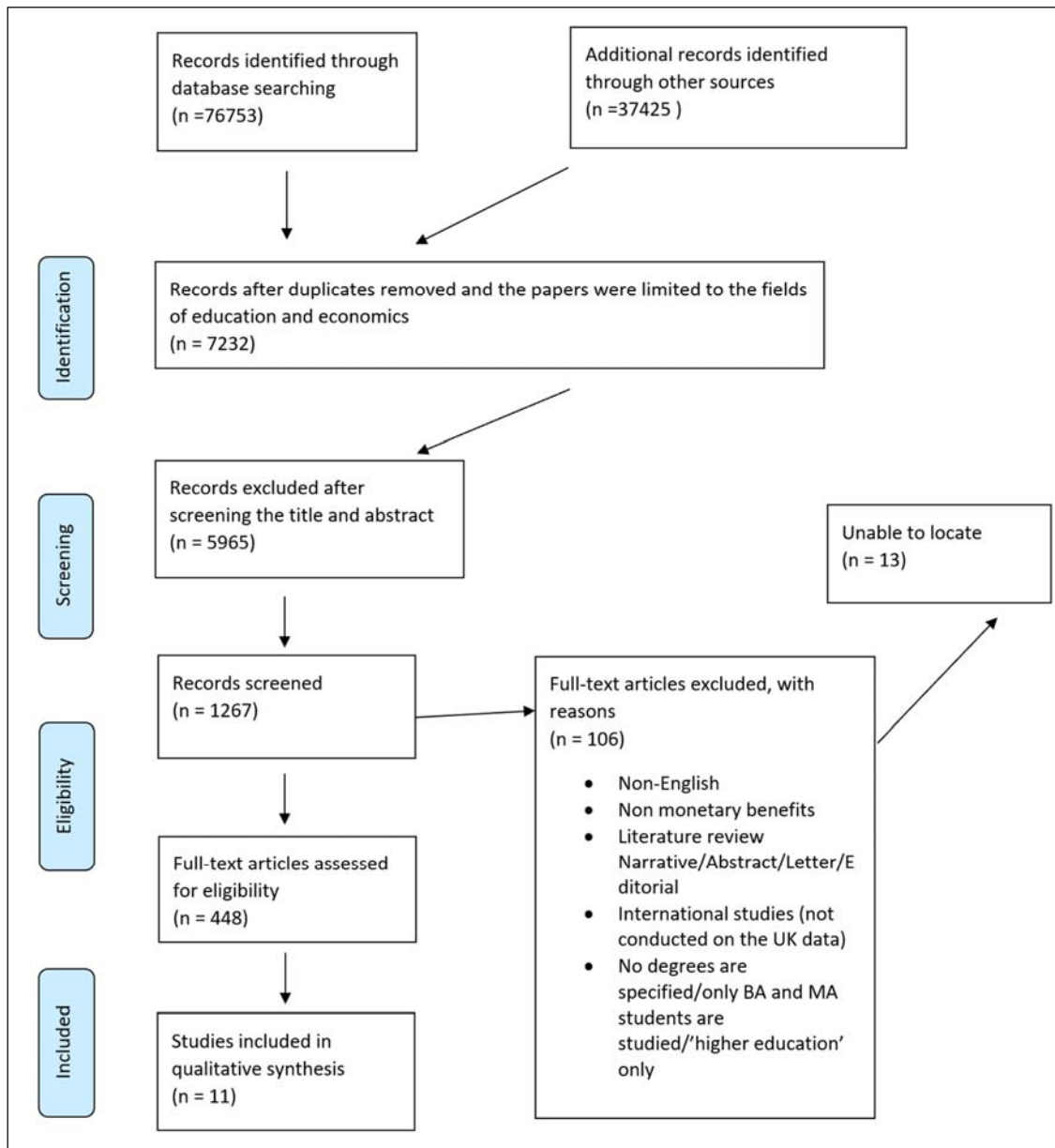Diagram 1. Flow Diagram with the literature search strategy stages


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┌─────────────────────────────┐     ┌─────────────────────────────┐
│ Records identified through  │     │ Additional records identified│
│ database searching          │     │ through other sources       │
│ (n =76753)                  │     │ (n =37425 )                 │
└─────────────────────────────┘     └─────────────────────────────┘

Identification
┌────────────────────────────────────────────────────────────────┐
│ Records after duplicates removed and the papers were limited to │
│ the fields of education and economics                           │
│ (n = 7232)                                                      │
└────────────────────────────────────────────────────────────────┘

Screening
┌─────────────────────────────┐                    ┌──────────────────┐
│ Records excluded after      │                    │ Unable to locate │
│ screening the title and     │                    │ (n = 13)         │
│ abstract                    │                    └──────────────────┘
│ (n = 5965)                  │
└─────────────────────────────┘

Eligibility
┌─────────────────────────────┐     ┌──────────────────────────────────┐
│ Records screened            │     │ Full-text articles excluded, with │
│ (n = 1267)                  │───► │ reasons                           │
└─────────────────────────────┘     │ (n = 106)                         │
                                    │   • Non-English                   │
                                    │   • Non monetary benefits         │
                                    │   • Literature review             │
┌─────────────────────────────┐     │     Narrative/Abstract/Letter/E   │
│ Full-text articles assessed │     │     ditorial                      │
│ for eligibility             │     │   • International studies (not    │
│ (n = 448)                   │     │     conducted on the UK data)     │
└─────────────────────────────┘     │   • No degrees are                │
                                    │     specified/only BA and MA      │
Included                            │     students are                  │
┌─────────────────────────────┐     │     studied/'higher education'    │
│ Studies included in         │     │     only                          │
│ qualitative synthesis       │     └──────────────────────────────────┘
│ (n = 11)                    │
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Table 2. Articles chosen for the literature review

No	Author	Year	Title	Purpose	Sample and Methods	Sample type
1	O'Leary, N.C., Sloane, P.J.	2005	The Return to a University Education in Great Britain	To estimate the rate of return to first degrees, Masters degrees and PhDs in Britain	Wage equation that captures variation in the hourly wages paid to workers with differing levels of educational achievement.	LFS
2	Rudd, E.	1990	The Early Careers of Social Science Graduates and the Value of a PhD	To provide information on the value of a PhD in the social sciences as a preparation for employment.	Survey of a sample of social science graduates who gained first- or upper second-class honours degrees at British universities between 1972 and 1977	2929 respondents from 21 universities in the UK
3	Rudd, E.	1986	The Value of a PhD in Science or Technology in Britain	To assess the value of a PhD in science and engineering	Matching samples of graduates with the PhD and of those without it from 8 British universities	A sample of 3312 graduates
4	Ziderman, A.	1973	Rates of Return on Investment in Education: Recent Results for Britain	To calculate for the first time private and social rates of return to education in Britain	Private and social rates of return were calculated in the conventional manner and compare benefits (net	A sample of 2651 professionals with various degrees (the 1966 Census follow up earning survey)

					of costs and subjected to various corrections) of a given educational qualification with those of a relevant preceding one.	
5	Blanden,J., Buscha, F., Sturgis, P.,Urwin, P.	2012	Measuring the earnings returns to lifelong learning in the UK	This paper aims to examine the earnings returns to learning that takes place following the conventional 'school-to-work' stage of the life-course.	Panel data models estimate the returns to qualifications obtained in adulthood using the British Household Panel	British Household Panel (1991 - 2006)
6	Dearden, L., McIntosh, S., Myck, M.,Vignoles, A.	2002	The Returns to Academic and Vocational Qualifications in Britain	To provide a comprehensive analysis of the labour market returns to academic and vocational qualifications	OLS of males' and females' wage premium using 2 datasets (NCDS, which controls for ability and family background and LFS, which does not)	Data from the 1991 sweep of the National Child Development Study (NCDS) and the 1998 Labour Force Survey (LFS)
7	Casey, B.H.	2009	The Economic Contribution of PhDs	To show how two separate but interrelated questions 'What is a doctorate worth?' and 'Is there a	Earnings premia by type of level of degree, discipline and sex	Data from O'Leary and Sloane (2005)

				justification for society to subsidise the production of doctorates?'		
8	Dolton, P.J., Silles, M.A.	2008	The effects of over-education on earnings in the graduate labour market	To examine the determinants of over-education and its subsequent impact on labour market earnings.	Multiple measurements of over-education were collected to assess the effect of measurement error on the estimated pay penalty associated with over-education.	Survey of graduates from one large civil university in the UK
9	Schulze, U.	2015	The gender wage gap among PhDs in the UK	This article analyses the gender wage gap (GWG) among PhD graduates in the UK 42 months after their graduation in 2004–5.	Log regression based on annual wages for males and females outside and inside of academia.	This study makes use of unique and extensive data set provided by the Higher Education Statistics Agency (HESA), the Destination of Leavers from Higher Education (DLHE) survey. 2004–5 cohort.
10	Blackaby, D., Booth, A.L., Frank, J.	2005	Outside Offers And The Gender Pay Gap: Empirical Evidence From the UK Academic	To examine the gender pay gap, perceptions of discrimination and consider how the response to outside offers	Log regression based on annual wages for males, females, including ethnic background,	The data set for this project derives from a questionnaire undertaken by the Royal Economic Society Working Party

			Labour Market	may sustain the gender pay gap.	education level, etc.	on the Representation of Ethnic and Other Minorities in the Economics Profession.
11	Dolton, P., Vignoles, A.	2000	The incidence and effects of overeducation in the U.K. graduate labour market	To measure the incidence of overeducation in the U.K. graduate labour market, to estimate the effect of overeducation on graduate earnings and, finally, to consider whether overeducaton can provide further evidence on the validity of human capital theory.	Overeducation and degree class— wage equations.	We use the 1980 National Survey of Graduates and Diplomates, a one in six random sample postal survey of U.K. graduates (1 in 4 sample of polytechnic graduates).

The distribution of papers by years of publication shows the growing interest to the topic around 2000s. This may have been the reaction to the governments' attempts to monitor and measure the quality and impact of the state funded research (Halse and Mowbray, 2011). It is interesting to note that there has not been much research done on the economic impact of the doctorates after 2015. Therefore, the governmental decision to introduce the loans might lack empirical data that supports the idea that PhD graduates will benefit from the scheme and earn sufficiently more than Master level students to be able to repay the loan back.

The scarcity of research on the economic impact of PhDs in the UK might be explained by the fact that pursuing a doctorate degree is still considered to be a preparation for an academic career, rather than a money making tool. Secondly, there is not sufficient data available on the destination of PhDs and their wages on the national level. Lastly, there is no definite metrics on the impact of the doctorate that would be comprehensive and transparent.

Classification of Papers

Papers chosen for this review were broadly referring to several themes. Schulze (2015) and Blackaby et al. (2005) focused on the gender wage gap among doctoral degree holders, people inside and outside of academia as well as tested the stability of the findings by adding other variables, such marital status, age, ethnic origin, quality of the degree, workplace characteristics, etc. Both researches' findings find evidence in the gender wage gap with men earning more inside academia (almost the same in the Schulze's research) and 14.1. log percentage points more outside one according to (Schulze, 2015).

Dolton and Silles (2008) and Dolton and Vignoles (2000) address the issue of overeducation. They test whether there are any differences between private and public sectors and whether the class of degree has any impact on the earnings. The results show that there are insignificant sectoral differences, but overeducated employees generally earn less than those in graduate jobs.

Rudd (1986), (1990) looked at the values of a PhD in Engineering and Economics in his first paper, followed by the Social Sciences in the second. The results of his research are discouraging as during the first several years after graduation doctoral students earn less than their colleagues with graduate degrees. Although by the age between 40 and 50 they catch up in their salaries, they hardly earn more than graduates with a Master degree or equivalent, who started working earlier.

Two of the identified papers focus on wages differentials. While Ziderman (1973) makes a very cautious assumption that 'low returns shown on social investment at the graduate level may suggest that part of the university sector has been overexpanded', O'Leary and Sloane (2005) find some substantial earnings premia for some disciplines at the postgraduate level in comparison to the undergraduate degrees. The results remain true for both Masters and PhD degrees and for both sexes.

One paper looking at the graduate earning through the prism of the life long learning concept by Blanden et al. (2012) provided a historical dimension of adult learning over the 16 years span. Despite the popularity of the life long learning narrative and emergence of MOOCs the author found weak and inconsistent evidence that adult qualifications provide any earnings benefits in the UK.

An interesting comparison of rates of return of academic and vocational qualifications is provided by Dearden et al. (2002) using the 1991 sweep of the National Child Development Study (NCDS) and the 1998 Labour Force Survey (LFS). Their results show that wage premium is usually higher for academic qualifications than for the vocational ones. This is true if the time variable (amount of time invested in training for obtaining a qualification) is disregarded. But once the time is taken into consideration, the returns per each year of study for vocational qualifications draw nearer to the academic ones.

Two papers were published in the Economics of Education Review journal, no preference to a single journal or publication source was found.

Thematical Analysis and Discussion

At the first stage of current work a systematic search and review of academic literature that addressed research questions and / or provided insights into assessing and measuring the impact of doctoral graduates in the UK was undertaken. During the literature analysis process over twenty overarching themes relating to the doctoral degree holders were identified. These have been grouped in Table 3. While their examination obviously requires a separate paper, below we are providing an overview of the themes, which focus on different aspects of the role and impact of the degree to contextualise our own research findings.

Table 3. Thematic analysis of the common themes emerging from the literature review

PhD candidate profile	Rethinking a doctoral degree	PhD holders and the labour market
a. The raise of professional doctorates	a. Definitions of the PhD	a. The gap between skills taught by employers and skills gained by the doctorate graduates
b. Quality of postgraduate research	b. Criticism of the traditional PhD model	b. PhD graduates and their career choices
c. Role of the PhD supervisors	c. Growing number of doctorates	c. Wage differences between PhD and other degree holders
d. The role of doctoral studies in developing skills and competencies		d. Effects of overeducation
e. PhD as an academic degree		e. Impact of the PhDs
f. Motivations to do a PhD		

Clearly, there are many various perspectives on the debate of the impact of doctoral study, be it personal, societal, economic or cultural as well as different agendas, issues and concerns proposed by varied stakeholders, involved in the topic directly or indirectly (PhD graduates, employers, communities, organisations, etc.).

The impact of the doctoral degree topic broadly sits on the number of important questions including:

1. Will keeping more young professionals away from joining the labour force and increasing their educational debt pay off in the economic terms for those students?
2. How are PhD graduates meeting the requirements and demands of the new knowledge economy?
3. Does obtaining a PhD result in higher wages over a postgraduate or undergraduate degree?
4. Are doctoral students happier in their jobs than other postgraduate or undergraduate students?
5. Are employers more satisfied with doctoral degree holders, rather than with students, who obtained other degrees?
6. Are PhD students producing 'more knowledge' or show substantially higher publication activity than postgraduate or undergraduate students?
7. How do doctoral graduates estimate the geographical area in which or extent to which the activities of their expert community have an effect?
8. Which research-based abilities had been important for the careers of the PhD graduates?
9. Where, how and for what purposes do doctorate degree holders use their research-based abilities?

Most of the identified papers were devoted to establishing an economic impact of the degree, either measuring the wage premium or calculating the return on investment of obtaining a degree. While the impact of doctoral degree holders stretches far beyond economic means, a

vast number of papers focused on a wider role of the PhDs to the employers and society, their contribution given their higher level of knowledge and advanced skillset.

Our research comes into agreement with the Synthesis Review Report (Raddon and Sung, 2009), which failed to identify a single study to 'tell us succinctly what the impact of PhD graduates is, be this in social, cultural or economic terms'. While some of the economic focused studies attempted to measure the economic value of obtaining a PhD, their outcomes are somewhat measurable and comparable. The wages are usually compared with postgraduate and undergraduate students, among genders, academic disciplines, effects of overeducation are estimated.

Some of the broader impact topics included emphasising the role of doctoral graduates in sustaining the UK skills and knowledge base. This is achieved by shifting the focus from research results to producing large numbers of highly educated people. The value doctoral degree holders bring to employers is stated to be skilled and creative human capital, access to innovative thinking and knowledge transfer. This is interesting because some of the studies, which operate in economic terms found some major penalties in wages due to the issues of overeducation (Dolton and Silles, 2008).

It can be argued that it is difficult to put a clear divide between market and non market benefits of obtaining an advanced degree. Yet it is important to acknowledge that higher education has numerous benefits for both individuals and society. Increased levels of tolerance, trust, social cohesion, civil participation, greater social mobility, reduced amount of crime are among the few benefits to derive from higher education. The Department of Business and Innovation Skills prepared a systematic review of research addressing the benefits of higher education participation for individuals and society (King and Ritchie, 2013).

Doctorate degree holders and their impact on the labour market are deeply intertwined with the perceptions of the degree by employers, skills required from graduates. The systematic data on doctoral graduates and the labour market is relatively limited, with quite scarce data on the PhD graduates as a whole (Green and Powell, 2005). Some of the identified research highlights

negative perceptions of doctoral graduates among employers who have not had direct experience of hiring individuals with a PhD (Diamond et al., 2014). Some employers believed that doctoral degree holders would have surprisingly high salary expectations (CIHE, 2010; Jackson, 2007; Souter, 2005), be too narrowly focused and would have difficulties adapting to the working environment (Diamond et al., 2014; CIHE, 2010; The Rugby Team, 2007; McCarthy and Simm, 2006; Purcell and Elias, 2005; Souter, 2005). The most commonly cited gap in young researchers' aiming to work outside academia is lack of 'commercial awareness', flexibility and ability to adapt fast enough to a new working environment.

In this debate UKCGE takes a protective stance, referring to the training on doctorates as an enhanced training for the "aspirant academic" rather than higher employability (UKCGE, 2002: 15). Gillon (1998 cited in Leonard, 2001) supports this idea claiming that nowadays there are too many requirements to the traditional PhD graduate, who not only has to produce a doctoral dissertation, but to be able to teach, have publications and develop a range of transferable skills for future employment. Scott et al (2004) as well emphasise that a doctoral degree aims to produce new knowledge rather than be directly applied beyond academia or being 'directly marketable' and that it plays a wider, societal role improving overall knowledge.

On the other hand, PhD graduates have different perceptions of their degree. Some felt that employers assumed they had short work experience, specialisation, which would limit them and high expectations (Diamond et al., 2014; Raddon and Sung, 2009; McCarthy and Simm, 2006; Souter, 2005). This led some of the doctoral degree holders hide their PhD in order to avoid being seen as overqualified (Diamond et al., 2014; Jackson, 2007). In contrast others reported that there was a sense of status associated with the PhD which could be an advantage (Diamond et al., 2014; Raddon and Sung, 2009).

Nevertheless, some researchers remain quite optimistic about the impact and role of the doctoral degree in the job market. Leitch (2006) believes that within the UK economy, there is a similar recognition of the value of higher-level skills and education. In his review he links Level 5 (now 8) qualifications to strong productivity and economic returns: 'One of the most powerful levers for

improving productivity will be higher level skills. Postgraduate, or Level 5 skills, such as MBAs and PhDs, can provide significant returns to organisations, individuals and to the economy as a whole. These higher level skills are key drivers of innovation, entrepreneurship, management, leadership and research and development' (Leitch, 2006).

Despite that fact that the number of doctoral students is booming in the UK, there are many aspects of the impact the graduates are making, which lack research. There are few studies on their career choices, ROI and economic benefits of obtaining an advanced degree, opportunities and challenges and longer term impact of doctoral degree holders. Little is written on the employers' perspective of the PhD graduates as employees, their perceived impact and overall demand for this qualification. While some of the research we were able to locate on the impact of the degree included professional PhD holders, there were none mentioning PhD by publications. The latter group might have shown different results in terms of the economic value of their degrees given that usually such 'students' are seasoned professionals, who need decided to pursue a degree to boost their career.

International Dimension

While the current research focuses on the doctoral degree outcomes in the UK, similar discussions on the value of the advanced research degrees remain open internationally. Several Australian researchers look at the employers' perceptions of the PhD degree holders. When studying the outcomes of the training program designed to support science-related PhD graduates, Manathunga et al. (2009) found that only 58% of PhD degree holders felt prepared to succeed in their employment. Her study is among the few that actually attempts to quantify the doctoral outcomes. Many other of her colleagues acknowledge the role university and academic supervisors play in the enhancement of graduate employability (Jackson and Michelson, 2015; Platow, 2012; Western et al., 2007).

USA seem to produce much disciplinary research on their doctoral graduates. One of the examples here can be the American Anthropological Association, that has been conducting a biennial survey of Anthropology PhD graduates since 1982. Sadrozinski et al. (2003) studied

almost 800 art history PhDs 10 to 15 years after degree completion in the country using factual data, a mix of open and closed questions.

A number of European studies have also focused on the issue of doctoral students' outcomes, more specifically on the employment destination. A number of French researchers analyzed the role of the PhD students being the main source of tomorrow's scientific production. (Mangematin, 2000) believes that most PhD students do not benefit from on-the-job training outside academia. Their survey on French doctoral students, studying life sciences shows that 70% of PhD students look for a position in academic research (Dany and Mangematin, 2000). A research conducted in Germany, a country, where a PhD degree historically had a high prestige within the society, found that doctoral degree holders not only have some advantages in job search and transition to work after the degree, but also in longer term perspective tend to get to high level positions more frequently than university graduates. There are no significant income differences, however (Enders, 2002).

A recent international systematic literature review on professional doctorates (Hawkes and Yerrabati, 2018) found that most of the existing research focuses on individual case studies of practice and that literature on the wider impact of professional doctorates remains limited.

Conclusion

The conventional understanding of the doctoral degree as a conduit to the academic career and that the overwhelming majority of PhD students are pursuing the degree in order to work in the HE sector later is vanishing. Neumann and Tan (2011) share their findings of Australian doctoral employment destinations, which show that only around half of the research students are working towards the PhD to remain in academia. The similar trend is seen in Germany (Enders, 2004; Enders, 2002), in the USA, where 47% of doctoral graduates stay in HE (Fechter & Gaddy, 1998), in France (Beltramo et al., 2001). In Canada the statistics is higher with 65% of Ontario graduates, who are planning to 'to become a university professor' after receiving the doctoral degree (Desjardins, 2012). Understanding of the career trajectories of Ph.D. holders, especially in English language is still quite limited across Europe.

The governments are trying to adapt to the changing realities that knowledge economy brings into the labour markets. Following this perspective, more highly qualified labour force is needed and thus stimulus to produce larger quantities of doctoral degree holders seems a logical step. But there is simply not enough evidence that producing more doctorate graduates is actually beneficial and relevant to the careers outside academia.

Conducting a systematic analysis on the outcomes of the PhD graduates 5 to 7 years out would enable to answer the question on whether the current system of PhD training and producing more doctoral graduates appears to be working effectively.

Further Research

This systematic review involved identification of all relevant papers and international journals, books, chapters in edited volumes, and published research reports devoted to the economic impact of the doctoral degree holders in the UK.

While we were able to identify eleven papers, which provide some quantitative evidence of the wages differentials or other measurable economic impact of obtaining a doctoral degree, current research provides a broader picture of a doctorate holders' career choices and destinations, required and expected skills a doctoral graduate should possess. The cultural and social dimensions of impact of studying for an advanced degree are harder to assess given that there is no transparent and measurable framework developed. Thus, few studies attempt to examine doctoral impact from these lenses.

Future research might look into the social returns of the PhD holders in the UK. This includes a systematic analysis of the costs the community incurred when preparing a doctorate and the impact the advanced degree holders have on national production and society overall.

Findings show that research on the economic impact of the doctoral degree holders remains limited in terms of its scope. One of the next steps to bridge the gap in the current literature would be to summarize the existing findings by conducting a meta analysis of the wages differentials among PhD and other degree holders to able to assess, whether investing in a

doctoral degree pays off in economic terms. Although outside the scope of the current study, further longitudinal in-depth interviews conducted with employers outside academic would be valuable in exploring the long-term impact and market preparedness of PhD graduates in an employment context.

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The Power of Research: Exploring Active Older People Participating in Creative Dance – challenging perceptions

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This paper contributes to understanding the power of participating in work-based doctoral research after a fulltime career. It explores ways in which active older people choose to participate in "creative dance" activities and how this may benefit them. It draws upon the first author's experiences in using her leadership, management, presenting and coaching skills creatively, having decided to leave her career as a senior manager and return to dancing and community activities "to see what life will bring". This includes becoming involved with dance performance activities, founding/managing a grassroots dance organisation, advising, networking and participating in projects concerning ageing and creative arts, whilst undertaking a work-based doctorate programme. Adaptable methodological approaches are explored so that uncertain new ad-hoc paid and voluntary work could be incorporated within research processes.

The paper outlines findings about active older people dancing and recommends a way forward on issues concerning ageing; creativity and older people's creative dance becoming mainstream. There is an argument for the social, political and health benefits of dancing for all, especially older adults and the need for more choices so that all ages can lead meaningful purposeful lives. This research challenges the stereotypes of retiring and becoming marginalised, showing positive aspects of entering the next stage of life and later stages of work, using skills and experience in new ways to benefit others as well as oneself.

Keywords: work-based doctorate, transdisciplinarity, ageing, older dancers, challenging perceptions

Introduction

This paper explores my work and research experiences and new opportunities from 2008 until the present. I chose to leave my fulltime career as a Senior Manager, for an international awarding organisation in 2008 because I wanted to return to dance and community activities whilst I still had energy and good health. I had been involved in these activities earlier in my life. In 2010 I had the opportunity to participate in a work-based doctorate programme.

During my research and in this paper, I am positioned as an older person, older dancer and older research practitioner. It has been prepared by selecting and summarising sections from my work-based doctorate's Final Report and personal reflections on my recent, mainly voluntary, work. As the first author, I drafted a version and Gordon Weller contributed further ideas and gave useful guidance. It explores the use of flexible methodological approaches including adaptable research design, innovative research methods, analytical tools and templates as well as outlining some findings and recommendations. There follows a discussion and conclusions reflecting on ways I am taking my research forward and disseminating ideas and successful practice.

Ways work-based doctorate programmes can be achieved by older adult researchers after their main fulltime careers, as they transition to more flexible, uncertain work activities and new interests are explored. The paper will be of interest to academics, practitioners and decision makers working in the dance sector and other participatory arts and sectors including health and wellbeing; community development, leisure; sports and culture. There are demographic changes in society and new solutions are being sought (Cutler 2009) (Oliver & Kelly 2013) (Organ, K. 2013). As everyone ages, it should be interesting to all, especially as ageism is a 21-century taboo (Gullette 2011) and assumptions need to be challenged. My intention is to inspire and contribute towards understanding adults who have left fulltime careers and enter new opportunities in the next stages of their careers and personal lives; to explore creative dance for older people so contributing to it becoming mainstream and normal for all wish to participate and consider issues concerning ageing and ways sectors need to work together in the future.

Background

The research brought together knowledge and skills from over forty years' work experience and learning during my careers, studies and voluntary community activities. This included teaching in secondary and primary schools and being a dance adult education tutor. In voluntary capacities, I led the development of local grassroots organisations where I live in London, including some for families and children. I led the successful development of a local Community Arts Centre before returning to my fulltime career in 1987 at the awarding

organisation. I managed and led teams of colleagues developing a range of qualifications and learning materials and externally worked with professionals from health, social care, community development and creative arts & crafts sectors. I have well-developed management, leadership, marketing, coaching-mentoring and presentation skills. In the final stage of this career I achieved several higher level professional vocational qualifications in Leadership and Management, Marketing and Coaching. My practice benefitted from this learning and practical research. I was studying in my fifties and had a very interesting busy career. I decided to leave aged 60 years because I wanted to return to dance and community activities, although I did not know what that would mean. It was a risk but worth taking. My intention was to have some paid and voluntary work, pursue dance and other interests and "see what life would bring". I had a pension but did not think I was "retired" or "elderly". I was surprised by the ways I was categorised in the external world. I thought I was an adult getting involved in new activities during the next stage of my career, but found myself classified as "retired", grouped with everyone else no longer in fulltime work aged 50-105+ years.

In June 2009, BBC TV "Imagine" Arts Programme broadcasted a documentary about "The Company of Elders", Sadler's Wells' long established resident over-60s dance company. I attended a complementary workshop. It was challenging and enjoyable and participants, including myself, stayed behind demanding more sessions. Following the programme, there was interest from all over the UK. Ross (2009) thought the demand demonstrated the disappointing levels of promotion and lack of awareness about quality dance opportunities. However, my research found that there were few dance activities specifically aimed at active older people and although more has become available and there is increasing interest, demand and provision remains patchy.

Fortunately, I found suitable dance sessions to attend. I founded a local community choir and a grassroots older people's creative dance organisation called Vivacity (a pseudonym). My other work included voluntary and some paid committee and seminar work, mentoring and brainstorming activities.

Almost by chance, I became involved in a work-based doctorate programme. I attended a university seminar reporting on a student mentoring project. I attended to learn about the research outcomes and thought I might offer my mentoring skills. After the seminar I was asked if I might consider participating in a DProf programme. Over the summer, I carefully thought about it. It would be a huge challenge; time consuming and my new various work activities were insecure. The vocational qualifications I achieved at work had whetted my appetite for learning and putting new ideas into practice and I knew I enjoyed studying. The prospect of participating in higher academic learning and researching was daunting but exciting. I decided to meet the challenge. I was dancing regularly giving me access to older adults who were choosing to dance. I was involved in local community activities including founding and managing Vivacity, but its funding was insecure so might not continue. I was accepted for the DProf programme and attended the induction event in October 2010.

My DProf, therefore, grew from personal aspirations and interests. I incorporated previous professional skills, knowledge, interests and life experience with new evolving activities. The research period was March 2011 – 2016. It needed to be adaptable, flexible and innovative as it was happening in real time during uncertain political/financial/social times as well as a transition in my own life. I was self-funding and most of my studying and work activities would be on my own.

I was not a beginner dancer but knew my learning styles and physical capabilities were different from younger experienced dancers. I became interested in researching other older people who chose to dance and how this increasing demand could be encouraged and resourced in the future. Ageing populations and longevity issues were increasingly rising up social/political agendas (Sinclair 2015; Ready for Ageing Report, House of Lords, 2013; Harrop, A. and Jopling, K. 2009; UN World Assembly on Aging 2002, 2012). In addition to attending dance sessions and managing/dancing in Vivacity, I joined a new older people's performance dance company.

My various, mainly voluntary, work activities increased. This included advising, networking and other dance activities including performing in a second older people's dance company. I

used these activities to research ways organisations could work collaboratively to face uncertainties and find political and social solutions to face new challenges.

Evolving research design using a variety of research methods.

My methodological approaches adapted over time to support my research activities, analysis and synthesis of evidence and data and writing my research Final Report. I remained flexible and gained increased understanding about research theories and practice and events happening in the real world. A straightforward mixed-methodology research design was insufficient, I had to adapt because varied work activities were increasing adding complexity. My research had strong underpinning structures and had four phases. I was positioned within my research both as an insider and outsider reflective work-based practitioner-researcher (Schon 1983).

Ethical issues

Lunt (2008) suggests ethically responsible professionals rarely refer to religious or professional codes though they act in ways that accord and go beyond them. As a mature, professional woman, I do not usually refer directly to my personal religious and professional codes when working with others. Making explicit my beliefs and values for my work-based doctorate activities were, therefore, challenging. I was influenced by my teaching, leadership and coaching professionalism based on integrity, honesty, autonomy and respect. Warnock's (1998) humanistic ethical stance including defending human rights, seeking peace and justice acknowledging the dignity of all humanity and respecting diversity, complements my Liberal Jewish ethics of social justice, love, compassion, forgiveness and striving to heal the world. (Raynor 2005). Ethical considerations were important throughout my research, directly impacting on its design and implementation. I critically reflected on my actions and the effects I had on others (Costley et al 2010).

I was an insider researcher returning to dance and community activities where I have lived for many years. I was also an outsider practitioner-researcher, a person from a minority community, living in an area with people from many different cultural and social backgrounds and I was entering new work activities in different settings.

I founded Vivacity before my DProf programme began to enable older adults to have dance opportunities and to bring neighbours from different backgrounds together. My role was founder/manager, dancer and neighbour. I did not want to use it as a "case" or "experiment" focussing on the content and relationships happening during sessions. My other dance activities involved building relationships with peers who became acquaintances and friends. I wished to remain an ordinary participant. I was not an objective researcher-practitioner. I was not willing to compromise newly formed friendships, especially as I wished these relationships to continue after my research ended. I would have felt uncomfortable interpreting and making judgements about behaviour, relationships and everyday occurrences within dance sessions. I was not an objective research fieldworker, making judgements on facilitators' choreography or ways they related to us as older dance participants. The same applied when collaborating with other colleagues with whom I built trusting relationships whilst networking and attending meetings. It was not acceptable to research their social interactions and behaviour. However, I decided it was ethical to use these work and dance experiences to generally inform my research. I made no secret about my work-based doctorate, answering questions whenever anybody showed interest and appreciated their support.

My research and Final Report needed to be believable to my audiences and bring new insights into unfamiliar social experiences (Ellis et al 2010). I was explicit, making transparent my biases as a reflective work-based practitioner. Each interviewee was informed about the research, agreed to participate and were fully informed about the interviewing process, confidentiality, I confirmed anonymity and they signed consent forms. Every effort was made not to influence their answers during interviews. I used my professional coaching skills to put interviewees at ease. Our conversations flowed easily. I was mindful my research might affect interviewees because they were recalling and reflecting upon previous experiences and present and future aspirations and gave them opportunities to question and comment. Carefully transcribed samples from interviewees' raw data were included rather than soundbites, adding vibrancy, authenticity and clarity to the Final Report .

I interpreted interviewees' transcripts with care, respect and accuracy. Transcripts were stored securely. I spent time learning to use NVivo 10 software to analyse the interviewees'

data and interpret it. The research benefitted because using NVivo 10 enabled all the interviewees' raw data to be analysed enabling themes to emerge. All nodes and themes were trackable back to transcripts.

I had meaningful conversations with some dance provider/practitioners. I informed them about my research, and they gave me ideas and guidance. I prepared potential topics and/or questions I wished to cover. They commented and confirmed notes following our conversations.

It was essential to research in ethical ways, be robust, credible and build good relationships. I remained true to my values and no conflicts or ill feelings emerged with peers or colleagues concerning my research activities. My research was incorporated into challenges I faced. The methodological approaches were transparent and the research had credibility and authenticity.

The Four Phases of Research and Activities

The research's four phases involved new work and research which were increasingly reflexive benefitting my practice and informing the research.

Phase 1: March 2011 – March 2012

During this phase I prepared and submitted my research proposal. I created lists of possible research questions but eventually created five initial questions influenced by an academic paper I found when carrying out a literature search. Stinson's et al (1990) phenomenological research on meanings young women dance students gave to their activities encouraged me to research active older people dancing. I could explore their dance experiences and reasons for participating and ways sessions encourage inclusion. The research could also include conversations with some dance-providers and decision-makers. As well as these phenomenological qualitative interviews I intended to create a quantitative survey built on identified themes from the interviews. This survey could involve larger numbers of dancers and would create statistical data. This was mixed methodology. However, although qualitative interviews remained the first aspect of my research, the quantitative survey was

discarded during Phase 3 because I decided it would be too small-scale and not sufficiently resourced to be influential.

My work activities were still ad-hoc and insecure. I continued managing Vivacity. I led two Roundtables for a research organisation "Widening Opportunities in Creative and Performance Arts" in London and Liverpool during June 2011 having responsibility for the administration, liaising and chairing of the events. I chaired them by creating an empathetic listening environment (Kline 2002) encouraging participants to learn by providing space and time to listen to each other in turn and dialogue.

Phase 2: March 2012 – December 2012

My research proposal was accepted, my work activities became more secure and varied. My proposal was selected for display on the university website.

The approved Research Report title was

> "When I'm 64 I want to dance! The influence of creative dance in active older people's lives"

I planned the in-depth phenomenological interviews and selected eleven active older people who lived in London and a SW England city. All were attending regular creative dance sessions. The interviewees were not a representative sample or random. I was not comparing and contrasting responses to prove hypotheses, so they did not have to be similar. Each person had their own voice. Interviewees were chosen purposively (Smith, Flowers, Larkin 2009). I selected people from different social and economic backgrounds aged 58 – 82 years. I did not want my research to be London-centric. Through the internet, I found dance sessions based in a SW city arts centre that was set up following the BBC "Imagine" television programme. I contacted the organiser who was a professional dance therapist. She selected three participants who attended regularly. I had considered conducting focus groups but decided face-to-face conversational interviews, where individuals expressed their detailed thoughts were preferable. This method used my coaching skills to best advantage. I included two men who were dancing as it was important to research their ideas as well as those of women dancers. My relationships with the interviewees varied, most were people I knew through

dance sessions I attended, one was in the dance company I performed in and the three people from SW city were unknown to me until I visited and interviewed them. Table 1 (appendix 1) illustrates interviewees' demographic details as they identified themselves.

I created and piloted an "aide-memoire grid" that was supportive during conversations. It was not prescriptive and allowed for flexibility. Each interview was 1-1.5 hours long. In-depth Interviews began in July 2012 and continued for one year. I also learned how to use analytical NVivo 10 software.

By December 2012, my awareness and experiential learning had increased. My research widened as my work and dance activities increased. I was pleased it was openly and honestly reflecting what I was doing, I could foresee it contributing to others' work and research.

Work and dance activities included dancing in "Dancing Voices" a largescale older dancers and music event performed at the Queen Elizabeth Hall, South Bank, London and SAGACITY, an older dancers' festival, a dance festival in a North London borough and a flash mob. I continued to successfully manage well-attended Vivacity sessions. I developed a website and good promotional materials and successfully acquired further funding. I gained a BIGDANCE 2012 grant to organise an intergenerational project and collaborated with the Heads from a local primary learning campus to plan an "International Dance Olympiad" event. Vivacity's dance facilitator was paid to lead school workshops and Vivacity dancers, including myself, volunteered and enjoyed creating dances with pupils. The schools also supplied facilitators, so more children learned a number of diverse dance traditions. An audience of over 500 local children, parents and teachers attended the final lively, successful event.

Phase 3: January 2013 - July 2014.

In January 2013, I devised a question matrix. The central main question was:

> 'Why do active older people choose to participate in creative dance activities and are there any implications and benefits?'

There were four axes: Individuals, dance, community/national levels, change and images. Eighteen sub questions clustered within the axes. This question matrix remained an underpinning tool guiding my research.

I became involved in more work and dance activities including writing articles for some professional magazines, networking with people involved in different arts activities and sectors and joining a local dance forum. Vivacity continued to develop; we were being asked to perform locally. I joined another performance dance company and participated in a intergenerational dance project. Work activities included advising, networking and boundary spanning (Williams 2002, 2010), and I gave a presentation to the London Intergenerational Network. By attending and/or presenting at relevant seminars and forums, I was learning more, participating in joint-working and collaborating with others, as well as promoting older people's dance. I attended the first meeting of the Department for Works and Pensions (DWP)/Age Action Alliance (AAA) older people and creative arts working group in March 2014 where I contributed ideas, dialoguing with people from large arts organisations. I felt confident because I had expertise about ageing and arts from my desktop research, experience, and various seminars and conferences I was attending. I was invited to co-chair this group in July 2014.

Phase 4: September 2014 – February 2016.

During this final phase I continued dancing and work activities. I realised my research and interests were at the crest of a growing wave of interest. A new social phenomenon: older people dancing, a growing community of older dancers, were emerging and increasing interest in the ageing population. My work included being asked to give presentations about my research at the first TEDx Tottenham conference and continuing to co-chair DWP/AAA creative arts and older people group. The company I danced with performed at the Sadler's Wells first Elixir Festival. A conference about older dancers complemented the festival. This indicated that older adults' dance activities were being taken more seriously.

In central London, conferences and seminars were held giving new insights about ways government departments and large organisations from different sectors were exploring collaborating and working together. For example: The "Public Wisdom" conference (2015) about the ageing population, built environment and the Arts; and Centre for Positive Ageing "Redefining Ageing" Conference (2014). An industry-wide dance conference "The Future: New Ideas, New Inspirations" (2015) indicated new collaborations were happening within the dance world. My ideas were connecting with related ideas in wider academic and political/social contexts (Murray 2011). This reflexivity enhanced and informed my research and work practice. I was experiencing transformational learning. As an autonomous thinker, my new work was affecting my thoughts and feelings and changing my points of view (Mezirow 1997).

Although there was no agreed terminology for "active older people" or "active older people's creative dance" and little research directly about them, there were lots of research topics related to them and I needed to research these but not become overwhelmed. I learned about Transdisciplinarity (Gibbs and Maguire 2015, Nicolescu 2008) and recognised that this approach would enable me to research the complexities of the challenge I had set myself. I realised my understanding about ageing, social participation and creative dance were now different from when I set out. I had to capture the boundaries for my research.

It took longer than expected to interweave and pull the aspects of the research together, but some important innovative developments were aligning. My ideas were triangulating with realities happening in the outside world. Issues about active older people were now being addressed within social gerontology and Sadler's Wells Elixir Festival and Conference addressed issues concerning older people's dance as an expressive artform.

My theoretical understanding as well as my practical work experience was increasing. For example, I participated in a workshop where health professionals and young choreographers attended. Some delegates were surprised older people could easily get up from the floor and move around in space proficiently, with expression. Professionals' perceptions and negative stereotypes about "the elderly" were challenged. Older people's dance did not only have to be fun, gentle repetitive exercises.

Analysis using a case study approach with Transdisciplinarity.

I experienced strong concept threshold blocks (Mewburn 2012). It was suggested by my academic consultant that a case study approach might be useful. I researched this and found that an exploratory case study (Yin 2014) would enable me to pull together all my varied data analysis and evidence. I produced a protocol that helped me to reflect on my research achievements so far. This exploratory case study approach enabled transdisciplinarity to be incorporated. I could interweave across and through different academic disciplines and work sectors. I wanted to include new work and dance activities but also set boundaries. For example, there was growing interest about dance and dementia, obesity and Parkinson's (and other clusters and combinations) but these went beyond the boundaries of creative, contemporary dance for healthy active older people.

The research methods became: Phenomenological in-depth interviews with older dancers; interpreting data from conversations with some leading practitioners and decision-makers; narrative, reflective journals, auto-ethnography from my work practice and interests; and desk-top research including on-line research as well as books and journals.

The external world was changing. I wanted my research to reflect what was happening and include what I was involved in. This reflexive approach with transdisciplinarity made my research dynamic, relevant and kept me motivated and engaged in what became a long, analytic, interpretative process.

Increasingly, intertwining topics had to be honed and prioritised. The solution was staring at me. The axes headings from January 2013 questions matrix were directly related to each section of the research project title: Individuals to active older people; Dance to creative dance, local/national to participating; Image and change to When I am 64. This was a Eureka moment.   See Figure 1 below.

The research title could underpin and structure the whole research project and act as another underpinning structural tool, complementing my other models, tools, tables and matrixes. This insight assisted analysing and writing up my report; enabling me to think in new ways to analyse and synthesise data and evidence and structure the writing-up of the Final Report.

Figure 1

FROM   **TO**
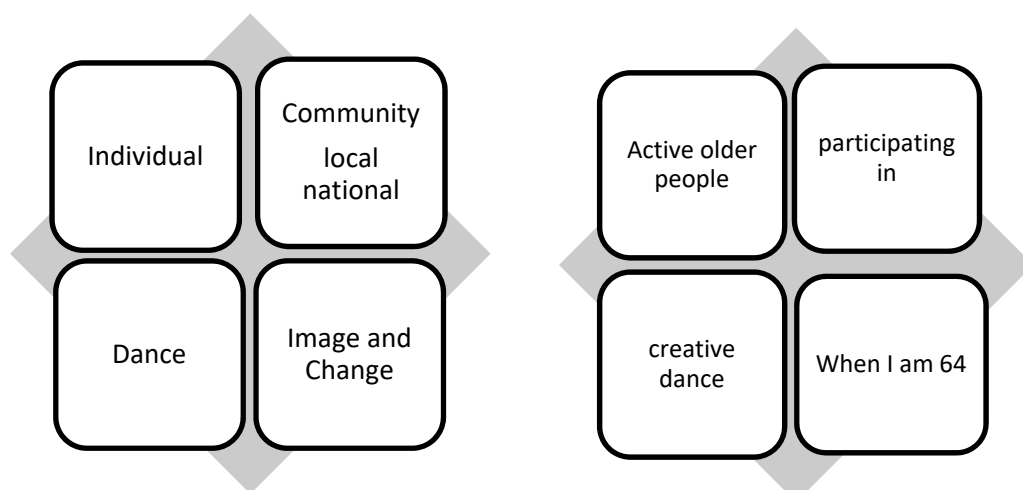
These headings are axes from the questions matrix created Jan 2013

Based on the research project title used to organise research into a Case Study from July 2014

A final tweak was required; it was useful to focus my research by amending "When I'm 64" to "challenging perceptions" which better incorporated "images and change" and rightly enabled more than baby-boomers to be included. The case study research project title and the final DProf report title therefore became:

"Active Older People Participating in Creative Dance – Challenging Perceptions"

The underpinning main question from the research question matrix created earlier as included in Phase 3 above continued.

I needed time to incubate and think through ideas at deep levels. This involved analysis, interpretation, honing and merging topics so that a coherent report could be written up.

I created a main template and completed a separate one for six main themes: Active older people; Dance; Community participation (local, national, international); Challenging perceptions; Work based experience; and Connectedness, spirituality, creativity. This enabled topics and themes from interviews coded using NVivo 10 or gathered over time from other evidence data and research (inductive/ deductive) to be entered onto relevant templates for further analysis, interpretation and synthesis. I collated and honed down the topics further, keeping in mind the new research project title.

The next step was to create a final matrix. I knew it would be impossible to include all the themes listed in the six templates. Most were relevant, interesting and/or important, but I had to create boundaries, considering what was most useful and directly relevant to meet my aims, to be the best contribution and influence those interested in ageing and active older people's dance as well as the university word-count It was impossible to include everything; for example, the topics about Relationships and Friendships were important and emerged from the research data and themes. I decided further research could be carried out by others as this is such a huge, important area for research in its own right and my own reservations about researching Friendships (See Ethical Issues) .

I had many ideas from my past, intermingling with new evidence and data I captured through my research. A final two-dimensional matrix enabled my analysis and interpretation to proceed and made writing up manageable. Bazeley (2013) suggests a researcher becomes a theory builder, identifying and making sense of all the patterns and relationships from their data and experience. The completed templates demonstrated how themes linked back to my research questions, and tools I had devised. The final matrix enabled the highest priority topics to be identified for inclusion in the Final Report. The findings, discussion, recommendations, looking forward and conclusions could now be written up with confidence and authority to produce a coherent, fit-for-purpose DProf report.

It is worth noting that writing transdisciplinary work-based research is challenging. The complexity and clustering of the topics and my work activities needed to be tackled head-on rather than playing safe and concentrating just on my original research design. Gibbs (2015), citing Maguire's research on 50 professional doctorates in one institution, found frequently the methodology used did not capture the richness of problems. Candidates used qualitative approaches and lacked critical realism. They were not using transdisciplinary approaches and were playing safe with qualitative research. This links directly with Silverman's (2007, 2012) complaints about researchers only using qualitative interviews. These concerns align with my own experience of producing a doctoral report. I wanted to adapt my methodological approaches and research design so that my report critically reflected my experiences and research activities that happened in real time and not just concentrate on data and findings from qualitative interviews.

During 2016, I submitted my research report, had a successful viva and then worked on my conditions. I continued to synthesise, hone, refine and cross-reference my report. I graduated in December 2017, awarded my doctorate in February 2018 and was delighted and surprised to win the university's Ken Goulding prize for Excellence in August 2018.

Summary of some benefits and implications of active older people becoming involved in creative dance.

One of the main reasons I left fulltime work was to return to dancing. For me, it is a life enhancing activity that I enjoyed, I wanted it to be part of my life again. I knew my life would benefit from my dancing. I wanted to research why other active older people were choosing to dance at this stage of their lives. All interviewees were regular participants attending sessions whenever they could. Although they came from different backgrounds and had different lifestyles, all considered dance sessions added quality to their lives. Benefits included increased body awareness and better physical health. It did not matter what you wore or how you looked, (unlike when visiting a gym) and a welcoming, non-judgemental environment was appreciated. Dance tasks encourage participants to explore ideas in new ways and this is challenging and enjoyable, helping to develop better memory. Some participants welcomed opportunities to be creative, expressive, imaginative and these new experiences enabled them to become more confident and increased self-esteem. Everyone enjoyed dancing to a range of music. Sessions were friendly, bringing people together from different backgrounds who were sharing a common interest. They danced together and often stayed for refreshments afterwards encouraging friendships to develop naturally. Whilst enjoying socialising they found they had other interests and issues in common. Dancing enable feelings of freedom, joy and connectedness to emerge. It can be thrilling, enabling participants to forget other issues in their lives. It is a chance to live "in the moment".

Spirituality is developed through relationships and creativity and this encourages increased peace, harmony and wellbeing (King 2009). Several interviewees mentioned dancing encouraged the integration of mind, body, emotions and spirituality and this enhanced their health and wellbeing and they felt more connected to others.

Some interviewees enjoyed opportunities to perform, attending different sessions, workshops and projects whilst others preferred the process of dancing and did not wish to perform.

Interviewees' dance capabilities developed by attending regular sessions designed for them rather than for young dancers. However, some interviewees also enjoyed participating in intergenerational activities.

Some interviewees had danced when they were younger whilst for others it was a new experience. They enjoyed the challenge and were learning more as well as experiencing benefits. For most, it was a surprise to be involved in dance activities at this stage of their lives. They appreciated dance facilitators/artists who were choosing to work with them. Regular dance sessions gave structure to their week and encouraged them to see their lives in different ways. This helped decision-making about what else they wanted to do. They saw dance as a life-enhancing activity and wanted to integrate it into their lives with other activities such as caring for grandchildren, travelling, paid work and volunteering. Facilitators needed to be participant-centred, aware of the dancers' physical and cognitive capabilities and let go of their preconceived assumptions about older people. Older dancers were like other adults. Each person has different capabilities and needs. Good sessions included fun, laughs and joy. Several interviewees mentioned they welcomed not having to memorise precise set sequences. However, others enjoyed the challenge of learning choreographed sequences and working towards performances where they needed to perform group pieces precisely.

We are living in an ageist society where to be older often means becoming more marginalised. There is not yet sufficient terminology to describe different cohorts of people in the second stage of life (Cohen 2005). Older people need choices. Fortunately, there are growing demands for older adults' dance and an emerging community of older dancers; more dance festivals and more intergenerational opportunities. Also, increased awareness that dance can be positive and encourages social participation, friendship, better health and wellbeing, creativity and meaning and contributes to the cultural wellbeing of communities.

The Recommendations

The Final Report came together in original, interesting ways. It reflected what I had achieved and ways my research was conducted. There were 15 findings and 10 recommendations that were directly cross-referenced to research data analysis. The recommendations and ways to look forward flowed coherently from my findings, the social/political context and the aims, objectives and goals of my research.

The following recommendations flowed directly from the findings.

1. Continue to actively challenge ageism.

Ageism affects everyone and is now actively being challenged. New perceptions and attitudes about the second half of life are needed. Retirement, as previously experienced is disappearing and there are new expectations emerging from active older people themselves and from decision/policymakers. Cohen (2000, 2005) suggests present decisions are being created based on research statistics that no longer reflect the capabilities and aspirations of many people who previously were classified as one cohort called "retired" or "old age pensioners". Positive, realistic terminology and images are required so individuals' aspirations and capabilities as well as their needs and limitations are acknowledged. Inequalities and power relations need to be addressed so that younger and older people can be hopeful and realistic about their future lives. Ageism must continue to be challenged.

2. As other cohorts, active older people should be respected as individuals with preferences, different lifestyles, responsibilities and needs.

Older people are not a single cohort. Everyone should be part of society and not be marginalised or isolated and many contribute to society. Each person has their own narrative, history and aspirations. Large and small-scale research need to explore the experiences and knowledge of older people and not treat them as a single group.

3. "Active older people's creative dance" should become a mainstream dance activity.

All kinds of dance need to be encouraged. It should be commonplace for different dance activities to be accessible, affordable and safe. Provision needs to be offered across the UK. Creative dance benefits the whole person. It is enjoyable, encourages artistic expression, creativity and dancing with others, as well as being a physical activity. It can be a choice for active older people. More dance facilitators will require training and career development including leadership and facilitation skills, awareness of their own internalised stereotyping and limiting assumptions concerning the ageing body and active older people's dance capabilities. Dance sessions should be welcoming, where creative activities are encouraged, participants feel secure, relaxed and respected and can use their energy, emotions and ideas in different ways. Older dancers can develop their dancing capabilities over time if there are opportunities to attend regular sessions.

4. Dance should be taken seriously by decision/policymakers and strategic planners because it can contribute to arts and culture, health and wellbeing in later life.

Dance is life enhancing, benefits individuals and society and should be available for children and adults throughout their lives. It can be a cost-effective way of keeping people active, healthy and participating in their communities especially as it enables people to pursue a common interest, develop friendships and increases understanding between people from different backgrounds.

5. Different sections of the dance world should continue collaborating and working together to develop a stronger voice

Dance needs to be taken seriously within the cultural life of nations and communities. This involves more joined-up thinking and blurring of previous demarcations, boundary spanning with colleagues from different factions within the dance world and with people from other sectors and different organisations such as health and wellbeing, sports and leisure, arts and culture. This requires trust, goodwill, new ways of communicating, resources and support, changing attitudes and breaking down unnecessary barriers.

6. More age-friendly environments need to be created.

More age friendly physical, social and cultural environments need development. Planners, policy/decision-makers, artists and others can provide all ages with safe, accessible environments where they can participate in the life of their communities/neighbourhoods. The Age Friendly City Movement in the UK encourages inclusive cultures and respect for different lifestyles. Unnecessary barriers such as age limits, lack of provision or ageist attitudes prevent older people getting involved. Accessible venues and spaces, transport and affordable activities are needed for this to happen. My research showed that "active older people's creative dance" can contribute whether age/peer specific or intergenerational. The same applies for other participatory arts, sports and leisure activities. Working and volunteering activities are important for some older people. Local authorities, other policy-makers and funders need to recognise the importance of community spaces and cultural facilities to support community and voluntary groups providing cultural and arts activities with and for older people, their families and communities. Innovative ways to bring people purposefully together can be created at this time of rapid change and less resources.

7. Independent dance-artists and grassroots organisations offering dance need support and recognition including access to funding and other resources.

Dance activities should be incorporated into overall neighbourhood, regional and national development strategic plans for culture and leisure, health and wellbeing, regeneration and age friendly environments. Collaborations for mutual benefit should be encouraged, including ways larger organisations can cascade information and resources down to smaller, grassroots organisations. Small, independent dance organisations and independent dance-artists might benefit from working in collaboration with other arts organisations and community centres, especially when applying for funding so their work becomes sustainable.

8. Boundary spanning skills and joined-up thinking benefit different organisations to meet 21st century challenges.

More training and practical experience is required for those working in large and small organisations in the private, public and voluntary sectors including arts and community organisations and academic institutions. Representatives from various organisations need to communicate and dialogue with others to find new ways to problem-solve, learn and share ideas. Trust, respect, encouragement, support and diverse ideas are needed. Different

perspectives and ideas can be recognised and exist together rather than there being a right or wrong way. This will encourage more innovation, transdisciplinarity and new solutions.

9. Older people's dance and performance can contribute towards challenging perceptions.

Dance challenges perceptions and stereotypes that everyone has internalised or have seen in the media as we still live in an ageist society. This did change to some extent during my research as more older people were seen in films and on television leading normal lives. There are increasing opportunities for older people to dance publicly. "Active older people's creative dance" is a way to challenge ageism and decline. All bodies age and move differently during the life-course. Older people's bodies do not have to be invisible. They can be expressive, interesting and artistic. My research showed that often younger people are inspired by older people's creative dance; it gives them hope for their futures. Intergenerational activities can be mutually beneficial, promoting understanding, friendships and social cohesion. However, when older people want to develop their dance capabilities many prefer dancing in sessions specifically devised for them. Choices are needed and a wide range of dance styles available. If older people are seen actively involved in their communities, this also challenges perceptions because they are included, not marginalised or invisible.

10. Dance encourages connectedness and spirituality in its widest sense; bringing people together.

Policy/decision makers should recognise dance contributes to society; giving feelings of joy, freedom, friendship and empathy, providing opportunities for better health, wellbeing and cultural activities. Different dance activities can bring meaning and purpose to people's lives, encouraging social participation and audiences. Dance keeps children and adults of all ages active and engaged. Dance is an art form and a good social and economic investment contributing to creating a better world.

Discussion

When I began the DProf programme, I was in awe of academia, but I became more realistic. I was on a sharp learning curve, initially lacking the knowledge and confidence to know what I was supposed to be doing. My confidence increased as I spent time learning about research

methodology, determined to carry out transparent work-based research that had firm structures and boundaries. My own voice and confidence strengthened as a researcher, an older dancer, older learner and boundary spanner.

Participating in my DProf was worthwhile although sometimes difficult and demanding. I was adaptable, open to ideas and brought my research to life, incorporating knowledge from desktop research, the voices of other active older dancers, illustrations and my work practice. I was analytical and creative, experimenting with ways to communicate effectively. Most of the time I was writing and studying alone. This was difficult for me as I am a "people-person" who enjoys sharing, arguing and analysing face-to-face with others. I enjoyed successfully interviewing older dancers and having conversations with leading practitioners/decision-makers. I experienced optimum Flow (Csikszentmihalyi, M. 2002) when totally absorbed in learning through texts and reports and analysing and interpreting all the data and evidence and writing up and editing my Report. This brought me much satisfaction and enjoyment. As does my dancing with others.

My research processes showed it was possible to scope widely, sometimes deeply depending on the topic. What I was directly researching had no agreed, established terminology when I began my research but new practices and interest in active older people and older people's creative dance increased over time. What started as personal interests began rising up social and political agendas.

New knowledge and solutions emerged by clustering, interpreting, synthesising theories and ideas, weaving around and through different disciplines, reports and practice. Carrying out research with transdisciplinarity was demanding, especially as topics came together gradually. The process could not be rushed. I remained focussed and motivated even when it seemed there was no end in sight. I experimented with ways to draft, re-draft and hone ideas. Knowledge could be interpreted and synthesised in different clusters, enabling findings and recommendations to be created. My exploratory case study approach pulled aspects of my research together. Finally, my report became coherent and showed that a time-consuming, complex creative work-based research report could be fit-for-purpose if iterative as well as linear pathways were used and underpinned by effective analytical tools and frameworks.

I made enough time to seek-out and learn about potential research methodological approaches, selecting the most useful and not being afraid to discard those that were no longer applicable. This enabled a unique robust research design to emerge. It was important to remain open-minded and not presume outcomes too quickly. Sound decisions about what was applicable and beneficial emerged gradually. Findings and recommendations could then be identified. I experimented and juxtaposed ideas, edited, honed using different perspectives. It was important to take risks and not panic when difficulties arose. I worked with uncertainties achieving creative results that can make useful, realistic contributions.

I spent increasing amounts of time on research activities. There was a dilemma, I could not spread my myself too thinly. I recognised my work activities and research impacted on each other reflexively. I reflected and captured what were priorities and important for my research, work and life generally. I made boundaries about the activities I would become involved in, enabling my time and energy to be used effectively. I was increasingly busy and made sure I did not become overwhelmed. Bannerman (2009) suggests there is an "emergent premise" to creative work that often involves "recognition" the collision of the rational and the intuitive. He argues artists rely on their intuitive processes whilst working, and it has importance in everyday life. This was an interesting theory for understanding my writing process, bringing analysis and interpretations together. Writing the Final Report was definitely a creative process as well as an analytical one. I relied upon intuition, previous and current knowledge and new learning. I could have remained safe and stuck to the original mixed-methodological approach but I wanted my work-based research to include my work-based activities and be a trustworthy contribution.

Contributions to Practice

Multidisciplinary topics included ageing, dance, participating in and promoting positive images of older people, connectedness and joy, community development at local and national levels. My ideas were triangulating with reality. My theoretical understanding as well as my work experience grew. I became a confident, authoritative researcher, an older dancer as well as advising and networking with others. Professionals' perceptions and negative stereotypes about "the elderly" were being challenged. My research was timely. Government and policy

makers were thinking of new ways to deal with changes in society including ways to address an ageing population and social issues such as loneliness, obesity, and health issues such as dementia, fall prevention and Parkinson's. The benefits and links between health, arts and wellbeing were being recognised. More art activities, including dance being an art-form, for all ages are being considered more seriously. New collaborations between people from different sectors and academic disciplines are being encouraged. These and other social and political issues influenced my research. Many active older people want to dance as they enjoyed dancing when they were younger, for others they dreamt about dancing when young and now have time to dance or it is a totally new interest. Media is having to readjust stereotypes and negative images of older people and popular television programmes involving dance are raising its profile and increasing demand for more dance activities.

After I was awarded my DProf, I decided it was unlikely I would become a fulltime academic studying alone and spending huge amounts of time in front of a computer. However, I wanted to share my research knowledge and my growing authority and make positive contributions. I am continuing to "see what life brings" and added a new perspective "take each day as it comes and live life to the full!".

The Power of Research

Since gaining my DProf, work, dancing activities and life generally are interesting and busy. I have continued to attend Vivacity dance sessions, (I handed over the management and organisation to the young dance-artist, in the final stages of writing up my report). I continue to be in the performance dance company. I have been a presenter at two conference roundtables about older people and dancing, giving me opportunities to inspire and encourage dance facilitators and lecturers to confidently offer dance sessions for older people, inform them about the benefits of dance when it is incorporated into everyone's lives, especially older people's. I have written articles about my DProf findings and recommendations in several professional magazines. I became a volunteer advisor for Age UK London Project "Age Allies", supporting the Project Manager creating and delivering workshops for organisations. This project has worked across London to facilitate positive change and attitudes to age and ageing including encouraging organisations to become more age friendly. My recent dance performances have included performing in some videos which

are now on You-Tube showing ways older people can dance in expressive and meaningful ways and these have surprised younger people, so challenging perceptions about the capabilities of older people. I have played a key role in the local Dance Forum and liaised with a local Public Health Commissioner and encouraged members of the forum to work together for mutual benefit.

I was delighted to be invited to be the plenary speaker at the Post-graduate Summer Research Conference 2019 at Middlesex University. The theme was "Power of Research – community and the impact of disruptive ideas" My presentation was well received by students and academic staff. It included ways I had worked since leaving my fulltime career and how this was similar to the ways younger people starting on their careers might work in the future as career/work patterns change; my work activities during my research and afterwards, ways using interdisciplinary approaches benefits research activity and brings coherence to create new knowledge. I outlined ways my research included disruptive ideas about ageing and dance activities for active older people indicating that increasingly they should not be marginalised or invisible. At the end of my presentation I invited everyone to dance. I gave them a simple dance task framework and lively music was played and the presentation finished with high energy and joy!

Conclusions

Had I a different mindset when I left fulltime work, my life would have been influenced by my thinking such as I was retired and should take life easy, look forward to gardening, participating in a little volunteering and gentle exercise, perhaps travel, have fun and look forward to grandchildren. This was the stereotype in 2008 and still exists! There is increased awareness and new opportunities, but a great deal more needs to be done. Many active older people are challenging perceptions of what it means to be older in the 21st century. Decision/policy makers are realising they need to consult older people about issues and provision that affect them. Individuals will benefit if they gain knowledge and skills, remain independent and lead healthier lives; many want to continue working and contribute in different ways. We are social beings and friendships and connectedness are important. Dance activities, when accessible, enable individuals to be culturally involved, remain healthier and society and communities benefit.

Research and practice going forward

The doctorate programme was a huge challenge. It has given me confidence to speak with authority about active older people dancing and ageing. Since leaving fulltime work I have successfully taken my previous knowledge and work practice in new directions that I could not have imagined when I began. Through my DProf programme I had opportunities to learn about interesting, relevant topics. I stayed on track, even though the research activities took longer than expected. I remained calm and determined. My inner self never doubted that I could learn from others' theories and ideas and apply them. There were blocks along the way when I thought I could not continue but I successfully achieved my DProf and now confidently share my new knowledge and expertise.

I have become an older dancer rather than an adult wanting to return to dancing and successfully achieved a diverse range of work activities through participating in interesting projects and working groups. My positive work collaborations have been appreciated by others and I am delighted that Vivacity and the Community Choir continue to flourish. I enjoyed participating in university seminars and conferences and appreciated learning from academic staff and fellow students.

 I have shown work-based doctorates can be achieved by people who are working alone with limited resources at a late career stage where work itself is uncertain and they have busy lives with differing responsibilities. As an older person, I succeeded in taming the complexities of my work-based doctorate, being creative, committed and adaptable. At times, I wondered if I had made a huge mistake and should have stuck to my initial design. I have no regrets because the results have gone far beyond my expectations and I am proud of my work-based research and gaining a doctorate. My DProf programme was a transformational experience and has benefitted others as well as myself. I created a wide ranging, interesting research Final Report that met academic requirements and hopefully will contribute to others' work in the future.

My Report is an example to others who want to challenge themselves to carry out transdisciplinary work-based research. I steered my research through all its complexities. The

eventual design was a multi-methodological, multidisciplinary/transdisciplinary exploratory case study with strong underpinning structures. A meaningful, informative, robust Final Report was created. Others will need to create their own research designs to produce their unique doctorates that benefit others as well as themselves.

I am now proceeding through another personal transition because when I was finalising my research submission in 2016, I became a grandparent and I love this new role. This wonderful experience with the completion of my research report ended my academic experience with heightened joy, new aspirations and hope for the future.

Sharing ideas

I will continue to "see what life brings" and hope to disseminate my new knowledge, continue dancing and prioritise competing priorities and share my passion and enthusiasm. I want to use my skills, expertise and time to best effect. There will be new priorities between family, dancing, work activities, disseminating my research, travelling, interests and volunteering. This reflects findings from my DProf research and what I learned about ageing in the 21st century.

I benefitted from participating in doctoral higher learning and carrying out work-based research. I feel confident sharing my research Report with others, accepting they may have different views from mine. I will continue the final stage of my professional journey boundary spanning, networking, learning and dancing for as long as I can. I recognise there are global and national issues affecting the future and some of them are negative. I am aware that others, whatever their age, are not as fortunate as I am. Support, encouragement and resources to meet their circumstances need to be addressed. The only hope is that everyone of goodwill can lead positive meaningful lives for themselves, their families, communities and future generations.

More Dance! Towards peace and a better world!

I welcome readers to gain further insights into my research by reading my full research Report

Http://eprints.mdx.ac.uk/23514

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Age UK London Age Allies Project https://www.ageuk.org.uk/london/projects-campaigns/our-projects/info/age-allies/ (accessed Sept 2019)

Appendix 1

No		G	Age	Ethnicity/ Background	Present Location	Work Present/past	Status	Education qualifications
1		F	72	White Anglo-Saxon Protestant From USA	North London (urban)	Part-time psychotherapist. Previously family psychologist	Married Mother Grandparent	HE and Professional qualifications
2		F	65	White Caucasian Ukrainian extraction, Jewish	Home Counties (Town)	Retired Developing new art business. Previously property solicitor, secretary in law firms	Single following divorce Mother grandparent	O levels Left school at 16, later HE and professional qualification
3		F	65	British English with mixed background	East London (suburban)	Retired Previously: Civil servant Nurse	Married Mother Cared for older relatives	College Professional qualifications
4		F	79	White Caucasian, English	Outskirts SW city (rural)	Early career "Librarian" and sales in a retail chain. Left paid work on marriage	Married	Left grammar school at 16
5		M	67	White Anglo-Saxon	South London (urban)	Retired but occasionally doing IT and website work. Previously: telecoms, mime artist, kitchen fitter	Married Father Grandparent	GCE standard Vocational qualification and OU courses.
6		F	82	White Roman Catholic, British-Italian	North London (urban)	Retired Before marriage: waitress in family business. No paid work after marriage	Widow Mother Grandparent	Basic education evacuee during WW2.
7		F	66	British White, middle class Anglo-Saxon	Recently moved from SW town to SW city centre	Having gap year Previously nurse, university lecturer Been therapist for a few years	Widow Mother Grandparent	HE and professional qualifications
8		M	75	Chinese from Singapore, now Londoner	North London (urban)	Head of after-school education franchise Previously: engineer	Father Married	Polytechnic engineering, maths
9		F	63	Black Jamaican British	North London (Suburban)	Retired from prison service - health care assistant & phlebotomist. Previously: part-time jobs including care assistant, school cleaner, playgroup worker, factory-work, sewing machinist	Married Mother Grandparent Foster carer	Basic education and vocational training
10		F	64	White European	SW city within city walls and edge of countryside	Retired Previously NHS civil servant, front desk work, Now working part-time from previously fulltime	Single	Secondary education
11		F	58	Turkish Cypriot	North London Borough (urban)	Pt-time school breakfast club organiser/special needs assistant. Previously: child-minder, sewing machinist Worked on family farm prior to marriage.	Married Mother Grandmother	Basic education Left school at twelve

Table 1 Interviewees (Self-Defined)

The impact of an art-based experience on leadership development

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The impact of an art-based experience on leadership development [1]

Art-based leadership experiments have gained a foothold in leadership development research. However, few studies have investigated their effectiveness. These studies have included music, drama, art, and performance to develop the dimensions and mind of a leader. This paper describes an experience that measured the impact of an art-based intervention in four dimensions: (1) disorienting dilemma, (2) creative self-efficacy, (3) self-awareness, and (4) sense-making. The art-based experience highlighted participants' need for leadership development to unleash their creativity and increase their self-efficacy and self-awareness, and demonstrated the usefulness of the experience in the process of transforming the mind-set in the classroom, which may also translate to the workplace.

Keywords: leadership development, coaching, creativity, creative self-efficacy, art-based, phenomenological study, disorienting dilemma, transformative learning, coaching, workplace learning.

Introduction

The purpose of this phenomenological study was to describe and examine the application of an art-based activity to leadership development in an MBA program and to apply the research to the field of leadership development and its implications to workplace learning. Leadership development is used in multiple organisations, including but not limited to: the workplace, academia, and executive coaching settings.

Students enrolled in an MBA leadership class at a small private university were asked to create a painting of their own choosing during a designated class experience. Class groups were able to enjoy this experience at the beach. This event allowed the researcher to gain new insight, perspective, and understanding about leadership development, and encouraged the students to discover new feelings while experiencing or living the phenomenon of the painting activity. By reviewing reflective journals written by students, the researcher discovered key implications

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of how an observable phenomenon, such as this art-based experience, can shift an individual's perspective and provide insight on how to incorporate the shift into an increased understanding of leadership development. From this experience the researcher gained a better perspective on how to design an experiential MBA leadership curriculum that enhances leader development, which can translate to the workplace.

The process has been tried with over 150 students. This paper reflects the experience of a self-selected sub-group, who responded positively to a request for permission to use their papers in the research.

Block (2010) stated that regardless of whether or not artists decide to engage us, making art more central to our lives presents some challenges. Most of us are imprisoned by the idea that art is a specialist's domain–that it is for exceptional and certain occasions. We have, sadly, de-emphasised the arts in our schools and it is now relegated to special performances. Based on Block's (2010) position, this research experiment utilized art to engage and transform individuals' minds, and invites leadership educators to rethink how art can be used to create a greater sense of self-awareness and creativity.

Definition of theoretical transformative thinking

The research began with the question: What do participants learn from their experience at the beach, when immersed in a creative leadership development exercise? To answer this question the researcher explored whether transformative thinking theories could be identified when the students experienced an art-based exercise in a leadership class. Mezirow's theory of transformative learning became the cornerstone of the research, and expanded to other scholars who further developed adult development theory.

Transformative learning is defined as 'a theory of adult learning that utilizes disorienting dilemmas to challenge students' thinking.' (Mezirow, 1991). Further, transformational self-

directed lifelong learning does not occur simply as a result of having life experiences and resolving cognitive dissonance. In self-directed lifelong learning, the onus is on learners to take personal responsibility and manage themselves through obstacles and challenges encountered on the life journey (Mingsheng, 2016). Learner self-awareness, self-leadership, and self-directedness are used to determine what additional information and resources are necessary.

Mezirow's (1991) transformative learning theory posits ten phases that lead to transformative learning; not all need be present, and they may be experienced in random order. The phases are: (a) a disorienting dilemma; (b) self-examination of assumptions; (c) critical reflection on assumptions; (d) recognition of dissatisfaction; (e) exploration of alternatives; (f) plan for action; (g) acquisition of new knowledge; (h) experimentation with roles; (i) competence building; and (j) reintegration of new perspectives into one's life (Mezirow, 1991). Mezirow (1991) further believed that reflection and discourse with others is an important ingredient in transformative learning. He posits that transformative learning involves 'critical self-reflection, which results in the reformulation of a meaningful perspective to allow a more inclusive, discriminating, and integrative understanding of one's experience' (Mezirow, 1990, p. xvi).

The following concepts and theories were considered in the learning experience, as a theoretical framework, to evaluate the transformative thinking of the students after completing the exercise. In the results section of the paper these words became themes, which were identified from the students' reflective journals and the narrative analysis. What makes this important to the research is (1) the possibility that these key theories were transferable, a point which is highlighted in the section on the implications to leadership in this paper, and (2) that it confirms the need to create safe spaces in order for people to develop.

The first concept analysed was disorienting dilemma, which is an experience that serves as a catalyst for the transformative process. The learners' current views are found to be insufficient or incorrect (to the learners) after they gain a new understanding of different viewpoints (Mezirow, 1991).

This kind of incident or experience is outside a person's control, and thus triggers transformation (Mezirow, 1978). From this experience, critical reflection and transformation can happen all at once ('epochal' transformation), or gradually over time ('incremental' transformation) (Mezirow, 2000). When faced with a troubling situation or disruptive event, individuals not only engage in self-directed critical reflection but also often reach out and communicate with others as they attempt to internally resolve the issue (Taylor & Cranton, 2013; Yukawa, 2015).

This led to the next analysis finding on self-awareness. Self-awareness is having a clear perception of your personality, including strengths, weaknesses, thoughts, beliefs, motivation, and emotions. Self-awareness allows you to understand other people, how they perceive you, your attitude, and your responses to them in the moment. This concept comes from Duval and Wicklund's (1972) work that self-awareness is focusing on the self, which then enables self-evaluation. Self-focused people compare the self with standards of correctness that specify how the self ought to think, feel, and behave. The process of comparing the self with standards allows people to change their behaviour and to experience pride and dissatisfaction with the self. Self-awareness is thus a major mechanism of self-control.

The next theory examined is sense-making, a term introduced by Weick (1995), which refers to how we structure the unknown so as to be able to act in it. Sense-making involves coming up with a plausible understanding, a map of a shifting world; testing this map with others through data collection, action, and conversation; and then refining, or abandoning, the map depending on how credible it is.

The moment in which an individual has an 'ah-ha' moment of seeing what possibilities *could be,* is called a sense-making moment. This moment is usually spontaneous and emotionally charged. After this moment occurs, we begin to see new action or motivation in the individual.

Another applicable theory analysed is that of perceived self-efficacy, which is defined as 'people's beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives. Self-efficacy beliefs determine how people feel, think, motivate themselves, and behave.' (Bandura, 1994, para. 1).

Lastly, reflection was critical. The exercise of self-reflection is thought to be the most significant learning experience. It involves reassessing our own orientation to perceiving, knowing, believing, feeling and acting.

> *Reflection enables us to correct distortions in our beliefs and errors in problem-solving. Critical reflection involves a critique of the presuppositions on which our beliefs have been built. Learning may be defined as the process of making a new or revised interpretation of the meaning of an experience, which guides subsequent understanding, appreciation and action. What we perceive and fail to perceive, and what we think and fail to think are powerfully influenced by habits of expectation that constitute our frame of reference, that is, a set of assumptions that structure the way we interpret our experiences. It is not possible to understand the nature of adult learning or education without taking into account the cardinal role played by these habits in making meaning (Mezirow, 1990).*

Methodology

Introduction to methodology

The purpose of this paper was to describe how students experienced a certain phenomenon through art-making and present research that explained the transforming experience of students, some of whom went through an overwhelming, spontaneous, and emotionally charged experience or a disorienting dilemma. This experience led to the students changing the way they felt and thought about themselves after going through the experience.

The research attempted to identify similarities and differences of various experiences the students had, where each personal transformational experience was unique. The study endeavoured to answer the questions: (1) what impact, if any, does an experience of art have on an individual, and (2) how could it possibly transform him or her to integrate personal values into his or her life with the outcome of personal transformation?

The research used a qualitative methodology following the narrative approach of storytelling. Denzin and Lincoln (2000) described the characteristics of a qualitative approach to research:

> Qualitative research is multimethod in focus, involving an interpretive, naturalistic approach to its subject matter. This means that qualitative researchers study things in their natural settings, attempting to make sense of or interpret phenomena in terms of the meanings people bring to them. (p. 2)

The students used journals to tell their story of their personal transformative experience. Storytelling is inter-textual, with each element of the tale, a line in the inter-connective web of stories and more stories (Boje, 2001a). Stories give a sense of connection between networks of storytellers, each crafting their own variation and fragments. But storytelling leadership is not a simple process. One story must be coaxed to win out over another (Boje, 1991b, 1994) and the official story can cover over many other voices (Boje, 1995, 1999c, 2000g).

The phenomenon came from observing the world around us, the experiences we have, the curious patterns in people's behaviour, and the social problems we would like to alleviate (Sansone, et al., 2004). The focus in this study was only a small part of the phenomenon filtered through the researcher's construal process. The researcher, utilizing the phenomenological method of study, identified the human experience concerning a phenomenon, as described by the students in the study.

Corbin and Strauss (1990) explained that theory cannot be developed from observations or incidents using raw data. From these student experiences, the incidents, events, and happenings were taken as-is and analysed as indicators of phenomena which were given conceptual labels. Theory is created when other like phenomena with the same term or label are used to form the basis of the theory, inductively derived from the study of the phenomenon it represents; that is, when they are discovered, developed, and provisionally verified through systematic data collection and analysis of data pertaining to that phenomenon. Therefore, the research did not begin with a theory; rather, it began with observations of phenomena, and transformational learning was allowed to emerge. As a result, the data were gathered, core theoretical concepts were allowed to evolve, and a natural link between the theoretical concepts and the data developed the grounded theory. The final result is a core concept or category that is central to the research (Trochim, 2006).

Methodology and design

At the end of the ten-week long class, students were asked to attend an art session in an outdoor setting, usually a local beach. Students were not told what they would be doing at the beach beforehand. A local artist spent approximately 20 minutes showing students how to mix paint and providing rudimentary instructions on how to paint with oil. The great majority of students reported that they had never painted with oil, and reported not having engaged in any creative art activities since childhood.

Students were then provided with a blank canvas, brushes, and oil paint, and were informed that they would be sharing their finished product with each other at the end of the allotted time. They were asked to disperse by themselves to different areas alone, and instructed to paint whatever they wanted for the next 1.5 hours. If they asked, which they inevitably did, students were informed that there would be no judgments on their final grade based on the aesthetic portion of the assignment.

After the allotted time, students gathered back to the predetermined spot to briefly show each other their finished painting and debrief the experience.

Subsequently, students were asked to write a reflective paper where they engaged in discussion of the experience. For their reflection, they were asked to answer two questions: (1) What did you learn from the experience? And (2) How will you use what you learned from the experience in the future?

The next section examined the catalyst for where the individuals experienced a shift in perspective, sensing a new self-awareness, increasing self-efficacy, and beginning to believe in their own individual creativity through the use of art.

Ethics

The relationship and intimacy between the researcher and participants in qualitative studies can raise a range of different ethical concerns, and qualitative researchers face dilemmas such as respect for privacy, establishment of honest and open interactions, and avoiding misrepresentations (Warusznski, BT, 2002). This research paper took these ethical concerns into consideration by carrying out anonymity and confidentiality and by obtaining informed consent.

Confidentiality means that no personal information was revealed to create any harm to the student. For researchers, the duty of confidentiality is less clear and involves elaboration of the form of outcome that might be expected from the study (Richards HM, Schwartz LJ, 2002 & Guillemin M, Gillam L., 2004).

When highly sensitive issues are concerned, students are highly vulnerable individuals and the researcher took this into account by obtaining their written consent and informing students how the data would be used after they had written and turned in their paper.

Reflective papers

Once the students turned in their journals, a description of the research process was used to eventually identify universal themes among the participants. The research process began with the reading of the student journals. Secondly, the researcher coded and categorized the results, and made written interpretative notations using the journal transcripts. Finally, an analytical report was completed, identifying universal themes among the participants.

Participants

Those who participated were students enrolled in an MBA leadership and creativity class (as part of their degree requirements), which included a day at the beach painting. The great majority of students had never painted before nor taken any painting classes.

Finding Themes and Writing an Analytical Report

Finding common themes among the participants was not an easy task. However, the final analysis yielded four universal themes among the participants. To determine what these themes were, a four-step analysis evolved; (1) coding, (2) interpretative notations, (3) categorizing, and finally (4) selecting the themes.

Coding

After the students' journals were read, key words or phrases that were common among the group were identified by the researcher. Key words or phrases chosen were based on whatever images would stand out, or highlighting groups of phrases that described similar models, desires, styles of action, and so on (Ochberg, 2003). For example, if a student shared, 'I was

radically changed,' this prompted a highlighting of this phrase because the research model asked how the student was impacted or transformed by the art experience.

After key words and phrases were highlighted, codes were given to each identified key word or phrase in the journals. The process of coding helped to eventually develop larger clusters and distinctions (Ochberg, 2003). When a key word or phrase appeared, an interpretative notation was written to begin the discovery process for identifying universal themes among the participants. When writing the interpretative notation, the researcher observed that the students' stories evolved into meaningful narratives, and individual themes emerged in their journals where each story took on its own plot, characters, unique circumstances, and specific issues.

Interpretative notations

The reason for the interpretative notation process was to distinguish between ambiguous passages (which could be seen as illustrating one category or another, or perhaps both) and those that seemed to clearly illustrate a given position. After key words and phrases were coded, passages were classified in terms of epistemological position (Blythe, et al., 2003). From the interpretative notations in the text, appropriate categories were established and under the heading of 'interpretative notation' a brief explanation of each category was established providing grounds for classification (Blythe, McVicker, & Clinchy, 2003). The interpretative notes changed the view about the person from a static entity to one who is evolving. The outcome from this process forced the addition of new passages and reshuffling of old ones. Therefore, the notations sheet was a place for thinking rather than having thought (Blythe, et al., 2003).

Categorizing

After completing the process of coding words and phrases, and writing interpretative notations, the next step was categorizing (Ochberg, 2003). After the list of codes and interpretative notations from the journals were reviewed, several broader categories were named that would pull together the codes and the interpretative comments (see Table 1). After the coding process had been worked through, four broad categories or 'sub-themes' evolved and all codes were sorted according to their category. After the categories were determined, a brief summary paragraph was written describing each.

[Table 1 near here]

Reflecting back on how the categories were designed, it became apparent that the categories provided a glimpse inside the minds of the students. This provided insight into the emotions of the students' experience, as well as the post-event impact on the students.

Themes

Theme development from the student reflection journals was designed using Ochberg's (2003) example in the writings of Josselson, Lieblich, and McAdams (2003) on the teaching and learning of narrative. Ochberg's (2003) research exercise used a four-step process to interpret the narration of an individual's story. Working through the process, reflective observations were made from the narrative of each person's story, which became the interpretative notation. The steps Ochberg (2003) proposed were as follows:

(1) Phase One: Reading for Individual Images

(2) Phase Two: Clusters and Distinctions

(3) Phase Three: From Clusters to Psychodynamic Conflict

(4) Phase Four: Bringing in the Counter-Evidence

Using Ochberg's (2003) method to analyse the coded journals and their interpretative notations, four themes emerged that were similar to all participants even though each story

was unique. Although many issues emerged from each participant, only those that were common across many of the journals were chosen as themes.

Results

After completing the art exercise at the beach, students were asked to write personal reflective journals about their experience. The journals were gathered and reviewed using coding, interpretative notations, and categorizing; finally, four themes were identified (see Table 1). What follows is an explanation of each theme using what students actually discovered in their transformational thinking.

Theme one: disorienting dilemma

Disorienting dilemmas occur when a person's thinking is challenged. In the art exercise students were encouraged to use critical thinking and questioning to consider if their underlying assumptions and beliefs about the world were accurate. As students went through the art exercise, they used their journals to express their feelings and emotions and how their beliefs were challenged, and eventually how their thinking was transformed.

As discovered in the interpretative notations, students expressed in their journals they did not think this exercise would challenge their personal and professional life. One student stated:

> 'To be sincere, I did not think that this class would help shape me in my personal
> or professional life. Even though this class was short, […] I truly feel that it has
> changed my perspective and it has taught me so much about myself that I never
> knew I had. I began to realize that I had misjudged this course, myself, and the
> basic ideas about being creative. Once I began to paint, I quickly began to tell
> myself that I cannot paint and I am not a painter. After observing my class and
> seeing how relaxed they were and knowing that nobody was going to judge me, I
> let go of my inhibitions and began to paint.'

A second student journal expressed:

> 'With this exercise, we were not learning how to lead others; rather, we were learning how to lead ourselves.'

A third student had a similar experience and expressed:

> 'This process for myself was about learning how I make decisions, how I face struggle, and most importantly, humility.'

As a result, these students were sharing thoughts that affirm Mezirow's theory (1991) that experiences are often at the beginning of the process where individuals question their understanding and views and then enter into a transformative learning process that changes their views and beliefs (1991).

The catalyst for this perspective of transformation, in this case the art exercise, usually occurs when people have experiences that do not fit their expectations or make sense to them and they cannot resolve the situation without some change in their views of the world. This fits Block's (2010) discovery that we have moved from the dehumanization of the person, because of technology, to a better understanding of our gifts that were dominant.

Finally, these comments in the journals relate to Mezirow's (1978) theory that an incident or experience outside a person's control can trigger a person's transformative thinking. Critical reflection and transformation can happen all at once ('epochal' transformation), or gradually over time ('incremental' transformation) (Mezirow, 2000).

Theme two: sense-making

The second theme was sense-making, introduced by Karl Weick (1995), which refers to how we structure the unknown so as to be able to act in it. Sense-making involves coming up with a plausible understanding, a map of a shifting world; testing this map with others through data collection, action, and conversation; and then refining or abandoning the map depending on how credible it is.

After the student journals were reviewed, the concept of sense making became clear. There are moments in which the student has an 'ah-ha' moment of seeing possibilities, after doing the exercise, which is called sense-making. This moment is usually spontaneous and emotionally charged. After this moment occurs, we begin to see new action or motivation in the individual. Following are statements from the student reflection journals that concur with this theory.

One student made the following statement:

> 'I perceived the idea from a financial perspective by being a waste of money… however, the experience was relevant to my life.'

A second student described it this way:

> 'Life tends to be much more enjoyable when you do what makes you happy. By being yourself and painting your own life picture your final portrait can be something you are proud of, something you can call your own.'

Finally, another student summarized it this way:

> 'I never saw myself painting and wouldn't imagine that through painting I would tap into myself to create a work of art that inspired me and others. Through this experience I saw how creative I am and realized that everyone in the class was truly creative.'

After going through this experience, what students realised was that their personal possibilities and innate creativity could move them forward to achieve other tasks that could be life changing and hopefully point them towards their career opportunity.

Theme three: self-awareness

Another key element to transformational learning is self-awareness. Self-awareness is having a clear perception of your personality, including strengths, weaknesses, thoughts, beliefs, motivation, and emotions. Self-awareness allows you to understand other people, how they perceive you, your attitude, and your responses to them in the moment. This is a critical factor to student learning because it helps the student begin a self-discovery of their capabilities.

A student described it this way:

> 'It helped me to not shy away from new things and to realize that everybody has their strengths and weaknesses.'

A second student shared:

> 'The experience at the beach was both exciting and intimidating. At first, while watching the artist do his demonstration, I thought I can never do that.'

The biggest fear for a student is failure; one student stated it this way:

> 'Since I don't usually take risks without some sort of knowledge or skill, this was a rather unique experience for me.'

Finally, a student described it this way:

> 'The painting session taught me that as leaders we need to take the initiative to be experimental in a similar way that we force ourselves to find solutions to our unexpected workplace problems.'

Reading these journals, it became evident that students began to gain a new self-awareness that helped them discover new capabilities, which led to self-efficacy, which is the last theme.

Theme four: self-efficacy

A sense of self-efficacy is a key element to a person's creativity (Bandura, 1994, 1997). Creative self-efficacy has been defined as the belief that one has the knowledge and skills to produce creative outcomes (Tierney & Farmer, 2002). Creative self-efficacy may also reflect intrinsic motivation to engage in creative activities (Hennessey & Amabile, 1998; Gong, et al., 2009).

Based on the responses, it was concluded that the experience led to transformative learning, growth, and development of students enrolled in the class. Students reported that they felt safe to be themselves in the environment and feeling a sense of relief when they learned that they would not be graded on the aesthetic qualities of the project.

It is also assumed that a sense of safety and comfort was provided in that students knew each other beforehand, and had participated in small group settings throughout the academic term where a number of topics were discussed, sometimes using the Socratic method of teaching which would have put students on the spot. The time spent together in discussion and reflection with each other would have led to a sense of comfort and safety by the end of the term when this activity took place.

This theme seemed to be the one that most students identified with in their journals. This led to a key word: 'freedom.' One student stated this:

> 'We were allowed to paint whatever we wanted … which added another layer of comfort because of the freedom to express ourselves…'

This freedom comes from self-discovery when a student sated:

> 'I now understand that you don't always want people to know up front what is at
> the deepest core of yourself, but there is still the need to get it out… I also
> learned that sometimes it is enough that you know what you mean, and in that
> context often it is vitally important that only you know what you are truly
> expressing.'

With self-discovery there is a risk for these students, but the risk helps the student begin to become more creative. As one student stated:

> 'When introduced to the idea I was quite nervous and skeptical … I was finally
> able to appreciate and be confident in what I created. I was able to see beyond
> what was in front of me and paint something soul inspiring.'

And this led to an interesting perspective by this student:

> 'The experience taught me that I have a hard time being creative when I'm put
> on the spot, [but I] get more creative as I work through something.'

The journals kept pointing to fear and feeling safe, but breaking through this barrier led to a shift in the perception of risk. One student stated it this way:

> 'I am not a creative person. I fear mistakes and I preferred to do things that
> made me feel safe. Before this painting experience, I thought the safest way to
> paint was to imitate. That day totally changed my mind…'

A great discovery in the student reflection journals was the idea stated by this student who saw creativity coming from being put under pressure:

> 'It's hard to portray a creative mind when you're put on the spot, but after
> comfort sets in, we're fine… this class allowed us to feel comfortable enough to
> express ourselves.'

And then this student began to believe in him/herself:

> 'I had never painted any pictures like on that day. So, I had never believed I can do that. Actually, I did it, also my friends said it's great.'

Learning about self-efficacy came through this project as students stated:

> '… through this, I learned an important lesson on getting past mental blocks and committing to a decision.…The experience contributed… to self-discovery.'

After evaluating the students' journals and identifying the themes, the next step was to see how these themes could be transferred to leadership development in our organisations to improve the capabilities and self-awareness of leaders, where they gain new confidence to take on new challenging tasks.

Implications for leadership development

The purpose of the research began with a desire to better understand leadership development through the examination and the application of an art-based activity. Leadership development, by definition, refers to activities that improve the skills, abilities, and confidence of leaders. Development programs vary greatly in complexity, cost, and style of teaching. Coaching and mentoring are two forms of development often used to guide and develop leaders (Bolden, 2005). This research provides a leadership development tool that can be used in group corporate settings and individual executive coaching.

The need for leadership development

Throughout the activity, students self-reported a new sense of confidence in their ability to be creative. Beyond that, students reported a sense of being creative. In order to create, people must have confidence, and on a deeper level, know that they are creative (Bandura, 1997).

The final outcome of this study resulted in linking students' stories about their engagement with an art-based activity to leadership mind-set development in a classroom setting that led to their belief that they were creative. Not only was this activity applicable to the classroom setting, but it can also be applied to executive coaching, corporate leadership development, team building activities, and life.

This research supports the need for more learning in the workplace. Organisations are creating new job models, which are reconfiguring the business world; because of this, lifelong learning has become an accepted imperative. Eighty per cent of CEOs now believe the need for new skills is their biggest business challenge (Bersin & Zao-Sanders, 2019). For employees, research now shows that opportunities for development have become the second most important factor in workplace happiness (after the nature of the work itself) (Bersin & Zao-Sanders, 2019). At the most fundamental level, we are born with an instinct to learn throughout our lives. So it makes sense that at work we are constantly looking for ways to do things better; indeed, the growth-mind-set movement is based on this human need. Thus, the art experiment has demonstrated that leaders have the capacity to learn and transform how they feel about their creativity and capabilities to become successful in the workplace.

The need for leadership development has never been more urgent. Companies realise that to survive in today's volatile, uncertain, complex, and ambiguous environment, they need leadership skills and organisational capabilities different from those that helped them succeed in the past. There is also a growing recognition that leadership development should not be restricted to the few who are in or close to the C-suite. With the proliferation of collaborative problem-solving platforms and digital 'adhocracies' that emphasise individual initiative, employees across the board are increasingly expected to make consequential decisions that align with corporate strategy and culture. It is important, therefore, that they be equipped with the relevant technical, relational, and communication skills (Moldoveanu & Narayandas, 2019).

It should be noted that organisations that say leadership development is critical to their success are 29 times more likely to have a successful transformation than those where leadership is viewed as not important (Harvard Business School [HBS], 2018). Millennials surveyed want to see significant improvements in leadership development programs. The under-36 set expressed the strongest agreement about the need for innovation in leadership development. Respondents in this age cohort identified poor content, insufficient thinking and expertise from outside sources, and a failure to make a compelling return-on-investment case are the biggest barriers to L&D program effectiveness in their organisations (HBS, 2018).

Since we have established the need for leadership development in organisations, what are solutions? In the concluding section the research using an art experience provides solutions for leadership development in the workplace.

Limitations and recommendations for future research

The study was conducted in a classroom setting, which may or may not be transferable to the workplace. Prior to the exercise there were readings and discussions in group settings online and in the classroom, which certainly influenced some of the outcome. In addition, the reflective papers were written shortly after the exercise, while the effects were still fresh in the minds of the students.

Future longitudinal studies would add strength to the findings, particularly to the belief that one is creative, and the effect of that belief on workplace outcomes. Moreover, the definition of creativity and its uses in the workplace were not defined for purposes of this research paper. Future research should involve quantitative measures to establish not only whether actual mind shift occurred, but also to measure the subjects' use of their new-found creativity and confidence from the art-based experience in the workplace. Finally, measuring the development level of the subjects, in terms of life and work experience, prior to the exercise seems primordial. Not surprisingly, many of the students who participated in the exercise did

not have an 'ah-ha' moment. An instrument to measure a person's openness to be influenced by such an experience would be useful to organisational leadership development programs and coaching.

Conclusion

The outcome from this research provided a useful tool that can be implemented not only in the classroom, but in organisations of all types and in the coaching world. After reading and studying the reflection journals from the students in this experiential exercise, it became apparent that by creating environments where leaders are put into an unknown situation and allowed to become creative, transformational thinking begins to bring on self-awareness and personal discovery towards new capabilities.

The steps proposed for leadership development using an art-based exercise in the workplace are as follows:

(1) Create safe space in the organisational structure and have leaders engage in an art-based experience.

(2) Provide very little structure and allow the leaders to come up with their painting and story.

(3) Have the participants journal and reflect on the exercise, asking probing questions, such as: What did you learn from this exercise? How would you describe your abilities, creativity, and skills after going through this exercise? What did you discover about yourself? What areas would you want to improve in your life when faced with an unknown environment?

(4) Form a roundtable discussion among the participants and have them work through a reflective exercise discussing what happened.

As organisations begin to evolve and the need for sense-making by leaders to create a map for the future becomes imperative, these 'ah-ha' moments will begin to happen, taking the

organisations to new levels. Art-based activities, under the right circumstances, present a safe space for processing and reflection not otherwise available in the workplace (Lewin, 1951). The urgent need is for organisations to create opportunities to allow leaders to experience a transformational activity, such as an art-based activity, to develop the leaders' skills, capabilities, and confidence.

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Lines-of-Inquiry and Sources of Evidence in Work-Based Research

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There is synergy between the investigative practices of police detectives and social scientists, including work-based researchers. They both develop lines-of-inquiry and draw on multiple sources of evidence in order to make inferences about people, trends and phenomena. However, the principles associated with lines-of-inquiry and sources of evidence have not so far been examined in relation to work-based research methods, which are often unexplored or ill-defined in the published literature. We explore this gap by examining the various direct and indirect lines-of-inquiry and the main sources of primary and secondary evidence used in work-based research, which is especially relevant because some work-based researchers are also police detectives. Clearer understanding of these intersections will be useful in emerging professional contexts where the work-based researcher, the detective, and the social scientist cohere in the one person and their research project. The case we examined was a Professional Studies programme at a university in Australia, which has many police detectives doing work-based research, and from their experience we conclude there is synergy between work-based research and lines of enquiry.

Specifically, in the context of research methods, we identify seven sources of evidence: 1) creative, unstructured, and semi-structured interviews; 2) structured interviews; 3) consensus group methods; 4) surveys; 5) documentation and archives; 6) direct observations and participant observations; and 7) physical or cultural artefacts, and show their methodological features related to data and method type, reliability, validity, and types of analysis, along with their respective advantages and disadvantages. This study thereby unpacks and isolates those characteristics of work-based research which are relevant to a growing body of literature related to the messy, co-produced and wicked problems of private companies, government agencies, and non-government organisations and the research methods used to investigate them.

Key words: Line-of-inquiry, evidence, research methods, police detectives, work-based research

Introduction

Forty years ago, Zinnes (1980: 319) coined the term "researchers qua detectives" (researchers as well as detectives). Since then, the parallels between the investigative work of detective police officers in solving crime and social scientists in addressing and seeking to understand human and organizational behaviour have been further noted in the literature. Winks for example equated the method of a historian to a detective (1969) and the method of a detective to a historian (2013), noting that being a historian is "like being a detective": in trying to "make sense of a

series of events…[the historian must] speculate on a number of different causal relationships, search for as much evidence as possible, and then eliminate all the hypotheses that were contradicted by the facts, leaving, ideally, the one hypothesis that must be true" (Winks, 2013: 97). An important precursor to that association had come earlier in 1951 with the acclaimed work of fiction *The Daughter of Time* by Josephine Tey, in which a modern police detective painstakingly reconstructed a case for the innocence of Richard III (d. 1485); her character's logical deductions, sifting of evidence, analytic reasoning and use of method testify to a synthesis of history and detection that Winks would later articulate.

Kaminsky, Rosenqvist and Holmstro (2009: 385) correspondingly likened the assessment phase of nursing to a "detective's work…asking questions and listening carefully…search[ing] for clues", and Smith, Braunack-Mayer, Wittert and Warin (2008: 3) associated the self-monitoring of men's health with "sort of like being a detective". It has been argued, therefore, that what makes a good detective also makes a good researcher, with success in each investigative method (including the application of skills such as pattern recognition [Dror & Cole, 2010]) reliant on an unbiased, systematic, and methodical approach to evidence in order to uncover facts or the 'truth'. As Sherlock Holmes famously declared: "Data! Data! Data!...I can't make bricks without clay" (Konnikova, 2011).

This research paper concerns itself with two interrelated investigative concepts common to both work-based researchers and police detectives: 1) line-of-inquiry; and 2) evidence gathering. However, we acknowledge of course that not all work-based inquiry is identical to the work of detectives but use detective work to highlight the use of our two concepts. We also recognize that not all work-based research applies the concepts in identical ways to each other or as they are described herein. However, the relationship between a line-of-inquiry and evidence to the general conduct of research can be schematically represented by Figure 1.

In this regard, Yin (2016: 108) has stated that "an apt analogy is to the clinical queries made by medical doctors. In asking about ailments that patients might have difficulty describing, the doctors will converse casually with their patients, but the doctors are also following an established line of inquiry to check the symptoms [i.e., the evidence]. While asking their questions, the doctors are entertaining the possible ailments that might be relevant". Like the medical doctor who wishes to establish the underlying cause of a symptom in Yin's (2016) example, a researcher investigates a person, trend or phenomenon (A), and develops a line-of-inquiry, i.e., a 'line of questioning' or a 'line-of-argument' (B) associated with the topic of investigation. The researcher gathers evidence (i.e., raw data) (D) from different sources of evidence (C) and, on gathering the evidence, analyses (E), explains and interprets (F), and then draws tentative conclusions or inferences from the evidence (G) in order to better understand or reveal the 'truth' (i.e., to provide answers, conclusions and/or recommendations) about the person, event or phenomenon (A) under investigation.
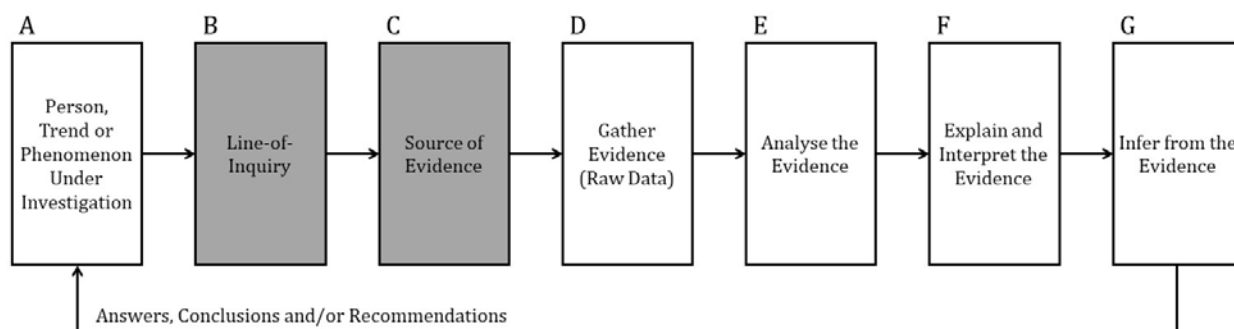

Figure 1: The relationship of line-of-inquiry and source of evidence to the investigative process.

The scientific nature of this process has been long recognised in professional literature (Perkins, 1949: 10). In policing, Berg (1999: 139) described the process represented in Figure 1 as "a scientific and systematic series of activities designed to use varies pieces of information and evidence to explain the events surrounding a crime, identify a suspect, and link that suspect to the crime. In this process, police and detectives use fingerprints and other evidence found at the scene of the crime, computers and other sophisticated technological and chemical advances, and logical reasoning to solve the crime". The research steps in Figure 1 can be identified in Berg's analysis of police detection, with "a crime" corresponding to (A), "fingerprints and other evidence" corresponding to (C), and "logical reasoning" corresponding specifically to (F-G) but also to the entire sequence of steps presented in Figure 1. In Yin's example, the doctor might ask (qualitative) questions about symptoms (A) and follow a line-of-inquiry (B), but she might also recommend other (quantitative) blood tests or an X-ray (C) to isolate and analyse data (D-E) to help explain the cause of symptoms (i.e., the ailment) (F), on the basis of which tentative conclusions can be drawn (G) about how best to effectively treat the underlying health problem (A). Figure 1 thereby locates the fundamental roles lines-of-inquiry and sources of evidence play in successful investigative outcomes.

Moreover, in the same way that bias can affect the dependability and trustworthiness of qualitative research findings and conclusions, the possibility of bias based on several possible causes, including race, is recognised in the literature (Dempsey & Frost, 2007: 215). As such "biased decision-making in criminal investigations can impede or arrest the progress of justice" (Fahsing & Ask, 2016: 203). Thus, for the detective-researcher, issues like investigator bias, stereotyping, selectivity of evidence, presence and potential impacts of compounding variables, threats to reliability and validity of method, inadequate or inappropriate analytical techniques, emergence of rival hypotheses, and making false assumptions or generalizations are relevant to both policing and research in the methodical approach suggested by steps A > G in Figure 1.

The police interview and the qualitative research interview can be sites of bias and must be protected against it. Strathern (2014: 261) refers to the 'scrutability of questions' and the strength of data elicited as safeguards in both sites. For example, in the context of policing and the "human tendency towards selective information search and confirmation bias", Fahsing and Ask (2016: 204) have explained the role of abductive logic in developing a line-of-inquiry and its relation to scientific discovery based on evidence. They note that when "transferred to an investigative context, the preference for such 'positive testing strategies' [i.e., selective information searching] entails serious implications. Specifically, there is an obvious risk that investigative actions become too focused on finding incriminating (i.e., confirming) evidence against a prime suspect, while no efforts are made to find potentially exonerating (i.e., disconfirming) information". In such instances, an adversarial criminal trial in which defense counsel probes and challenges can bring such one-sided cases undone.

Positive testing strategies can also prove disastrous in medicine and other diagnostic sites, which routinely face challenges associated with false negative and false positive diagnoses as well as placebo and nocebo effects. And while the literature associated with 'evidence-based policing' and its relation to the work of a detective is still emerging (e.g., Kalyal, 2019; Telep & Somers, 2019), our goal is to examine the specific characteristics of lines-of-inquiry and sources of evidence in the methodological approaches of work-based research because the relationship between these has yet to be explained. Consideration of the synergies between the practices of police detectives engaged in their work and academic researchers engaged in theirs will be brought together with examples from work-based learning projects undertaken by senior police officers. In this way, any boundary between the academic and the detective becomes uncertain and the detective-as-researcher comes more firmly into view.

In the last 20 years, a number of important pedagogies related to learning and research at 'work' have been advanced. Situated in the world of work more generally, these pedagogies have collectively been referred to under the umbrella term 'work-related learning' (e.g., Allan, 2015), and include approaches such as work-integrated learning (e.g., Jackson, 2015), workplace learning (e.g., Gherardi, 2009), work-applied learning (e.g., Wall, 2017), work-based education (e.g., Zanibbi, Munby, Hutchinson, Versnel, & Chin, 2006), and, importantly for the present study, work-based learning (e.g., Helyer, 2015). For our purposes, we use the term work-based learning (WBL) to mean a transdisciplinary field of learning which "logically refers to all and any learning that is situated in the workplace or arises directly out of *workplace concerns*" (Lester & Costley, 2010: 562), with our emphasis deliberately placed on workplace problems and their solutions. Thus, in WBL the researching practitioner is "concerned with the most compelling and effective real-world 'maps' of *situations* and *phenomena* rather than with either purely theoretical or pragmatically simplified representations" (Costley & Lester, 2012: 259).

Such a conceptualisation can be contrasted to the more common (and generic) concept of workplace learning (WPL), which has so far focused on "retrospective experiential learning" (Fulton & Hayes, 2017) and "professional practice" (Fulton, Kuit, Sanders, & Smith, 2012) rather than work-based problems *per se*. Cacciattolo (2015: 243) for example points out that because "working is interconnected with learning…workplace learning is the way in which skills are upgraded and knowledge is acquired at the place of work", but she fails to mention the all-important wicked, messy and co-produced situations, problems, challenges, and other phenomena of work (e.g., Dostal, Cloete, & Járos, 2005; Fergusson, 2019; Head & Alford, 2015) and the associated investigative methods used to examine them when defining the mission of WBL. These types of problems have been associated with private organisations, government agencies, and non-government organisations.

Precise descriptions about the specific research methods used in WBL have only recently been made. Fergusson, Shallies and Meijer (2019) have identified the centrality of models, methodic-ness, and mixed methods in WBL and their relation to first principles of scientific inquiry, but Costley and Abukari (2015: 11) have noted "the links between practitioner research and research methodologies need further development as this is a key area for practitioners to enhance their working practices especially at postgraduate and doctorate level". Costely and Abukari go on to point out that "research approaches and methodologies have been an important development in universities [and] qualitative research has been at the forefront of these initiatives [but] work-based research projects are not an applied version of an existing theory" and hence further investigation of work-based research methods is warranted.

To achieve our goal of identifying the role of lines-of-inquiry and sources of evidence in work-based research, we have identified the nexus of this study as the WBL and research-based pedagogy conceived and operationalised from within a University in Australia, with which we are most familiar. This higher degree by research (HDR) approach to investigating work is called 'Professional Studies' (Fergusson, Allred & Dux, 2018; Fergusson, Allred, Dux & Muianga, 2018; Fergusson, van der Laan, White, & Balfour, 2019). At the heart of all WBL pedagogies is reflective practice (e.g., Fergusson, van der Laan & Baker, 2019; Helyer, 2015), but Professional Studies also features student-centric learning built around personal and programme learning objectives and a mixed methods approach to researching pragmatic, work-based wicked problems (Mertens, 2015). Using the postgraduate Professional Studies programme at USQ as the context for study is particularly appropriate as some of the researching practitioners within this HDR programme are senior police officers and plain-clothes detectives. The question we ask, therefore, is: how are lines-of-inquiry and sources of evidence conceived and applied in work-based research? We approach this task by using descriptive analyses of white and grey literature

from within the Professional Studies programme and an Australian Police Service, drawing from the authors' collective experience with both police detection and WBL research practices.

Lines-of-inquiry

Given the close association of investigative policing and research, lines-of-inquiry form a central part of both police detection (Fahsing & Ask, 2016) and social science research (Yin, 2016), but sometimes also play a role in medical research (e.g., List, & Gallet, 2001), education (Nordness, Swain, & Haverkost, 2012), law (van Oorschot, & Mascini, 2018) and engineering (Chinowsky (2011). An expanded form of the research process presented in Figure 1 can be seen in Figure 2, in which a line-of-inquiry and sources of evidence have been highlighted and labelled (B) and (C).

Once the topic of investigation, problem, theory, and research question (RQ) have been identified (A), the researcher, according to this model, develops a mental framework and a line-of-inquiry (B). Together these two preliminary approaches (one psychologically tacit and the other overt) run in parallel for the purposes of developing a research protocol.
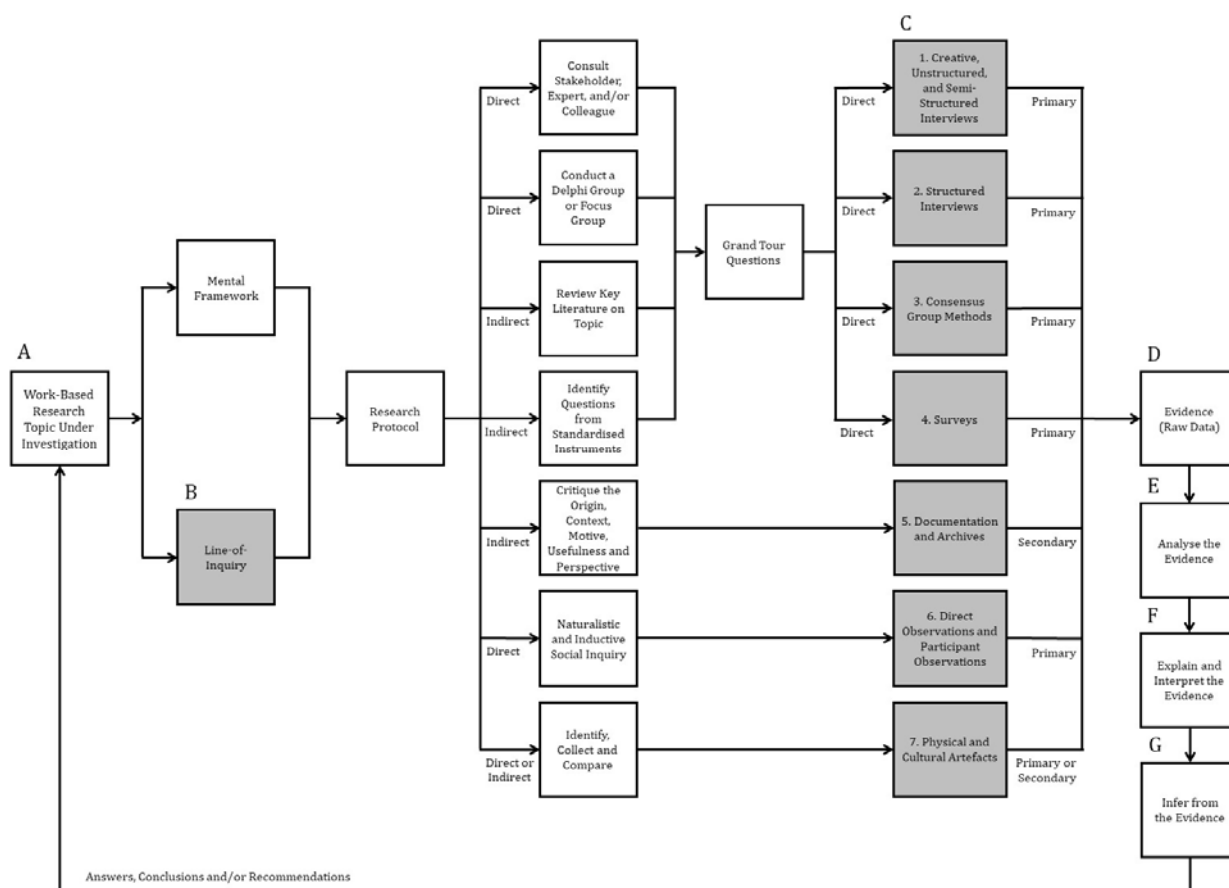

Figure 2: Relationship of direct and indirect lines-of-inquiry to sources of primary and secondary evidence in work-based research.

A mental framework, sometimes called an 'investigative hypothesis', is an adjunct to the line-of-inquiry. As suggested by attribution to the realm of the mental (or even imaginative), a researcher or police investigator's inner emotional and intellectual worlds are part of this framework. The rational 'hunch' can be both 'visceral' and a reasoned response based on experience (George Mason School of Law, 2007: 83). Akin to his earlier analogy of the doctor,

Yin (2016: 109) maintains that when solving crimes, a police detective investigates "at two levels":

> The first involves collecting evidence [i.e., data collection on the basis of a line-of-inquiry], whereas the second involves simultaneously entertaining their own ideas about how and why a crime might have occurred. The questions lead to the detectives' hunches and theories about crime and may direct their attention to new evidence whose significance might first have gone unappreciated. The hunches and theories may be considered the detectives' mental framework.

According to Fahsing and Ask (2016: 218), like researchers in Yin's examples, detectives have an "ability to identify relevant investigative hypotheses and formulate appropriate lines of inquiry", and once a line-of-inquiry has been identified, the detective-researcher decides on the appropriate approach to gathering evidence, i.e., Data! Data! Data! or (D) in Figure 2, and plans how to conduct the search. This stage of investigation involves the development of a research protocol, which consists of the aims and objectives required to answer the investigative question(s): what is it I wish to know, and how am I going to go about knowing it? Thus, the protocol reflects a broad research line-of-inquiry accompanied by a mental framework, both of which are associated with the research topic, theme, or construct under investigation (A).

As shown in Figure 2, in work-based research the research protocol can take a number of forms depending on the type of evidence to be examined. In the case of interviews, consensus group methods, and surveys, four authoritative sources may be used to inform and guide questioning. In the case of work-based research, the research protocol may necessitate consulting stakeholders, experts or colleagues from the same work-base or practice domain who come together to brainstorm about what questions are likely to elicit the responses needed to understand the research topic, or could involve convening a focus group or Delphi group of experts for the same purpose. Similarly, the researcher could identify relevant questions from the published literature which relate to and extend knowledge about the research topic or could re-use questions previously posed by other researchers or questions derived from standardised test instruments which have yielded valuable data on the topic in the past.

In all cases, these authoritative sources form the basis of inquiry because the practice results in the generation of 'grand tour' questions, i.e., questions the researcher needs in place in the right order to extract data required to answer (or at least partially answer) the overarching research question(s) related to the investigation (Leech, 2002). Grand tour questions serve as the formal architecture of the interview or survey process, cover the main topics of the interview or survey, form the basis of follow-up questions on more specific aspects of the research topic, and may represent the lead-off questions in an individual or group interview or survey. Thus, the line-of-inquiry (B) and mental framework are operationalised through the research protocol in order to define the various kinds of information to be elicited from the interview, consensus group, or survey (C). In this approach, the interviewee, group or survey respondent can also be considered a 'source of evidence'.

Other sources of evidence may also be investigated, including organisational or policy documents and archives. These text-based sources again bring together the detective and the historian. Both will read the textual content through a discursive lens, seeking not only content from the dead letter on the page but the deeper meaning and emphases beneath the surface and between the lines. Sometimes what is *not* said or what has been omitted can be as meaningful as what is included and archival silences are revealing (Guberek & Hedstrom, 2017). In using these sources, the research protocol requires a critique of the origin, context, motive, usefulness and perspective of the document's original author(s), whether the sources are a

continuous running record or discontinuous record, direct and/or participant observations for which naturalistic and inductive social inquiry are required, and/or physical and cultural artefacts which require a protocol of identification, collecting and comparing during interrogation. Archives also provide traces of human behaviour (Canter & Alison, 2003: 162). In the case of police detection, physical artefacts may also be forensically examined.

According to Chinowsky (2011: 3), the "formalization of a line of inquiry requires three elements: a foundational definition, an operational context and a path forward to guide researchers within the domain"; in policing and social science research, this "path forward" results in the formation of either direct or indirect lines-of-inquiry, both of which can be effective. A direct line-of-inquiry refers to evidence gathering which yields data to support the 'truth' of an assertion directly without an intervening inference, whereas an indirect line-of-inquiry refers to evidence which establishes collateral facts from which the main fact may be inferred, such as circumstantial or supporting evidence. In policing, Berg (1999: 163) points out that a detective uses an indirect line-of-inquiry "in an attempt to draw out the truth without specifically addressing the literal facts or circumstances of the case….It is a little like sneaking up on the truth, rather than coming out immediately and asking [about it]. It is also a non-accusatory style of questioning". In contrast, direct lines-of-inquiry, according to Berg, "work best with experienced criminals", and involve coming straight to the point of the inquiry. However, in Berg's example, both indirect and direct lines-of-inquiry use the same source of evidence (i.e., a suspect, but presumably could also apply to a witness).

As shown in Figure 2, direct or indirect lines-of-inquiry in work-based research are applied differently from each other. For example, in developing grand tour questions in research, consulting stakeholders and others as well as conducting consensus group methods to gain insight into the topic are direct lines-of-inquiry, whereas reviewing literature and standardised instruments are indirect lines-of-inquiry, allowing the researcher in Berg's conception to "sneak up on the truth". Moreover, all four sources of evidence associated with the development of grand tour questions and direct and participant observations are direct lines-of-inquiry, while documentation and archives analyses are considered indirect lines-of-inquiry (because they are not directly related to the main phenomenon under investigation and are usually of a secondary or inferential nature) and use of physical and cultural artefacts can reflect either a direct or indirect line-of-inquiry because the evidence may directly assert 'truth' or may be circumstantial in nature. The output from these direct and indirect approaches is evidence or raw data (D), which need to be analysed (E), the results of which require explanations, including considerations of cause (i.e., explanans) and effect (i.e., explanandum) and craft rival and real-world rival hypotheses (Yin, 2016: 173), and interpretations (i.e., consideration of relevance and importance of the finding) (F), from which sound inferences can be made (G).

Consider the following example of a line-of-inquiry (B) and its relation a source of evidence (C) from a current policing Professional Studies work-based research project embedded within the QPS. Having identified a significant gap in training, the research topic considers how to develop and implement an effective training programme for police investigators (A) by asking: What comprises an Investigative Coordinator's Course for Senior Investigators of the rank of Detective Sergeant and Detective Senior Sergeant and how might it be implemented? Two main lines-of-inquiry (B) were then identified: 1) whether current training programmes adequately address the knowledge, skills and experience required of a detective (direct and indirect lines-of-inquiry); and 2) emerging investigative strategies required of a detective (direct line-of-inquiry).

By interviewing stakeholders and colleagues and by interrogating through that discursive lens policy and training documents for what is said but also what may be omitted or absent, the

researcher can assess current-state training 1) and by interviewing and conducting a focus group with stakeholders and colleagues, the researcher can gather evidence related to future-state training 2). These lines-of-inquiry and subsequent evidence (D) can be analysed (E), explained and interpreted (F), and thereby used to understand current-state and infer future-state training needs for senior police investigators (G). In this example, work-based research would then lead to an actual workplace project by providing the evidence necessary to develop and implement a revised or new Investigative Coordinator's Course, which can be assessed and evaluated on the basis of evidence, thereby fulfilling the requirements of (A).

Sources of evidence

Choosing the right source of evidence (C) is fully dependent on the problem to be addressed and RQ to be answered (A) and the appropriate line-of-inquiry adopted by the researcher to answer it (B). For example, in the work-based case cited above, it appears entirely appropriate that the researcher directly elicit the opinions of stakeholders and colleagues and indirectly analyse policy documents in order to answer the RQ rather than examine physical and cultural artefacts.

It is not within the scope of this paper to identify and explain all the sources of evidence available to a researcher when examining work-based phenomena. We have therefore identified the seven main sources of evidence which in the literature and through experience within the Professional Studies programme have been associated with work-based research. These sources are: 1) creative, unstructured, and semi-structured interviews; 2) structured interviews; 3) consensus group methods; 4) surveys; 5) documentation and archives; 6) direct observations and participant observations; and 7) physical or cultural artefacts, shown as (C) in Figure 2 and discussed in more detail below.

1. Creative, Unstructured, and Semi-Structured Interviews. As a source of evidence, short- and long-form interviews are a core technique in work-based research. Several variations of non-structured interviews have been identified, including ethical integrity, life history, situational, patterned behaviour description, creative, unstructured, and semi-structured, of which the last three types will be highlighted.

According to Mason (2010), creative interviews involve "exploration of verbal and non-verbal dimensions—material, spatial, environmental, non-human, embodied, sentient and sensory—and their intersection". Creative interviews can be useful when the researcher wishes to learn about operational "processes, nuances, richness, meanings, experiences, dynamics, connections, and complexity" and are often associated with 'why' and 'how' research questions or nuanced understandings of 'what'. To paraphrase Mason (2010), researchers who are interested in actors' perspectives and experiences, in situational and embodied knowledge, knowledge which is contextual and particular, and knowledge as constructed and created not simply collected, find creative interviews of value. As a result, creative interviews result in an understanding of processes 'in the round' rather than the logic of theoretical constructs but are based on a line-of-inquiry and research protocol.

Unstructured interviews (Zhang, & Wildemuth, 2009), sometimes called 'discovery interviews' or 'non-directive interviews', are also exploratory in nature and may occur with or without the researcher devising questions prior to the interview (i.e., will use an implicit line-of-inquiry and research protocol but may not use grand tour questions). Being conversationally based on the interviewee's responses, unstructured interviews proceed like a friendly, non-threatening conversation because each interviewee is asked a different series of questions depending on where the conversation leads. Hence, it is the interviewee who decides what is and is not important in an unstructured interview.

In policing, these types of interviews are referred to as 'cognitive interviews' (Fisher, Milne, & Bull, 2011) and have been found most effective when interviewing cooperative witnesses, victims or suspects. This method focuses on the interviewee and their narrative and locates the interviewee as the active party in the interview process, a process designed around the so-called PEACE model (Brooks, Snook, & Bull, 2015). In simple terms, the interviewee knows why s/he is being interviewed and is afforded the opportunity to provide all the information s/he sees as relevant via an uninterrupted narrative. Contextual reinstatement is encouraged where the interviewee recalls the incident (often chronologically, in a before, during and after format).

Police investigators are taught that this is the best way to obtain a more thorough, reliable and accurate account of a crime rather than using a Q&A format. After the free narrative, questioning can (and often does) continue with the interviewer identifying specific topics to probe and discuss. Thus, cognitive interviews are described as being like a funnel, with open questions at the top and direct, closed questions at the bottom, with questioning progressing from open to closed if and as required. As well as witness/victim versions and suspects admitting offences, the method is also useful for suspects denying allegations. For example, if a robbery happened yesterday and the suspect denies the offence, a cognitive interview of their movements and interactions yesterday will provide details investigators can used to corroborate or disprove the suspect's version of events as opposed to a simple (and closed-ended) denial.

The most common interview in work-based research is semi-structured (Kallio, Pietilä, Johnson, & Kangasniemi, 2016). Semi-structured interviews form the dominant type in both qualitative and mixed methods research. In this approach, the relationship between interviewer and interviewee is a social one and the interview is not tightly scripted but open-ended; the researcher has an explicit line-of-inquiry and follows a research protocol and grand tour, but the questions posed may differ according to the context and setting of each interviewee. Being open-ended, questions are deemed important but are also designed to elicit responses which do not pre-empt the interviewee or beg the question and encourage use of their own words. Semi-structured interviews thus seek out the details of experience and ask interviewees to reconstruct and explain their experience in their own words. Thus, researchers using semi-structured techniques seek to understand the interviewee's world, including understanding the meaning of their words and phrases. In research of gender and diversity in Australian Federal policing, an example of an unstructured question would be: tell me about your experience as a police officer, but a semi-structured one would be: what are your views about female police officers and their role in the Australian Federal Police?

Some quantitative researchers maintain these three approaches lack the reliability and precision of a structured interview, while qualitative researchers maintain the comparison is a meaningless one because data from unstructured interviews are not designed to be generalisable but can still be trustworthy.

2. Structured Interviews. We have separated structured interviews from the preceding three types because they are confirmatory in nature, typically use categorical questions, and are mostly quantitative. Structured interviews are conducted using carefully scripted, repeatable, closed-ended questions according to a proscribed list of grand tour questions (Rowley, 2012). In structured interviews, the researcher adopts the formal role of 'interviewer' and tries to adopt a uniform behaviour and demeanour when interviewing different interviewees. Such interviews are typically part of a survey or poll and may seek to draw qualitative and/or quantitative data from a representative sample of interviewees. As a consequence, structured techniques tend to focus on core dimensions or constructs and limit responses to those dimensions or constructs that have been predefined by the researcher (i.e., questions are closed-ended and answers often single-word, sometimes only allowing categorical answers), including word usage, phrases and

hence meaning. Structured interviews are therefore confirmatory in nature, and it is the interviewer who decides what is and is not important.

Data derived from such interviews are said by some researchers to yield more reliable and valid data, especially in clinical, forensic or investigative contexts, not least because they follow rigid rules and can be analysed statistically and generalised to the larger population (Craig, 2005: 38). In this sense, structured interviews can be treated quantitatively and may form the quantitative aspect of an exploratory, explanatory, concurrent, or embedded mixed method design while being supplemented with other qualitative techniques. In the study of gender and diversity in policing for example, a structured interview question would be: do you think the Australian Federal Police should employ more women? In police interrogations, 'conversational management' is closely aligned with structured interviews and the stereotypical 'interrogation' style of interview. Such an approach is preferred when dealing with uncooperative suspects and witnesses. Conversational management is a direct interviewing technique which uses a closed-ended style that does not provide significant opportunity for the interviewee to provide a free narrative; hence, responses are a definitive yes or no. The focus of these interviews is on the interviewer's questions and the interviewee is but a passive participant.

3. Consensus Group Methods. Consensus group methods include focus groups, Delphi groups, and nominal groups. A focus group is a source of evidence based on data collected by the researcher from a small group of key informants having similar attributes, experience or work-based focus (Longhurst, 2003). In a focus group, the researcher leads the group discussion in a non-directed manner but using grand tour questions, with the objective of identifying the "perspectives of the people in the group with as minimal influence by the researcher as possible (Yin, 2016: 336).

In a similar way, a Delphi group allows the researcher to gather evidence from a group of experts according to the following stages: "identifying a research problem, selecting participants, developing a questionnaire of statements, conducting anonymous iterative postal or email questionnaire rounds, collecting individual and group feedback between rounds and summarizing the findings. This process is repeated until the best possible level of consensus is reached, or until a predetermined number of rounds have been completed. Participants never meet or interact directly in the classically-described Delphi method" (Humphrey-Murto, Varpio, Gonsalves, & Wood, 2017: 15), which is an intriguing parallel to correct police and legal procedure in which witnesses would not be allowed to interact. Nominal groups share several features of focus and Delphi groups, but a nominal group "is a structured *face-to-face interaction* usually involving 5-12 participants (Humphrey-Murto et al., 2017: 15).

4. Surveys. Using categorical, ordinal and/or ranked questions, surveys are a common source of explanatory evidence in work-based research (e.g. Lester & Costley, 2010; Swail & Kampits, 2004) because they yield inferentially analysable quantitative data said to represent larger general and working populations (Nardi, 2018). Work-based researchers use surveys when they wish to obtain or develop an understanding of the lived experiences of other people and the meaning they make of those experiences, typically as part of a larger programme of investigating organisations, workplaces, social phenomena, practice domains, and work more generally. Surveys can also explain relationships between people, and can examine how we know, learn, educate, and develop as human beings, but important questions associated with the relationship between probability and non-probability samples and between response rates to representativeness of populations using survey techniques have also been discussed (Cornesse & Bosnjak, 2018). In an embedded, mixed methods study of workplace health, safety and wellness for example, a work-based researcher in Professional Studies included a leader's 360-degree survey tool, specifically a Life Styles Inventory (LSI), to collect and distinguish

responses to 240 inventory items and measure 12 thinking patterns or styles and their effectiveness.

5. Documentation and Archives. The examination and interrogation of documents and archives is particularly well suited to work-based research because they allow for the analysis of content created locally or collaboratively by organisations, governments and/or people in work environments. For a historian, archives comprise their 'primary sources' but in work-based research documents and archives typically supplement other primary sources of evidence, and may include memoranda, letters, diaries, administrative documents (such as proposals, progress reports or policy documents), public-use files (such as census and other statistical data made available by state or federal governments), maps and charts, in-house commissioned survey data, formal studies or evaluations of work environments, and articles which have appeared in industry-related or mass media. As such, diversity of data rather than uniformity prevails in type, frequency and availability. For example, a recent Professional Studies' programme of research on psychological well-being, which asked: What are the current psychological support mechanisms provided to the Australian Police Officers after an officer-involved shooting, required a systematic analysis of internal documents associated with so-called 'post-incident occurrence reports'.

However, Yin (2016: 117) cautions the researcher to "be careful to ascertain the conditions under which [a document or archive was] produced, as well as its accuracy. Sometimes, the archival records can be highly quantitative, but numbers alone should not automatically be considered a sign of accuracy". Work-based research can, however, uncover an understanding of an institution's or government's social or organisational life based on what has *actually occurred* rather than on a set *a priori* assumptions about what the researcher thinks might have occurred. While it is tempting to consider an archival source as akin to an 'eye witness' or for information 'hot from the archive' to have a distinctive authority or immediacy, a further note of caution: archives and documents are fundamentally different from other sources of data. The researcher will determine how many interviews and of what type or what type of survey they will conduct; archives and documents, on the other hand, exist in types and quantities beyond the control of the researcher, can be incomplete by accident or deliberate destruction, and can be discontinuous or continuous. For example, a researcher wishing to use records to understand the longer history of Indigenous interactions with police in Australia would find the records have been lost (Richards, 2008).

6. Direct Observations and Participant Observations. Wildemuth (2009a, 2009b) has described the nature and relationship of direct and participant observations. In case study research, as in work-based research, Yin (2016: 121) explains that because research "takes place in the real-world setting of the case, you are creating an opportunity for direct observation. Assuming that the phenomena of interest have not been purely historical, some relevant social or environmental conditions will be available for observation. Such observations serve as yet another source [of evidence, and] can range from formal to casual data collection activities" based on a line-of-inquiry and research protocol.

Yin (2016: 122) goes on to point out that "observational evidence is often useful in providing additional information about the topic being studied…observations about the group in action can yield invaluable data to complement interviews with individual group members [or a consensus group]…observations can add new dimensions for understanding the actual uses of a new technology or of a new curriculum and any problems encountered". Such was the case for a recent Professional Studies' project which used direct observation to assess the time taken by the Australian police officers to access data via a new mobile intelligence dissemination product. Participant observations go further by allowing the researcher to participate in phenomena as a

staff member or key decision maker in an organisational setting not merely being a passive observer of them. However, as noted in Table 2, this source of evidence as with all others is not without limitations.

7. Physical and Cultural Artefacts. Perhaps used more extensively in police investigations and forensic anthropology than in work-based research, physical and cultural artefacts can be a valuable source of evidence. Also called 'real evidence' or 'material evidence', an artefact in a work-based context can include a "technological device, a tool or instrument, a work of art, or some other physical evidence. Such artefacts may be collected or observed…" (Yin, 2016: 125) and can also be accidentally discovered. Yin (2016: 125) goes on to note that while artefacts may have less "potential relevance" in some cases, "when relevant, the artifacts can be an important component in the overall…study". Such is the case in a current Professional Studies' project on the development of a new Operational Skills and Tactics (OST) facility for which a postgraduate student is required to visit Australian and international police and military training centres to gather data on construction techniques and operational designs.

The methodological features of each source of evidence are presented in Table 1. These include the type of data yielded by the source (i.e., primary or secondary data), the research method type, whether the source can be tested for reliability and validity in the case of quantitative data or assessed for dependability and trustworthiness in the case of qualitative data and thus whether generalisations may be drawn from the data, and the types of analysis generally associated with each source of evidence.

As shown by Fergusson, Shallies and Meier (2019), work-based research may embrace either quantitative, qualitative, or mixed methods approaches, and typically views phenomena through a Pragmatist or Constructivist lens. Thus, each source of evidence yields either primary data (i.e., data collected by the researcher from first-hand sources, such as an interview) or secondary data (i.e., data collected previously by someone else, such as data located in government policy documents), the researcher applies a research method which is either qualitative, quantitative or mixed methods, which yields data which are either reliable/dependable or valid/trustworthy to be analysed using a variety of different analytical techniques.

Take the case of data from a semi-structured interview. Data result from a direct line-of-inquiry with a primary source, are either gathered via a qualitative or mixed methods research approach, are dependable, trustworthy, are, to use Yin's (2016: 37-38) phraseology, analytically generalisable but not statistically generalisable, and can be analysed using a variety of techniques, including thematic, saliency and basic content analysis. In contrast, data derived from a physical artefact might result from an indirect line-of-inquiry with a secondary source, may be gathered via a quantitative approach, may be reliable and valid depending on the characteristics of the artefact, and may be analysed using direct observation, forensic analysis and/or logical reasoning.

Qualitative and some mixed methods work-based researchers do not use instruments with established reliability and validity metrics. However, like their quantitative cousins, they too must show how their findings are credible and confirmable, and where applicable transferrable and generalisable. Like reliability in quantitative research methods, in Table 1 'dependability' means the stability of data over time and over conditions, and the extent to which qualitative or mixed methods research can be repeated by others resulting in findings that are consistent (Golafshani, 2003). In naturalistic settings, work-based researchers recognise that reality is socially constructed and constantly changing, and that dependability of method originates from reliably capturing the changing conditions of the work settings; these can occur through a variety of means but include stepwise replication and inquiry audit.

Table 1: Sources of evidence and their methodological features.

Source of Evidence	Type of Data	Type of Method	Reliability	Validity	Type of Analysis
1. Creative, Unstructured, and Semi-Structured Interviews	Primary	Qualitative; mixed methods	Dependable	Trustworthy; analytically generalisable, but not statistically generalisable	Thematic; salilency; basic content; interpretive content; qualitative content; discourse; dimensional, situational; categorical; or contextualising
2. Structured Interviews	Primary	Qualitative; quantitative; mixed methods	Reliable; dependable	Valid; trustworthy; analytically and statistically generalisable	Statistical analyses, including descriptive and inferential; thematic; salilency; basic content; interpretive content; qualitative content; discourse; dimensional, situational; categorical; or contextualising
3. Consensus Group Methods	Primary	Qualitative; mixed methods	Dependable	Trustworthy; analytically generalisable, but not statistically generalisable	Thematic; salilency; basic content; interpretive content; qualitative content; discourse; dimensional, situational; categorical; or contextualising
4. Surveys	Primary	Quantitative; mixed methods	Reliable	Valid; analytically and statistically generalisable	Statistical analyses, including descriptive and inferential
5. Documentation and Archives	Secondary	Qualitative; mixed methods	Dependable	Trustworthy; analytically generalisable, but not statistically generalisable; continous or non-continous; partial or complete	Thematic; salilency; basic content; interpretive content; qualitative content; discourse; dimensional, situational; categorical; or contextualising
6. Direct Observations and Participant Observations	Primary	Qualitative; mixed methods	Dependable	Trustworthy; analytically generalisable, but not statistically generalisable	Thematic; salilency; discourse; dimensional, situational; categorical; or contextualising
7. Physical and Cultural Artefacts	Primary or Secondary	Quantitative; qualitative; mixed methods	Reliable or dependable	Valid; trustworthy, analytically generalisable but not statistically generalisable	Direct observation; forensic analysis; logical reasoning

Table 2: Advantages and disadvantages of sources of evidence in work-based research.

Source of Evidence	Advantages	Disadvantages
1. Creative, Unstructured, and Semi-Structured Interviews	▪ Can uncover and probe key evidence, despite lack of questions or clear line-of-inquiry ▪ Can provide insight into, and explanations of, a phenomenon, as well as the personal opinions of participants ▪ Non-threatening technique ▪ Creative interviews can involve observations and explorations of verbal and non-verbal dimensions and their intersection(s) ▪ Unstructured interviews are flexible because questions can be adapted and changed according to answers received ▪ Semi-structured interviews can focus directly on research topic and moderately strong lines-of-inquiry ▪ Can explain 'why' and 'how' as well as 'what', 'where', 'when' and 'who' ▪ Creative and unstructured interviews are exploratory in nature; semi-structured interviews can be both exploratory and confirmatory	▪ Bias can occur due to poorly articulated questions and underdeveloped mental framework ▪ Inaccuracies in evidence can occur due to response bias of interviewees ▪ Inaccuracies in evidence can occur due to poor recall of interviewees ▪ Interviewees may say what the interviewer wants to hear, resulting in misleading conclusions about evidence ▪ In creative and unstructured interviews, it is the interviewee who decides where the interview will lead, and hence a limited ability for the researcher to develop a line-of-inquiry ▪ Lack of reliability due to unstructured nature of some interview techniques ▪ Easy to mislead interviewer with false or concocted evidence ▪ Responses are difficult to test for reliability ▪ Interviewers often lack the skills needed to conduct creative and unstructured interviews, including the ability to establish rapport and knowing when to probe
2. Structured Interviews	▪ Can focus directly on research topic and line-of-inquiry ▪ Can provide explanations for evidence ▪ Can examine a strong line-of-inquiry ▪ Can generally explain 'what', 'where', 'when' and 'who' rather than 'why' or 'how' ▪ Assure anonymity ▪ Easy to replicate ▪ Responses can be tested for reliability and validity ▪ Relatively quick to carry out ▪ Confirmatory in nature	▪ Blindspots can miss key evidence because of predetermined mental framework and/or line-of-inquiry ▪ Responses may not reflect the general population or working population ▪ Lack of generalisability if participants are incorrectly selected or too few in number ▪ Responses limited to numeric findings and lack detail due to closed-endedness of questions ▪ Lack flexibility, and new, unscripted or off-the-cuff questions or lines-of-inquiry cannot be asked, and a strict interview schedule must be followed
3. Consensus Group Methods	▪ Evidence can represent the opinion of a group of individuals who have had a common experience or hold a common view ▪ Gains in efficiency when 'interviewing' a group rather than multiple individuals ▪ Moderately strong lines-of-inquiry can be pursued ▪ Individuals may express themselves more freely and accurately when	▪ Bias due to poorly articulated questions ▪ Response bias due to peer pressure ▪ Inaccuracies due to poor recall of group participants ▪ Group members say what interviewer wants to hear or what s/he thinks the group wants to hear resulting in faulty evidence ▪ Group think ▪ Evidence can be tainted if interviewer/ moderator is not experienced in working

	speaking within a group ▪ Can explain 'why' and 'how' as well as 'what', 'where', 'when' and 'who' ▪ Exporatory and confirmatory in nature	with groups ▪ Superficial evidence; loss of deep evidence ▪ Difficult to maintain anonymity in a group ▪ Groups can be dominated by one or two strong personalities, thereby tainting the group's evidence
4. Surveys	▪ Evidence reflects the attitudes, preferences, and opinions of a large number of participants ▪ Rigorous technique with systematic design, implementation, and analytical properties ▪ Generalisable to both the working population and the general population (i.e., high external validity) ▪ Can yield descriptive, behavioural, and/or preferential information ▪ Generally explain 'what', 'where', 'when' and 'who' rather than 'why' or 'how' ▪ Confirmatory in nature	▪ Responses may not reflect the general population or the working population ▪ Lack of generalisability if sample incorrectly selected or too few in number ▪ Participants in work-based environments may be suffering 'survey fatigue' and thus not take the questionnaire seriously ▪ Closed questions and limitations placed on answers may bias responses ▪ Allow only for limited or narrow lines-of inquiry ▪ Responses limited to numeric findings
5. Documentation and Archives	▪ Evidence can be reviewed repeatedly ▪ Evidence can contain the exact names, references, and details of a person, phenomenon or event ▪ Can broadly cover a long period of time, many events, and many settings ▪ Precise evidence (and in the case of archives, may usually be quantitative) ▪ Can explain 'why' and 'how' as well as 'what', 'where', 'when' and 'who' ▪ Confirmatory in nature	▪ Can be difficult to find and retrieve evidence ▪ Biased selectivity of evidence if the collection of documents is incomplete, which is highly possible ▪ Potential unknown or unrecognised reporting bias due to evidence having been tainted by undeclared bias of original document author ▪ Access may be deliberately withheld for privacy, confidentiality, or other reasons ▪ Access may be technically difficult in some circumstances
6. Direct Observations and Participant Observations	▪ Can cover actions and phenomena in real time and in real-world settings ▪ Can cover the context of a research topic and its participants ▪ Insightful into interpersonal behaviour and motives ▪ Can locate researcher at the heart of an event or phenomenon ▪ Unobtrusive measures ▪ Can explain 'why' and 'how' as well as 'what', 'where', 'when' and 'who' ▪ Exploratory in nature	▪ Time-consuming ▪ Broad evidentiary coverage is difficult without a team of observers ▪ Actions and events may proceed differently to normal because participants know they are being observed ▪ A significant number of hours are required by human observers to gather meaningful evidence ▪ Potential bias due to participant-observer's manipulation of events or evidence
7. Physical and Cultural Artefacts	▪ Evidence can be reviewed repeatedly ▪ Evidence can contain the exact names and details of a past person, phenomenon or event ▪ Provide insight into cultural and anthropological features of people, a place or phenomenon ▪ Provide insight into technical	▪ Limited selection options when choosing artefacts ▪ Physical artefacts may be unavailable to the investigator ▪ Interpretation of relevance or meaning of physical artefacts can be difficult and time-consuming ▪ May require technical or interpretive expertise beyond the generalist

	operations and applications ▪ Provide a variety of stakeholders with the opportunity to compare and debate the meaning and nature of evidence ▪ Allow direct measurement, counting and/or testing ▪ Provide 'hard' evidence, which tells its own story ▪ Generally explain 'what', 'where', 'when', and 'who' rather than 'why' or 'how' ▪ Confirmatory in nature	researcher ▪ May be tampered with, concealed, or destroyed (knowing that it may be wanted for research or a judicial proceeding, or is being sought by law enforcement officers) ▪ Access may be deliberately withheld for privacy, confidentiality, or other reasons ▪ Access may be technically difficult in some circumstances

Similarly, 'trustworthiness' is associated with validity in quantitative research (Pitney, 2004), and includes consideration of credibility (levels of confidence in the 'truth' and accuracy of findings), confirmability (degrees of neutrality in the findings, and how the researcher controlled for bias and personal motivations), and transferability (how the work-based researcher demonstrates findings are applicable to other work-based contexts). Nevertheless, each of the seven sources of evidence have advantages and disadvantages, and these have been detailed in Table 2, which has been expanded from Yin (2016: 114).

Conclusion

Sherlock Holmes' cry of 'Data! Data! Data!' continues to echo through social science research and detective work. It may even be amplified, and analogies broadened. The case a lawyer presents in an adversarial trial intended to convince beyond a reasonable doubt relies on corroboration, cross-matching and checking evidence, and the mental construction of a bigger picture (Sagor, 2010: 109). The nurse, the medical doctor, and the historian are among those who systemically ask questions and use lines-of-inquiry and multiple sources of evidence in order to understand people, trends and phenomena. Similarly, Zinnes (1980: 339), who identified parallels between detective police investigations and research 40 years ago, stated "the difference between great detectives and poor ones lies ultimately in the ability to make the creative leap from the evidence to the full picture. But surely, assembling as many clues as possible in as coherent a way as possible provides the best possible base from which to make such leaps".

The fields that a detective may work across, from the instinctive to the systematic, draw upon the many different types of evidence discussed in this paper. Lines-of-inquiry and evidence gathering have been explored using USQ's Professional Studies HDR programme as the site of an intersection between policing and the scholarly academy. The increasing number of senior police officers enrolling in this programme have made it a timely necessity to give sustained consideration to where and how lines-of-inquiry and sources of evidence, notably the main sources of primary and secondary evidence used in work-based research, interact. In discussing the possible sources of evidence in work-based research examples have been provided from current professional development-based research projects undertaken by senior police officers which rely upon the systematic use of these sources, although these reflections are salient beyond one university programme.

In the context of policing, it can be concluded that "describing detective work as a science is seen as increasingly relevant with the growing influence of forensic science and investigative psychology (e.g., interviewing and criminal profiling). This approach removes the mystery

around detective work and offers an opportunity to take on a more evidence-based approach, grounded in science, to the development of detectives" (Westera, Kebbell, Milne, & Green, 2016: 2). This observation however may also run in the opposite direction: social science researchers may also benefit from an association with and invocation of the evidential rigour of detection, where the data elicited must withstand rigorous scrutiny and testing.

The data presented by this paper represents one example of how practitioners bring knowledge, skills and expertise to the sphere of WBL and research in a higher education context. However, what we have attempted to show in the example of police detectives, there is not only an advantage to the in-depth knowledge, skills and expertise insiders bring to higher education, but a valuable additional synergy facilitated through this approach to learning. For work-based learners in a variety of fields this paper thus represents a working example of how synergy can be created in WBL and within a specific profession, but also points to relevance for a wider range of researchers in other fields of investigation.

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Examples of practice-based curricula in higher education

Introduction to four examples of practice-based curricula at Middlesex University
Carol Costley

Example 1. Meri Juntti, Brief Cases at Middlesex

Example 2. Loraine Leeson, Practice-Based Teaching in MA Art and Social Practice and BA Fine Art Social Practice

Example 3 Duncan Allardyce, Evaluation of an Inquiry-based laboratory approach

Example 4 Bruce Thompson and Mark Burley, The Assessed Performance Review Meeting / Appraisal Interview

The examples here are a small but compelling sample of how practice is employed in curriculum design in four different subject areas at Middlesex University. There are changes in expectations surrounding how graduates should be more prepared for work especially in the way they behave, what they should know, and what they need to do to be successful. These changes have led to dynamic teaching and learning ideas proposed by educational experts, academicians, policy makers and researchers and these examples constitute just a few of them.

At Middlesex all students engage in practice-based learning which is underpinned by academics' research and practice to ensure they are at the cutting edge of their subjects and professional practice. Part of the aim is that curricular and co-curricular experiences will be co-created with students, employers and professional bodies. The diversity of the students has become a resource and is a distinctive feature of their learning and personal development. Personalised academic, professional and peer support is provided. Evidence, innovation and research continually enhance teaching and learning, acknowledging that technology, enables graduates as never before to connect with and make impacts. These initiatives recognise the need for strong links between education practice and industry needs.

This year in the UK there was a Knowledge Exchange Framework (KEF) pilot and metrics consultation, the outputs of which are to equip higher education institutions to effectively demonstrate their diverse strengths and successes in working with business and community partners to generate real economic and societal impact https://guildhe.ac.uk/consultation-knowledge-exchange-concordat/

Knowledge exchange may be one of the most effective means by which universities can co-operate with businesses and other stakeholders. Knowledge Exchange incorporates teaching and research and so has the capacity to bring these, often, disaggregated parts of the universities together to bring about the impact on students and research outcomes that we are striving for.

The practice-oriented view of curricula developing at Middlesex has been outlined in the following blogs:
What might a practice-based curriculum look like?   https://mdxtf.blogspot.com/p/what-might-practice-based-curriculum.html

in response to **Practice-based learning. What if we started with practice?**

https://mdxtf.blogspot.com/p/practice-based-learning-what-if-we.html

Practice based learning example: Brief Cases at Middlesex

MA Global Governance and Sustainable Development

Dr Meri Juntti, Department of Law and Politics, School of Law, Faculty of Professional and Social Sciences

Introduction

This non-work based practical learning opportunity is offered through one of the existing 20 credit modules (SSC4031 Work experience – short placement) in the Department of Law and Politics. Tailored for the students on the MA Global Governance and Sustainable Development it has been developed in collaboration with the Barnet based The Heaven Company London Ltd. While The Heaven Company have been running the innovative Brief Cases initiative with a number universities prior to Middlesex, Brief Cases at Middlesex is the first postgraduate level iteration and has been specifically tailored to meet the learning outcomes of the MA Global Governance and Sustainable Development. It was first run for the 2018/2019 cohort of students. The aim of Brief Cases is to help bridge the gap between academic study and commercial reality. Hundreds of undergraduate students undertake a Brief Cases project each year, the learning and interactions are delivered in the classroom at each of the participating universities (The Heaven Company 2018).

Brief Cases at Middlesex provides students the opportunity to work to a brief set by a sustainability consultancy – The Heaven Company – providing a realistic setting for transferring some of the knowledge and skills that students have learned in taught modules to a professional task. The briefs reflect small and medium size businesses' needs in developing environmentally and socially sound business practices and solutions and the link to Programme content is supported by asking students to explicitly relate each outcome and offered solution to the brief to specific UN Sustainable Development Goals (SDGs). Working to a Brief Cases brief therefore requires students to think innovatively and to apply the theoretical and policy knowledge that they have gained in their taught modules to a real-life context.

From knowledge acquisition to creative application and evaluation

Brief Cases is delivered by The Heaven Company through three contact sessions that take place on the University's Hendon campus. Beyond the introductory session, sessions are student led and based on students presenting work to receive feedback from The Heaven Company. This brings a strong skills orientation into the module. While the content of what students present is crucial, they are also required to present it in a manner that is accessible, engaging and focussed. The two briefing sessions are aimed at supporting independent work and students are encouraged to identify problems and challenges and share them to seek support and to achieve a focus on problem solving. This means that students also learn from each other. The openness to engage directly with the business seems to encourage confidence and the opportunity to talk about an idea, project or product for which students feel strong ownership, and this has elicited some inspired classroom contributions. The first run of Brief Cases at Middlesex suggests that it is well poised to support and accommodate alternative learning styles, thereby increasing belonging and engagement, uncovering and enabling potential and supporting self-reflection, all central components of embedding equality and diversity in the curriculum (EEDC - Hanesworth, 2015; Fry et al. 2015). Independent work on briefs is intended to provide students with an opportunity to expand their skills and understanding of the sustainability challenges and potential responses in the private sector, to develop the kind of independent initiative required at workplace, and to meet industry requirements and standards in output. Students also get an opportunity to receive realistic feedback from industry representatives and to interact with a potential employer. As a final output, students devise a business report within which they present their response to the brief; a practical project, policy or an innovative product. Brief Cases therefore constitutes an effort to address the identified private sector sustainability skills gap (e.g. Drayson 2016), where lack of appropriate skills and perspective has been deemed to significantly hinder the implementation of important policy instruments such as environmental management systems, environmental impact assessment and environmental, social and governance standards. So far students have relished the opportunity to work outside the academic format, to creatively devise projects, products and policies that could potentially help a business of their choice to become more sustainable.

The non-placement placement

Form student feedback I know that the availability of work placement modules on the politics MA programmes constitutes a significant reason for choosing to study with us. But a significant obstacle to students completing these modules is the difficulty of obtaining placements within suitable organisations, especially for our predominantly international student cohorts who cannot depend on contacts or previous employers in the UK. A large proportion of Middlesex students is from outside the UK – according to THE in 2017, Middlesex was the 15th most international university in the world with 46% of the student body consisting of international students (The Times 16.5.2018). All this diversity is both a challenge and a resource in the classroom context, making it all the more important to pay close attention to the central themes of embedding equality and diversity in the curriculum. Brief Cases at Middlesex does not provide an opportunity to be physically placed within a work-place, and some students find this disappointing. It nevertheless establishes a link to industry integrating a contextual understanding into students' learning experience and developing important practical skills. In the words of one of the students in the first cohort:

> *"Unfortunately, since there was no need to be present at the company there is no real way to evaluate the different organizational structures or professional practices of The Heaven Company. However, through this module I was able to develop my own personal professional practice because this is an area that truly interests me, and I can see myself working in something related to this profession. Throughout my experience in the module, I had to intrinsically approach to understand the interaction of my project and its people; create a clear linkage between my project and where and who to apply it with."*

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Practice-Based Teaching in MA Art and Social Practice and BA Fine Art Social Practice

Loraine Leeson PhD SFHEA

Arts education is by definition practice-based. However at Middlesex we also offer education in the emerging field of socially engaged art. This requires not only a holistic approach to the creative development of the individual, but engagement with others, both in the process of teaching and through the external projects that are the focus of practice on these courses. The MA Art and Social Practice and the exit degree BA Fine Art Social Practice in the Faculty of Arts and Creative Industries are both relatively new courses. They nevertheless build on a long history of community-based arts in the faculty while also drawing on the methodologies of social practice developed in the professional field. The main practice elements of these courses are delivered by a team of just two people, each active as a practitioner and researcher, and with extensive connections in the professional world. This enables them to build into the teaching enrichment activities such as experiential visits, student involvement in conferences and events, and inter-university dialogue and debate. The development of students' practical outreach projects, which are the main focus of these courses, are facilitated through one-to-one tutorials a mixed-level support group and workshops. While the MA is part of a postgraduate matrix with two theory modules taught by other specialist staff, additional and more focused theoretical input is provided in the practice element of the course through a regular 'think tank' for which students often choose the texts to debate. A programme of mixed-level seminars and lectures raise issues pertinent to practice, and make significant use of the tutors' own experience and research.

Embodied

Creative work cannot be realised without tapping into the feelings and emotions of the practitioner, whether student or professional. Much focus is therefore given to this in the

tutorial support. Students also support each other through a bi-weekly support group, where MA and final year BA students come together to talk about their projects, particularly where they are having difficulties or feeling 'stuck'. In all this work staff act as a facilitators to allow the interests and concerns of students to emerge and identify what they really wish to concentrate on. Student projects are based on their own interests, communities and networks, and represent the major part of their work on these courses.

Experiential and Participative

Since the aim is that students engage in activity that can make a difference in the world, this cannot be achieved without external engagement. Once students have identified the focus of their project, rather than developing a project in the abstract, they are encouraged to research their ideas with a relevant constituency. It is only through this engagement that they are then able to identify how and where they can bring their creative skills to bear on social or environmental need. All the projects undertaken are participative or collaborative in nature. To make these interactions work student find that they have to draw on all their existing interpersonal skills and experience, and these are then augmented though workshops in topics such as active listening and conflict resolution. The former employs listening in small groups to examples of difficult work-related situations each has encountered and observing what affects the quality of the engagement and experience, also methods for hearing beyond what is expressed. The latter takes examples of challenging community-based situations drawn from tutors' own experience in the field, where students take on different personas and support each other in a problem-solving role play. Another 'simulation' event is the Art Parliament based on a real-world international award for socially engaged art. Here students debate the actual shortlist, setting their own criteria and choosing the most successful candidate, before being introduced to the actual outcome. All seminars, lectures, workshops and external visits are followed by shared reflection, review or critique of the situation or ideas that have been encountered.

Engaged

Art cannot by itself make a difference in the world, and if artists wish their work to contribute to social change they have to find ways of collaborating across disciplines and experience. In order to discover these processes for themselves, students make contact with external groups or individuals who are striving for similar change and learn to both respect and pool expertise, whether held by other professionals, young people or community members with first-hand knowledge of the issue at hand. To enact this engagement they need the inter-personal skills described above, and to become a team-player, understanding that theirs are not the only skills that count. There is no better lesson to be offered for this than having to engage with an outside group. This becomes the source of their learning, but can nevertheless be a difficult negotiation, which makes tutorial and group support so necessary, in conjunction with the wider contextual understanding offered through the lectures, seminars and experiential group visits. This engagement is generally the most challenging but also the most profound vehicle for learning that each student encounters.

Situated

The term 'situated art practice' is one that I favour over the other current terms of 'social practice' and 'socially engaged' art, and is one that I have used for my own book on this subject[1]. This is because it anchors the creative experience in an actual place or in relation to a real constituency, which provides a context against and within which ideas can be tested. There are many instances of art students wishing to relate to the 'general public' a concept that I would contest. Therefore our students have to engage with people and places to which they return, bear some responsibility and with whom they develop real relationship. This prevents 'skating over' difficult issues, but rather requires them to be worked through. In this way students come to recognise perspectives and positions that can bear little relation to those encountered in academia yet require some conceptual resolution, a process invaluable in broadening social and cultural understanding. The

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[1] Leeson, L. 2017 *Art: Process: Change – Inside a socially situated practice*, Routledge, New York and London.

'experiential visits' we organise offer encounters and dialogue with artists working in the community, plus learning about how artists are able to develop their practice and earn a living in the wider world. They have included visits to creative co-ops in South London, an artist residency in a care home setting and a trip to Margate to encounter the effects of arts-led regeneration on its local and incoming creative communities.

Emergent

The creative process is one of 'not knowing' and follows a narrow line between order and chaos – too much order results in the predictable, while too much chaos is just a mess. However this is a dynamic line that cannot be set in advance, and one which requires constant negotiation. When planning their project, each student is encouraged to put certain parameters in place – deadlines, resources, the limits of their own creative and other skills, preferences and experience, plus a set of aims developed through negotiation and listening to the needs of the other parties involved. However, while the overall project output might be shared, the most important outcomes for each can differ. For example one student has been working with a local poet and residents on a North London housing estate. They have planned an event to celebrate the cohesiveness of the community in the face of proposed demolition and dispersal. For the student the outcome will represent the successful management of her creativity in relation to community needs over an issue about which she feels strongly. The poet might be appreciating the opportunity to develop their work and hold a public performance. Local residents will hopefully feel empowered, enjoy the communality, and feel that their message to the local council and developers has been reinforced.

This student is successfully engaging in the process of building a project that none could have previously envisaged, and could only be produced through creative collaborative process. This can be highly challenging task for those as yet unversed in these processes, but more achievable if broken down into its constituent parts. The first practical 30-credit module in MA Art and Social Practice is entitled Developing Practice, and focuses on research and development to help identify the kind of project each wishes to pursue. The next is Practice Through Engagement, where contact generally begins with outside agencies

and constituencies to firm up ideas and develop a proposal for a practical creative initiative based in a social or environmental situation. The final 60-credit Major Project is the practical realisation of this work. Although projects might extend beyond the duration of the course, the graduate show provides a moment to present ideas, process and outcomes in a visual or other creative format with which others will be able to engage. The module also allows for the possibility of realising the work in a publically accessible or virtual location, which is documented at the graduate show. Practical work for each module is augmented by a reflective statement that includes how the project has addressed the learning outcomes.

Co-constructed

All the project work carried out by students is participatory or collaborative and necessarily crosses disciplines in the addressing of social and environmental issues. It is also entirely the student's own creation. The outreach work they do is not 'placement', although this is an approach I have used in the past. Rather it has gradually evolved into students negotiating and developing their own creative projects in the public domain, which has proved significantly more satisfactory in terms of engagement and learning. Tutors' professional contacts furnish further optional engagement opportunities in external initiatives. This might be as volunteer assistants at relevant conferences, documenting events, or assisting in staff projects. We also connect them with students in other universities through initiatives such as the virtual symposia in which we collaborate with University of Highlands and Islands, to involve students and staff from other universities to share their current work and ideas. Up to five universities have been involved at one time, with live input from some of the key authors on the course reading lists, which certainly helps to bring theory and practice together whilst widening student's perspective on their own practice.

Summary of an approach or project to enhance employability

Below are listed key elements of the practice-based teaching described above with regard to employability:

- Development of transferable skills, particularly in terms of listening, negotiating, consultancy, managing people and transforming conflict.

- Experience of of creative problem-solving.

- Balancing own desires and ambitions with the needs of others.

- Recognition of the importance of empathy and use of emotional intelligence.

- Work with external groups and organisations creates contacts, experience and understanding of collaboration and teamwork, plus opportunities to apply learning.

- Respect and understanding for diverse disciplines and experience, including knowledge held by non-specialists at local level.

- Experience of pushing boundaries, and to reflect, review and adapt to change.

Evaluation of an Inquiry-based laboratory approach

Duncan Allardyce[1]

Consider one or more of the following concepts in your prospective or existing approach or project summary:

- Embodied

- Experiential and participative

- Co-constructed

- Emergent

- Situated

- Engaged

Summary of an approach or project to enhance employability (1000 words):

Science investigates unknowns; it can be unpredictable and require higher level cognitive skills to be successful. Whether in research, industry or clinical settings, the vast majority of employment in the scientific field relies upon competency at complex problem solving and critical thinking. This is in line with the trend of top skills required across all disciplines, highlighting the transferrable benefit of these qualities (World economic forum, 2018). Here I will discuss and evaluate the approach of inquiry-based laboratory classes to enhance student employability, reporting on its application as group work, within a life sciences discipline at foundation year level.

An inquiry-based method introduces co-constructed, emergent learning through the design and implementation of a personal investigation (Domin, 1999; Martin-Hansen 2002). Case studies using inquiry-based approaches are often implemented within chemistry disciplines due to the analytical and quantitative nature of the work. These also tend to span a long

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[1] Faculty, School, Department, Curriculum area – Natural Sciences, Faculty of Science & Technology

time frame and involve more capable students (McDonnell, 2007; Sandi-Urena, 2012; Fakayode, 2014). However, the principles and selected elements can be applied to a wider variety of disciplines and scaled up to larger cohorts, retaining the benefits observed (Cummins, 2004; Bugarcic, 2012).

These benefits have been compared to the traditional scripted laboratory whereby using a deductive approach, predetermined outcomes known to the student are verified. Whilst there is the advantage of scripted laboratories facilitating students to achieve advanced practical skills and quality results in a short period of time, there can be a tendency for students to overlook an understanding of the process and application of knowledge (Szalay, 2016). As a non-contextual example; '*A baker adds the recipe-dictated quantity of baking soda and is complemented on the delicious cake produced. However, without understanding the role and impact of the ingredient or procedure, the baker would fail to improve upon a cake that has not risen, nor could they apply the use of certain steps or ingredients to other recipes'*.

The scripted style remains the predominant approach used today despite the fact that this has long been the most heavily criticised method (Hodson, 1996; Domin, 1999). It is worth noting that often accompanying pre- or post-laboratory exercises and report writing can often allow the chance for reflection and evaluation in learning; however these would arguably only be enhanced from an original inquiry approach.

Scripted laboratory classes are generally designed to robustly "succeed" and emphasis is placed on the results. However, by introducing co-construction with the student, they could enhance regulatory metacognitive skills through practise of declarative, procedural and conditional knowledge with activities such as planning, monitoring and evaluating (Sandi-Urena, 2012). Arguably, scripted laboratories miss the opportunity to challenge student's higher levels of learning that could be achieved through inquiry-based approaches. Whilst practical and technical skills develop in a dynamic, technological era; the underlying planning, organisation and problem solving abilities remain vital employability attributes applied to any scientific context.

Here, an inquiry-based approach was introduced for a 3 laboratory class series at foundation year level with around 70 students. In open-inquiry style, students formulated, designed and developed a mini-project to investigate. They were given permission to be creative and allowing freedom to select an area of interest. The personal ownership and control over selecting the investigation engaged and empowered students, increasing curiosity, effort and immersion in the work. This was evidenced by feedback that 56/58 students agreed that they "liked having the freedom to select our own topic".

It is important to note that although this is a student-centred approach; guidance and support from tutors throughout remains vital to ensure correct focus and to continue to challenge the students. Whilst the students take the lead, there should always be an opportunity for feedback, and during the progression of work tutors can nurture and stimulate additional ideas. 37/58 students "strongly agreed" that "Having to design my own experiments made me engage with the content more" with 15/58 "agree", 5/58 "neutral" and only 1/58 "disagree", therefore it is paramount to maintain a suitable balance of facilitation over decision making. Furthermore, as reported by Deters (2005), in many cases students required additional affirmation of their thoughts and ideas, before gaining the confidence to proceed.

An open structure of an inquiry laboratory also allows reflection and assimilation (Kolb, 2014). Performing all planning and execution steps facilitates a greater ability to apply critical thinking to resolve issues. Whereas the traditional lab set-up can cut short the experiential learning cycle by not providing the opportunity to evaluate and adapt for improvement through experimentation. Student's recognised this with only 1/58 students disagreeing that "Performing research with unknown results enhanced my critical thinking and problem solving skills".

With some investigations testing unknown outcomes or allowing the possibility for multiple outcomes, a level of emergent learning and authentic assessment is introduced (Szalay, 2016). It is thought that through the discovery of new information there is a level of personalisation acquired that creates more meaningful and better retained knowledge (Sandi-Urena, 2012). However, depending on the scale and level of the work (Hodson, 1996) also argues that: *"You cannot discover something that you are conceptually unprepared for.*

You don't know where to look, how to look, or how to recognize it when you have found it". It is therefore important that there is sufficient time and support to analyse and reflect, along with a suitable background provided from taught classes and supporting materials.

Overall, there were 47/58 students who agreed that "I feel that I learnt more from running our own project compared to following prescribed protocols" with 5/58 neutral and 5/58 disagree. Although interestingly, only 39/58 agreed to "preference of running our own project compared to following prescribed protocols" with a higher 14/58 neutral and the same 5/58 disagree. This suggests a self-acknowledged benefit to the approach, but with some challenges. Whilst there is a role for scripted laboratories, there are striking advantages demonstrated by an inquiry-based approach. Combined with literature case studies and the added credence of associated pedagogical background, this is a viable approach deserving additional consideration in module design.

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The Assessed Performance Review Meeting / Appraisal Interview

Bruce Thompson and Mark Burley, Middlesex University

This practice-based curriculum activity comprises an exercise which describes the activity followed by examples of two role plays and assessment criteria/ marking plan.

These were developed by Bruce Thompson and Mark Burley, Middlesex University and are copied here with their permission. Use of these materials would need permission from them.

This curriculum activity is within a Human Resource Management module:

Definitions

Assessor or Appraiser: the manager or supervisor who is conducting the appraisal/ performance review of a member of his/her staff.

Assessee or Appraisee: the person who is being assessed/appraised at the performance review.

Information Available

Below you will find

      1. Background and objectives for the Interviews

      2. Assessment Criteria

      3. Who you will be appraising/being appraised by – **a separate handout**

      4. The programme of Interviews – **a separate handout**

      5. Your responsibilities

      6. Timing and room

      7, The four organisations in which the interviews take place

            7.1 EuroOil

            7.2 Hospital H

            7.3 Bank B

7.4.Johnson Asset Management

8. How to role play.

8.1 The assessor

8.2 The assessee

Further orange coloured scripts for the Assessor, not to be communicated to the assessee, will be issued in advance of the interview.

Further green coloured scripts for the Assessee, not to be communicated to the assessor, will be issued in advance of the interview.

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1. Background and Objectives

Background

Bruce's old company, BP, used role playing to improve their manager's ability in conducting appraisal interviews. As a result, Bruce has arranged such interviews for you.

Objectives

To fulfil competency requirements of the CIPD professional area of reward and performance management.

To give each student the experience of being an assessor and an assessee.

To observe four different assessor/assessee situations in four different organisations.

To learn what happened in the real life situations on which the case studies are based.

2. Assessing your performance as an Assessor

Your performance as **Assessor**, judged by Bruce Thompson, makes up 40% of the total marks for this module. The assessee will **not** be marked, but can ask for feedback from the assessor and/or from Bruce. The **criteria** used by Bruce to assess you the appraiser is

Interview Atmosphere 15%

Appropriate Questioning 15%

Giving feedback 15%

Assessing Performance 15% (includes confronting poor/average performance if necessary)

Setting Objectives/goals 15%

Personal Development Plan 15%

Follow up/action plans 10%

Total marks available 100%

3. Who will you be interviewing and who will interview you?

Bruce will choose who interviews who, but probably will do it by student number. **See the separate Excel spreadsheet to find your name, your role, and organisation.**

It is important for each appraiser and each appraisee to exchange phone numbers and e mail addresses. Being late or absent for an interview will create mayhem. Hence you need to be able to communicate at short notice.

4. Programme of Interviews

Essentially the progamme has 4 one hour sessions over weeks 22 and 23. Each hour has 2 couples simultaneously doing their interview, with the module Leader looking on.

We will use our normal lecture room for the interviews. You don't need to observe other interviews. The interviews during each hour are based on 4 particular organisations called respectively Euro-Oil, Hospital H, Bank B, and Johnson Asset Management.

5. Your responsibilities

Bruce will observe and assess the Appraiser for each interview. So that Bruce can look at the interview later **you must record your interview**, both visually and verbally, and give Bruce a computer stick or whatever, so that he can see your interview on his office PC.

You are responsible for conducting the interviews. Bruce will not tell you what to do. As in the real world, the Assessor for each organisation may want to take the lead e.g. starting the interview.

6. Timing and Layout

You are responsible for the layout of chairs/tables for your interviews, which take place in our normal lecture room. Do consider that you may have another couple doing an interview in the same room. I will, however, see if the room next to ours is free

Timing is up to you, but may I suggest

5 minutes Preparation.

30 minutes. Assessment Interview

5 minutes.   Review and feedback between Assessor and Assessee.

If time is available Bruce will tell both couples what actually happened in the real life situations on which the case studies are based

Bruce will have to stop the first session after 50 minutes so that you can have for a 10 minute coffee break

The next interview will start on the hour with the same programme as above.

7. The four organisations and context

7.1 Euro-oil

A large company, part of a multinational oil company that refines and sells oil products (gasoline, diesel fuel, lubricant) in Belgium and Holland

It has a high reputation for quality, but its market share is being eroded by new competitors with more automated processes

The context is their Marketing Services Department, with a new Marketing Services Manager, who is you the Assessor.

He managers all the marketing services activities, which include a small IT unit that provides IT services for Marketing.

This IT unit has a Unit Head, who is the Appraisee, who supervises an inexperienced, newly qualified IT graduate.

There is also a central head quarters IT department reporting to a Services Director.

There is a policy of internal recruitment, and staff can be recruited from other Euro-Oil subsidiaries across Europe

There has recently been a job evaluation exercise in the company and some staff have been downgraded and their salaries frozen

7.2 Hospital H

An NHS Acute Hospital is in West London.

The context is a one of a general ward for men, where patients arrive directly from surgery. If there is a local emergency, numbers of patients can increase significantly, thus creating ward management problems

Nurses work shifts covering 24 hours, but fewer nurses are on duty during the night

Although a Senior Staff Nurse is in charge of the ward, a Nurse Manager, you the Appraiser, is responsible for appraisals of nurses in that ward. One of those nurses is the Appraisee

Appraisals are part of a NHS wide personal appraisal & development review, which is linked to key skills requirements for each job.

Nurses range from very experienced staff nurses to newly qualified nurses

The hospital is under financial pressure. There is no money for extra staff and efficiencies must be made

The catchment area for the hospital includes both poor and middle income families

7.3 Bank B

Bank B is one of the 4 largest UK Retail Banks

General Managers, based in Head Office, feel that too many of their Branch managers, of which you the Appraiser are one, are bureaucrats rather than businessmen. They want to recruit and promote entrepreneurs.

Bank B is under government pressure to lend more to small and middle sized businesses

Strategic business direction is decided in the company Head Office marketing and planning functions

The Hendon branch of Bank B, employing 80 staff, has Retail and Business banking, and it is in the Hendon branch where the appraisal takes place.

Experienced graduates, one whom is the appraisee, sell loans to local businessmen. This can be very profitable.

There is enormous pressure from Head Office not to give loans to anyone who might default. As a result, risk/audit staff constantly monitor branch business deals.

7.4 Johnson Asset Management

John Asset Management (JAM) is a successful independent asset management company with a good reputation for advising clients with liquid funds of £2m - £10m.

JAM employs about 50 people and has been run under the owner James Johnson who was always the visionary and very much a "people person" .

2 years ago, James sold a majority shareholding of the business to a Swiss Bank. As a result of this, a new Chief Executive, Bob Angel, came into the business.

Bob is keen that the company moves from being a "small-time player" to a professional and industry leading adviser.

This means that the staff will have to raise their game and previously acceptable ways of working (such as casual dress) are no longer acceptable in the new professional company.

Appraisals have become less of a "chat over a glass of wine" and have become more formal and regulated as part of the individual's CPD programme.

You, the manager of the front office (this is the team that look after and interact with clients, will be appraising a member of your office staff.

8. Role Playing

8.1 Role playing as the Assessor

At least one week before their interview, Assessors will be given special Assessor scripts reflecting how they perceive the situation regarding the person they are to appraise. Assessor scripts are coloured orange. **Do not show these scripts to your assessee**

Apart from pleasantries, do not talk to the Assessee prior to the interview

Try to think yourself into the role and make it as real as possible. Without you playing your part, neither you nor your assessee, will learn from the experience

Think in advance of what you want to achieve from the meeting. **Do give Bruce, at the start, a copy of what your objectives for the interview are** (up to 5 bullet points will do).

Recall the approach of the assessors in the Appraisal DVD you saw.

Don't try to destroy your assessee, but make certain you achieve at least some of your objectives..

After the interview, spend 5 minutes informally talking to the appraise, to review what went well and what could have been improved.

8.2 Role playing as the Assessee

At least one week before their interview, Assessees will be given special Assessee scripts reflecting how they perceive their situation in their particular organisation. Assessee scripts are coloured green. **Do not show this script to your assessor**

Apart from pleasantries do not talk to your Assessor prior to the interview

Try to think yourself into the role and make it as real as possible. Without you playing your part, neither you or your assessor, will learn from the experience.

Think in advance of what you want to achieve from the meeting. **At the start, please give Bruce a copy of your objectives** (up to 5 bullet points will do)

Be natural in your reactions e.g. if the assessor is aggressive, you be aggressive, if the assessor is friendly and supportive, you do likewise.

Don't try to destroy your assessor, but on the other hand don't be a wimp. Make certain you achieve at least some of your objectives.

Recall the assessee's performance in the Appraisal DVD you saw

After the interview, informally talk to the Assessor to review what went well and what could have been improved.

Example 1: EURO-OIL: APPRAISEE ROLE PLAY

PIERRE

You, Pierre, are Unit Head of the IT section within Marketing Services, EuroOil's Belgium and Holland subsidiary, based in Brussels.

You report to Martin who has recently been appointed Marketing Services Manager

You have been in the job for 3 years, having previously been in EuroOil's French subsidiary IT department, which you joined after graduation

You supervise a new IT graduate.

You are moderately happy in your job. Your previous manager left you alone and you are an expert in your field.

You deal with the Marketing Managers who are pleasant enough, but don't know much about IT.

They want you to do the routine IT for them, whereas you feel they should do it themselves. Your job is to develop computer applications, not do routine work.

Your previous manager told you that you were doing a good job and last year you had a good appraisal rating.

Career wise you would like to do more technical computing. However opportunities in the Headquarters IT are few, especially at your job grade.

You are annoyed that you have been downgraded, You feel it reflects how IT is regarded in the company. You want to get back to your old higher grade.

You and your wife like working in Brussels where you live in a French speaking area.

Example 2: EURO-OIL: APPRAISER ROLE PLAY

You, Martin, were appointed Marketing Services Manager, two months ago

Your background is entirely sales and marketing across several countries. You are not very knowledgeable about IT

One area you want to concentrate on is staff management, and you are about to conduct appraisals for your unit heads, including that of Pierre who is in unit head of IT.

Morale in the department is poor due to a recent job evaluation exercise where some staff, including the IT unit head, were down graded

Pierre, a French national aged 30, graduated in IT and has been in IT throughout his career

He has attended training courses in management, interpersonal skills, marketing appreciation and technical computing topics.

You find Pierre a pleasant person who agrees with everything you say. Whether he really agrees you do not know

Much of his work involves dealing with the marketing managers. They acknowledge his technical ability but feel he doesn't understand marketing.

Pierre expects them to do more computing work, whereas they want him to do the computing work for them

Previous appraisals have said that Pierre has done a reasonable job. He always obtained above average appraisal ratings

Pierre relates well with other French staff but is less friendly to other nationalities.

Regarding his downgrading, you could recommend him for a recently advertised HR job, at his old pre- evaluation grade.

You do not have a successor to Pierre if he leaves, as the young graduate has only recently been appointed.

Example 3: ASSESSED APPRAISER INTERVIEW

K………………. P…………. MARK SHEET

Criteria	Mark
Interview Atmosphere max 15 marks	**10**
Appropriate Questioning max 15 marks	**10**
Giving Feedback max 15 marks	**9**
Assessing performance (includes confronting average/poor performance) max 15 marks	**9**
Setting Objectives/goals max 15 marks	**9**

Personal Development Plan max 15 marks	**10**
Follow up/action plans max 10 marks	**6**
Total Marks out of 100	**63** %

This was a very good interview. You had planned very well with solutions to all the issues. The interview was friendly and constructive and you kept control of the agenda throughout. You raised all the performance matters, but maybe you could have probed further before offering solutions. You had a very good action plan with suitable timings. Not sure if the HR job is the job for him, but you did argue persuasively that HR needed IT improvement, and that the new graduate must be trained up first. Good training proposals, although you yourself might have coached him in marketing. Overall well done.

OBITUARIES

Professor Ruth Helyer

Professor Ruth Helyer passed away suddenly on 19 August 2019. She will be remembered with fondness and admiration by learners and colleagues lucky enough to have worked with her.

Ruth was a mature student herself with personal experience of the benefits and challenges of combining work with study and family commitments. She was able to draw upon her own experience as well as academic scholarship to fuel her passionate commitment to developing Work-Based Learning at higher education level.

Ruth went direct from School to employment and followed a career in banking and then publishing. A part-time degree helped foster a love of English Literature and resulted in a First class award. Further juggling of study with work and family commitments was required as Ruth went on to achieve an MA and then a PhD. Her first academic appointment was as an English Literature Lecturer at the University of Teesside.

Ruth is best known in academia for her work over a twenty year period in the developing field of Work-Based Learning. While at the University of Teesside Ruth became a nationally and internationally regarded expert in Work-Based Learning and developed highly innovative higher education programmes in collaboration with a wide range of employers. In 2013 her contribution to learning and teaching in higher education was recognised by the award of a National Teaching Fellowship. Reflecting upon the award of her Fellowship Ruth described herself as "an avid believer in the power and potential of work-based learning". In 2017 Ruth joined Leeds Trinity University as their first Professor of Work-Based Learning.

Ruth worked tirelessly to champion Work-Based learning not only with employers and learners but also within the University sector. Amongst a range of publications her most influential may prove to be "Facilitating Work-Based Learning: A Handbook for Tutors" which is an invaluable resource. Another dimension of her promotion of Work-Based learning and her willingness and ability to assist colleagues was her work as Editor in Chief of "Higher Education, Skills and Work-Based Learning" the academic journal of the Universities Vocational Awards Council.

Ruth was a colleague with outstanding ability coupled with good humour, energy, integrity and authenticity. She will be sadly missed by all whose lives she touched.

Ruth is survived by her husband Neil, children Max and Megan and grandchildren Clementine, George and Otto.

Emeritus Professor Jonathan Garnett