USING QUALITATIVE METHODS TO EXPLORE CAREER DEVELOPMENT FOR CONSTRUCTION OPERATIVES

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Trade and craft employees are an instrumental part of the project delivery process. Recruiting and retaining an adequate share of the UK workforce is vital to meeting the construction industry's demands and sustaining its current growth. This requires attracting new employees and adopting a proactive approach to Human Resource Development (HRD). Career development programmes are capable of aligning the industry's needs with the career expectations of individual employees. However little is understood about the careers and career development of these key employees. Previous research into trade and craft populations have used quantitative methods to document labour market process and behaviour patterns, rather than using qualitative methods to explain factors which shape and influence careers. The conceptual understanding of careers and career development should be enhanced using qualitative methods to direct research as this would serve to uncover any unique factors associated with trade and craft populations and influence suitable strategies in response to them. This paper presents a rationale for the application of qualitative methods and the implications of this approach to future research.

Keywords: careers, career development, qualitative methods, trade and craft operatives.

INTRODUCTION

Construction organisations rely heavily on the continuing productive and innovative spirit of its manual based personnel. As such, they are a key component in the industry's growth; supporting profits, serving both to reinvigorate and renew the industry's competitive advantage in the process. Olomolaiye (1998) describes the attributes of the trade and craft worker contributing to productivity as: i) skills, qualifications, training and experience; ii) innate physical and mental ability; and iii) the intensity of application of both skill and innate ability to the production process. Productivity is related to the physical, social and psychological actions of employees and, the employer's process in inducing, driving or restraining forces that act on the employee's capacity to perform (Maloney, 1983). Labour therefore acts as the fulcrum of production (Olomolaiye, 1998) and it is the employer's role to support this by recruiting, training, developing and retaining the services of the workforce, if higher productivity is to be achieved.

In broad terms "careers" are often taken as comprising three components: the individual; the employer; and inter-play of both (Parsons, 1909 cited Zunker, 2002).

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From a cognitive psychological perspective this refers to a relational schematic involving the processing of social information (Baldwin, 1992). Developing a consensus of objectives through aligning employer and employee goals is the basis for the continued success of the UK construction industry. In competitive labour markets it is often acknowledged that retaining talent and a competitive workforce is through appropriate career development strategies (DeSimone *et al*., 2002; Kreisman, 2002). Visible career development initiatives also serve to attract career minded individuals by presenting opportunities for individual growth (Young, 1990; Dalton *et al*., 1996). This subsequently has an effect on maintaining quality standards through the active promotion of continuous learning (Schein, 1978; 1980). Thus a major priority for construction management is a thorough understanding and analysis of the career needs of key personnel and the subsequent provision of appropriate career development programs. Considering such factors as recruitment and retention of key skilled workers, becomes crucial to the delivery of governmental targets as well as the industry's long term goals. Ignoring the developmental nature of trade and craft careers ignores the complex array of enablers and barriers that may impinge on the long-term productive process.

Careers research is an area of science where substantial and exciting developments have taken place. The credibility, accuracy and relevance of research into careers is largely determined by the data collected to investigate them and, the ways in which this data is collected (Dex, 1991). Though quantitative methods hold that behaviour can be explained through objectively-derived facts that aim to eliminate bias, they are often criticised for disregarding unpredictable variables such as human agency, emotion and irrational choice. Qualitative methods express the assumption, through a phenomenological paradigm, that there are multiple realities that are socially and cognitively derived (Creswell, 2003). As such, rich descriptions make sense of phenomenon. In this regard, factors contributing to the formation of career and their development over time might be increasingly explained.

Building on previous research that explored the role of qualitative research in the construction management field (Kappia, 2005c), this paper describes an approach to understanding what is meant by career development and its associated drivers and impediments for craft labour. Highlighting areas of potential improvement in terms of career development policy, the contribution and value of the work is in discovering hidden dimensions which affect trade and craft tenure. A synopsis of the literature is presented and the implications of this work is examined.

COMPETING ONTOLOGICAL AND EPISTEMOLOGICAL PERSPECTIVES ON CAREERS

It is customary for academic research to take account of ontology; epistemology; methodology and methods (Creswell, 1998; 2003; Saunders *et al*., 2000). One of the most daunting and controversial areas of research is choosing between groups of research philosophy (ontology) and their associated methodology (epistemology). In philosophical terms, the researcher's ontological assumptions are the most fundamental aspect of any research. It refers to the basic categories for examining phenomenon and what types of information exist. These refer to the collection of mental events experienced by the researcher as a person. As such, the ontology of the research has strong implications on the researcher's conceptions of reality and how they formulate theory. Epistemology refers to the process by which the researcher seeks to uncover these findings and the specific methods outlined to attain results.

The issues underlying these choices exist in a dichotomy which is identified generically as paradigms between quantitative and qualitative approaches, and relate to the collection of shared characteristics within alternate research approaches. This can be viewed simplistically as the tendency to gather either hard (objective) or soft (subjective) data. Saunders *et al*., (2003) depict the range of choices in a generic "research process" (p.83).   The layers of this process provide insights into the associate issues underlying the choice of data collection method and represent the following aspects in an ordered linear approach: Research philosophy; Research approach; Research strategy/Methodology; Time horizons; and Data collection methods.

The selections and decisions made by researchers culminate in what is considered the research design. The process is graphically depicted in Figure 1 and surmised in Table 1.   From Figure 1, it can be seen how the research process may be applied. Each characteristic feature represents a simple set of rules or a structured set of guidelines or activities to assist in generating valid and reliable research results (Hustad, 2004). Researchers must choose between the ranges of rules in a sequential movement.
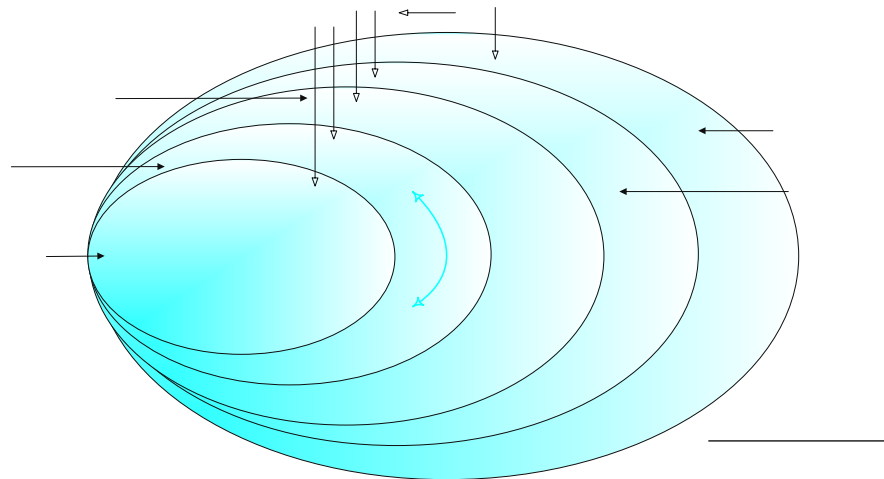
Figure 10: Research design process. (Source: Adapted from Saunders *et al.* 2003)

Ontological and Epistemological Persp

Epist

Method

3. Research Strategy - Methodology

4. Time Horizons

Sampling/Secondary Data

Literature Analysis

Reflecti

Table 5: Research design process

Philosophy & Methodology	Ordered Linear Approach	Qualitative	Quantitative
Ontology	Research Philosophy	Understanding Social Issues	Making Objective Measures
⇩	Research Approach	Emerging	Existing
Epistemology	Research Strategy/Methodology	Gathering Subjective Information	Gathering Objective Data
⇩	Time Horizons		
Method	Data Collection Methods		

There are four differences in the two basic paradigms: a) assumptions: quantitative researchers tend to come from a positivist paradigm which assumes that there exist social facts and an objective reality that is examinable, while qualitative researchers come from a phenomenological paradigm and assume reality is socially constructed through definitions of the situation; b) purposes: quantitative researchers attempt to explain causes and consequences, while qualitative researchers tend to press for understanding of social phenomena; c) approach: whereas quantitative researchers tend to use observations, correlational, or experimental designs in which great effort is expended to assure objectivity and accuracy, qualitative researchers tend to use ethnography in ways that permit the researcher to understand the world in the same terms as the actors; and d) roles: quantitative researchers try to be detached and neutral, while qualitative researchers strive to be immersed to gain understanding (Firestone, 1987). A typical approach to each paradigm could be presented as:

> **Quantitative:** Positivism = Deductive = Survey = Cross Sectional = Questionnaire

> **Qualitative**: Phenomenology = Inductive = Case Study = Longitudinal = Interviews

The issue of whether research should be conducted according to qualitative or quantitative paradigms is highly contentious. The continued debate focuses on whether there is a necessary connection between method type and research paradigm that polarises the different approaches and makes them incompatible (Firestone, 1987).

EXAMINING TRADE AND CRAFT CAREERS

Aside from the product of the construction world (built assets), the most visible aspect of the industry is often its trade and craft population. In keeping with this, several authors consider people as instrumental to project delivery, rather than systems and processes (Lechler, 1998; 2000; Cooke-Davies, 2002). Thus, by focussing on the career needs of its people the construction industry may fulfil the dual purpose of enhancing productivity and retaining its key employees. However, the industry continues to base future productivity on financial incentive programmes to the

detriment of career orientated initiatives (Olomolaiye *et al.*, 1998). Further to this, Kappia *et al.*, (2003; 2004) suggest that the majority of research in the industry focus on professional and managerial employees. Drawing on literature and empirical evidence (Thomas, 1989; Locosco, 1990; Leibowitz *et al*, 1992; McDonald *et al*, 2002; Milman, 2003), Kappia *et al.*, suggest that in the wider context trade and craft careers are rarely acknowledged, and few organisations subscribe to the belief that operatives have or even want "careers" (Kappia *et al.*, 2003; 2004).

A scenario reflected within the construction sector, is that fragmentation perpetuates inadequate commitment to the component parts of career development, that of education and training (Chan *et al.*, 2001; Hassan *et al.*, 2004). This becomes challenging as Schein (1978) claimed that career development programs can have an increased bearing on corporate and personal productivity, creativity and long-term employee tenure. Schein suggests career development programs that fail to satisfy the needs of the required group ultimately reduce productivity and the level of identification the employee has with their employer, ultimately leading to turnover. The link to experiences in the construction sector is compelling. A militating factor threatening the well-rehearsed performance improvement challenges (cf. Latham, 1994) are: high attrition rates of both new recruits and qualified craft professionals (Mackenzie *et al.*, 2000; Ruiz, 2003). With competition for key skilled and un-skilled personnel being high across all industrial sectors, career development emerges as one of the most critical workforce issues. Attaining a greater understanding of the careers of trade and craft workers will serve to inform the industry's career development policy. In doing so, it is possible to enhance the productivity of workers and reduce attrition rates. The challenge is to apply research that is capable of identifying the unique facets of the trade and craft career development process.

Quantitative Vs. Qualitative Methods
The gamut of previous attempts to understand the trade and craft labour market problems have tended to rely on quantified demand forecasts (Dainty *et al.*, 2004). Invariably, these dominate research agendas and influence researchers to adopt a quantitative approach, yet these approaches often fail to capture the complexity of human action and emotion. For instance, many researchers have sought to establish what turns on the primary production generators inside workers (Olomolaiye and Price, 1989). Yet, while it is possible to measure physical action in quantifiable terms; social and psychological process -and their interactions- are less quantifiable and unpredictable. For instance, in an examination of labour productivity, Radosavlevic and Horner (2002) concluded that productivity is not normally distributed and are based on chaotic systems. As such, basic statistical diagnostics are either non-applicable or misleading. Characteristics of quantitative methods are that while they may easily measure quantifiable aspects of productivity, they fail to adequately measure the human emotion factors that often govern socio-psychologically guided actions. Basically this problem is rooted in the idea that although the technological capacity of workers can be evaluated in a positivistic way, it does not necessarily imply that the social impacts can be assessed by the same means. A qualitative research approach aims to capture the multiplicity of perspectives of social actors and the meanings that those actors assign to events.

The Relational Schema Between Employer Groups and Employee
The study of career development could be considered as existing in dialogue between the individual, their employer (or organisation) and the employing environment

(related employer groups surmised as an industry) (Arnold, 1997). This understanding can be exemplified by increasing awareness that people tend not to deliberate over independent social entities - such as self, others and environments - in isolation from each other, as much as they think about such entities in interaction with each other (Smith and Mackie, 1995). Young and Collin (2001) discuss the contributions and challenges of opportunities in the career field and presented information on "dominant discourses" (p.376): the way people talk, think and act about the concept of a career. These discourses are dispositions (matching internal traits to occupational characteristics), contextualising (locating people within social, economic, cultural, and other contexts), subjectivity and narrative (interaction of self and social experience in a unique life "story", and process (the processes by which career develops, e.g., decision making, life-span development).

One psychological approach exemplifying this is social cognition, which, broadly defined, concerns the scientific study of the cognitive, motivational and affective processes involved in social interaction (Kunda, 1990; 1999). Various research (Baldwin, 1992; 1994; 1997; Baldwin *et al.*, 1990; 1999; Baldwin and Main, 2001) has supported the hypothesis that people possess "Schemas", or organised knowledge structures, including specific facts, memories, and abstract beliefs organised according to many theories (Abelson, 1981). In an associative network, three schemas converge to form a "*Relational Schema*" comprising of: a schema for self (a *self-schema*); a schema for other (*other-schemas*); and are connected by way of an *interpersonal script* (convergence of both). Given this perspective quantitative methods prove highly problematic in analysing the career perspectives of individuals.

Meta-Level Perspective
However, the study of careers encompasses both qualitative and quantitative dimensions (e.g. process, time and structure, emotion and cognitive perception). Essentially, a rapprochement is required combining both paradigms. This increases the complexity of the investigative process since both soft and hard data are necessary for a complete career analysis. A false dichotomy is often assumed between qualitative and quantitative approaches and in reality few studies wholly exemplify the ideal criteria characteristics of either paradigm (Creswell, 1994). Although much research explores the various strategies and methods of each, such research only explores their associated advantages and disadvantages or evaluates and compares the approaches in the context of the research experience. Cogent discussions on the issue are presented in Firestone (1987) and Creswell (2003) who both suggest that the connection is in fact rhetorical and that the methodologies employed within the paradigms are fundamentally complementary.

As Creswell (1994) and Firestone's (1987) suggestions imply, research can never truly associate to one paradigm or the other. The extrapolation of both quantitative and qualitative results often negates a subscription to one paradigm or the other. Typically, when faced with this challenge, researchers argue for multiple data collection methods whereby methods are combined as and when deemed appropriate (Bryman, 1988). However, while quantitative data are uni-dimensional, qualitative data are unique in that they can be analysed and interpreted both qualitatively and quantitatively. This allows for correlations and/or grouping to be made amongst all data sets, i.e. job role or age to emotion. Through inductive phenomenological research a richer, deeper and process-based set of data are gathered (Taylor and Bogdan, 1984; Bryman, 1988, Strauss and Corbin, 1990). This is a critical advantage

for qualitative data and means that analysis can be conducted into the "What?", "How?" and "How Many?" in relation to careers. That is, an approach that integrates the interpretation of qualitative data with statistical analysis of that data.

IMPLICATIONS FOR FURTHER RESEARCH

In the wider careers literature, career development programs come in response to career needs. They can help to reduce the very significant costs incurred as a direct result of high turnover levels whilst also helping to prevent the deterioration of staff as a whole. In addition, programs that are developed in response to career needs will assist management practitioners within the industry to rearrange their priorities for career development programs, thus more effectively allocating resources to improve the level of trade and craft perception of the career development programs provided. There are key managerial tasks involved in recognising the need to meet the various career needs of trade and craft operatives throughout their careers. It is also necessary to place the emphasis upon flexible and needs-oriented career development programmes in order to satisfy the career needs, and further enhance job satisfaction levels. In-depth analysis of careers and career development in a qualitative context will undoubtedly provide a significant channel for future research, particularly in an industry such as construction where there is a multiplicity of factors which shape the careers of the trade and craft group which are situated both within and outside of the control of the individual.

CONCLUSIONS

In the construction industry, manual based occupations represent the direct producers of an industry's product by transforming natural product into built assets. Different career development programmes should be provided to meet the different career needs of trade and craft workers. The research argues for a greater emphasis on qualitative methods in construction management research and outlines the theoretical basis for investigating trade and craft careers. From the analysis and proceeding discussion, a qualitatively based methodology is suitable for exploring the unique dimensions of careers and career development at trade and craft level. Whilst this ultimately involves the combination of quantitative and qualitative procedures, the qualitative process is more suited to addressing immeasurable facets of construction productivity. Methodologies that allow for increased contextual insights and provide greater understanding of the internal and external forces affecting the trade and craft career should thus be promoted. There may be an elective affinity between certain philosophies and methods but this should not necessarily constrain the methods chosen. Linking methods and approaches to specific philosophy often means that research discounts innovative or creative data collection methods. More importantly constraints to philosophical stance and particular method or approach may reduce the credibility, validity and/or significance of the research.

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