

MENTORING CONSTRUCTION GRADUATES: BRIDGING THE GAP BETWEEN ACADEMIA AND INDUSTRY

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The paper reports on an investigation into the rôle, operation and effectiveness of mentoring in training, developing and retaining novice staff in a range of construction-related employment environments. The roles of both mentors and associates are defined and examined. The characteristics of normative mentors and associates are proposed and evaluated. Issues of significant concern to novice staff and to incipient mentors are identified and reported. Value added to the skills and qualities of the participants is investigated and reported. The effectiveness of mentoring programmes, undertaken over a continuum within a cross-disciplinary construction-related employment environment, is evaluated.

Keywords: Construction graduates, mentoring; personal qualities; skills

THE PROBLEM

For a number of years industrial practitioners have expressed a strong opinion that graduates of industry-focused courses should be capable of immediately undertaking skilled technical tasks. In the context of construction, practitioners frequently express the opinion to their university lecturer colleagues that the intellectual calibre of graduates is laudable, but the level of technical skill is not. These criticisms are increasingly becoming formalised (Andrews and Derbyshire, 1993; McNamara, 1994).

Higher education assumes that, whilst graduates possess the core knowledge and skills to commence their careers, further formal training is undertaken by the employer. This training input is at a premium during the stage of transformation from university to work. It is at this critical developmental stage that the graduate / novice employee needs to be shown the industrial application of theoretical knowledge (Cariss, 1996).

Research (Townsend and Gameson, 1994) has shown that the position of the novice employee is complicated in as much as many construction graduates are not employed in rôles which might be regarded as vocationally - specific. Additionally, novice construction employees have reported (Townsend and Gameson, 1994) that, in rank order, the three most important skills involved in the performance of daily tasks are:

- Interpersonal communication
- Teamwork
- Planning and organisation

Whilst most construction degree courses focus on these requirements (Sheffield Hallam University, 1994) these skills are not easily taught, but rather, are learned over a continuum, often by rôle model observation. Further, the final year of construction courses - when award classifications are decided - is infamously competitive. It is difficult to encourage interpersonal communication and teamwork amongst undergraduates working in such an environment.

Within their operant environments both practitioners, and academics associated with the provision of construction services, are involved in practice 'situations' (Schon, 1991) comprising a matrix of : uniqueness; uncertainty; complexity; instability and, value conflict. However, the response of practitioners and academics is profoundly different:

- Practitioners customarily respond to operational imperatives to produce specific practical, often satisficing, technical solutions.
- Academics generate scenarios from reflective analysis to develop generic intellectual, publicly defensible proposals.

This research project focuses on the identification of a nodal point:

- at which the interests of both practitioners and academics converge
- into which both practitioners and academics can invest resources
- from which both practitioners and academics can extract learning, to the mutual enhancement of all involved parties.

The nodal point is identified as the recent construction graduate recruited as a novice employee into a construction services providing organisation. In such a situation, the novice encounters a number of significant transitions:

- *Learning processes* : Academia focuses the undergraduate's learning processes on perceptual and symbolically complex learning segments. Practice will direct the novice employee towards effectively and behaviourally complex learning segments (Juch, 1983; Morris, 1986).
- *Reward systems* : Academia focuses on intellectual integrity and ratiocination. Practice focuses on quality of technical achievement attained within a framework of time and cost expenditure.
- *Operating conventions*: construction undergraduates who have learned within the didactically - orientated literary environment of a university will be exposed to a working environment of pragmatic, satisficing solutions, developed informally in an attempt to comply with time constraints (Higgin and Jessop, 1965). Flatter organisational structures have resulted in the devolution of authority and concomitant responsibility to lower level staff, without expensive supervision provided by experienced and highly skilled staff (James, 1991). Historically, in the context of construction services providing organisations, that supervision has been almost continuously available (Cariss, 1996). The economic imperatives of an increasingly price sensitive market compel the withdrawal of this experience/novice relationship and creates a vocational training vacuum (Armitage, 1991).
- *Culture* : One researcher (Hofstede, 1980) has submitted that culture is *collective programming*. In the taxonomy proposed, the construction services

professions would exhibit the traits of *masculinity* : assertive and competitive. The masculinity of the construction industry may very well present specific barriers to entry and progression for women (Byrne, 1992; Cockburn, 1991).

The experiences and perceptions of the novice employee during his/her socialisation period exert a significant influence on subsequent work performance and values. Any sensation of isolation (Blauner, 1964) during this period has been found to have longer-term effects on work sentience and career development (Kanter, 1977). Successful integration into the work environment via an effective socialisation process has been shown to result in an enhancement of levels of interaction and mutual support, together with a reduction in levels of staff absenteeism and turnover (Argyle, 1989). In a word-*commitment*.

The *model of commitment* which UK researchers (Martin and Nicholls, 1987) have constructed comprises three pillars, each of which supports three satellite factors. The foremost pillar is *sense of belonging to the organisation* supporting the satellite factors of a workforce which feels it is *informed, involved* and, *sharing in success*. There are strong intuitive grounds for proposing that the earlier the novice employee is introduced to the organisation's climate of commitment, the earlier and more readily (s)he will give an undertaking of commitment to the organisation. It is proposed that the surest and most expedient means of constructing a model of commitment in the novice employee's work-related value set is **mentoring**. It is proposed that an investment in mentoring a novice employee results in a significant enhancement of commitment from the novice (Drennan, 1989).

What is *mentoring*? Of the sixty definitions identified by the researcher, the majority reflect a bias towards teaching and, the caring professions. However, terms such as "An intense relationship ..." (May, 1982) and "...an ongoing, caring relationship..." (Anderson and Shannon, 1988) were felt to be inappropriate in a construction-related employment environment. The definition adopted (Herthington and Barcelo, 1985) here, is:

The guiding of a novice in professional development and the journeying together towards professional excellence.

The accelerating pace of internationalisation in the provision of construction - related professional services adds a further dimension of significance to the rôle of the mentor. Research (Lockhart, 1990) reveals that, in 1990, twenty per cent of UK employers were recruiting internationally. Amongst UK public sector employers, the figure rises to nearer 26 per cent. In order to achieve the primary objectives of the Single European Act of 1987 - unrestricted exchange of capital goods, services and labour within EU member states and, simultaneously ensure the optimum performance efficiency of EU-recruited novice staff, an element of circle-squaring must be involved. Mentoring is the solution. Thus some form of organisational assimilation strategy is highly desirable and not just from the perspective of the novice recruit.

Throughout the remainder of this paper, the term *associate* relates to a novice employee engaged in a mentoring relationship with a mentor.

THE RESEARCH

Research Methodology

The research methodology was constructed on the proposal that an interactive model which results in mutual enhancement of the performance of both academia and

industry can be implemented. The model developed within the context of this research project comprises *action researched mentoring*. Conventionally, researchers into social systems endeavour to ensure that the subjects of the research project are not contaminated in any way by the existence of the researcher. Action research (Lewin, 1946) however, extends to a conscious interaction with the social system. The intention of the interaction is to formulate and integrate improvements to influence the behaviour of the system. In consequence, the interests of the involved practitioners and academics are simultaneously served. The researchers adopted the role of Observer as Participant, based on the recommendations of Junker (1960). This technique allows a researcher to be accepted within an observed group, with a high degree of ethical validity.

Preliminary Research

The research project commenced with a preliminary two-part questionnaire survey of twenty-nine organisations providing construction services. In formulating the questionnaire, it was recognised that recipients might regard the questionnaire as a fishing expedition, with intra-organisational political undertones. Therefore, care was taken to draft the questionnaire in a format which emphasised the ethical 'no fault' purpose of the investigation.

The preliminary two-part questionnaire survey revealed that construction services organisations induct novice staff in one of three ways:

- Provision of a formal, taught induction programme, which novice staff are obliged to attend.
- Identification and quasi-appointment of a member of staff, selected by management on the basis of her/his intuitively - perceived personal and professional skills.
- An informal offer of assistance, available on an ad hoc basis, from any member of staff who might be available.

The questionnaire further investigated the opinions of management and staff within the relevant organisations relating to the organisation's induction strategy:

- The first option was apparently perceived by relevant managements as a convenient method of purchasing an external induction package. This was regarded as a particularly convenient method of resolving complex issues involving potential liability such as Health and Safety. Employee response indicated that this was not generally a well-received approach. Reservations were expressed about the technical competence, anonymous character, organisational relevance and, short-term effect of 'packaged' induction courses.
- The third option was justified by relevant managements as appropriate since established staff were perceived as approachable by, and helpful to, novice recruits. Employee response indicated that daily operational pressures resulted in experienced staff making a practice of referring novice enquirers to a more 'expert' source of information, apparently chosen at random.
- The second option was generally regarded as the satisficing strategy. However, managements and employees expressed an unease at the absence of definition and structure inherent in the situation.

Action Research

- The dependency on questionnaire responses dictated that, from this stage on, the research project was resource-led. Analysis of the questionnaire responses led to a programme of structured interviews conducted with twelve of the respondent organisations. The prepared questions were formulated from the analysis of reports relating to fourteen supervised work experience tutees, produced over a preceding period of three years. Judgements were then made, based on the researchers' *a priori* evaluations of the respondent organisations' research - significant characteristics eg. management commitment; personnel co-operation; organisation stability. The outcome was an agreement that the researchers would conduct action research with six construction services organisations.

The field research was conducted over a period of one year. Six novice employees were involved in the project, each employed in a construction-related environment within one of the employing organisations identified earlier. All novice employees were male, and were construction graduates of the School of Construction, Sheffield Hallam University. During the course of the year, action research conducted with one employing organisation was suspended because of internal re-organisation.

What follows is an adumbration of the principal outcomes from the one-year action research programme.

THE MENTORS

Mentoring possesses many of the characteristics of negotiation. Researchers (Cockman et al, 1992) have emphasised that an agreement can be effected which is of higher quality than would otherwise be the case, if parties adopt a learner centred focus during negotiation. This proposal was transferred by the researcher into a level of activity model (Lippitt and Lippitt, 1978) which was adopted by all the mentors. It is believed that the outcome was that the associates were enabled to maintain a higher level of control of the learning interaction than would otherwise have been possible.

In the early stages of the mentoring relationship, developing a positive perception of the process was apparently the most significant difficulty encountered by the novice mentors. This negativity was apparently caused by anxiety and was progressively ameliorated as mentors succeeded in taking control of the inner condition of ego personalities. This rite of passage was facilitated by an audit exercise conducted by both the incipient mentor and the researcher. The incipient mentor was asked to list what he believed would be expected of him as a mentor. The list was invariably a wish list of impossibly high expectations. Both parties then discussed the feasibility of the list's contents, and the conclusion, invariably, was that a mentor should, initially, be little more than a trustworthy, supportive and helpful senior colleague.

Any potential stress imposed on the mentor should be proactively managed. A range of managerial stratagems are proposed by researchers (Hall and Savery, 1987) in particular, it is clear from the research undertaken that the appointment of a novice employee's line manager as her/his mentor would almost certainly create dysfunctional tension.

The qualities of the normative mentor are proposed as:

- The ability to 'make time' to support the associate
- Possess the skills of a learning facilitator

- Effective professional practice rôle model
- Discreet
- Physical work location close to the associate

THE ASSOCIATES

It was not uncommon for associates to undervalue the significance of their contribution to the organisation, or express resentment at the apparent meniality of their duties. In the opinion of the researcher, this may emanate from the preceding learning environment of recent graduates. Undergraduates are accustomed to being assigned discrete and clearly defined academic tasks, which specify perceived learning outcomes. This is virtually never the case in the industrial environment. Thus there is a classical example of conflict between the expectations of the individual and the demands of the organisation (Vroom, 1982). The outcome is inexorably frustration and conflict. In such a situation, the skills of proactive management are at a premium in order to identify, capture and develop the novice's potential. Once again, the mentor's rôle is critical. Researchers (Megginson and Pedler 1992; Pedler, 1991; Revans, 1983) have developed the concept of the *learning set* to assist mentors. The logistics required to implement this strategy are usually beyond the availability of most construction-related employing organisations. It is proposed that the adoption of action research as a joint strategy by the researcher, mentors, associates and their employing organisations may be considered an innovative development.

The qualities of the normative associate are proposed as:

- Adopting a proactive rôle in her/his learning and development
- Innovative in developing strategies and skills to support professional activities
- Receptive
- Reflective
- Adaptable

Initially it may appear strange to propose that associates should possess normative qualities. However, the proposal is made for two reasons:

- Selection and appointment procedures should emphasise future potential of novice employees; and,
- Mentoring is not a cloning indoctrination process.

THE MENTORS AND ASSOCIATES

It was observed that the relationship between the mentor and the associate was crucial in the process of converting the associate's experience into learning. In all the cases observed, the mentor controlled the relationship. It became apparent that the relationships were based on three fundamental qualities:

- Respect
- Empathy
- Trustworthiness

It was notable that, where the mentor engaged in a proactive professional interest in the associate, the associate thrived. Evidence of research undertaken within the hotel industry (Mullins, 1995) clearly demonstrates that a positive commitment by a manager to the development of a novice is a factor of extreme significance in the novice's career development. However, using the collective programming taxonomy (Hofstede, 1980) previously adopted, the hotel industry exhibits *femininity* : relationships and quality of working life.

CONCLUSIONS

Validation of the results of a multi-dimensional action research project of this nature is inevitably subjective. The qualitative basis of the research dictates a Gadamerian approach to validation. The research team adopted a Delphi group - style of approach to validation. However, it is recognised that the close proximity of the members of the group, as work colleagues, could be regarded as prejudicing the integrity of the group's outcomes.

The mentoring process is essentially one of learning for both the mentor and the associate. A continuous, organic personal and social experience which results in outcomes. The process is active and dynamic demonstrating change in knowledge, skill, attitude and, social behaviour. The extent of learning which the mentor and the associate derive from this process will be a function of controlling variables, principal amongst which are motivation and attitude. These in turn are conditioned by the culture and close environment of the employing organisation. The dynamics of the interactions will perform a vital rôle in developing the contribution of the novice, not only to the employing organisation, but possibly to her/his entire profession.

The interventionist rôle of the researcher operating within the principles of action research was considered by all mentors and associates to have been supportive. This was particularly so, since all mentors were of the opinion that published literature provided by the researcher was of limited applicability. This confirms that becoming an effective mentor is a long-term developmental process, which requires:

- Questioning values and attitudes
- Modifying behaviour
- Enhancing personal skills

All qualities of the reflective practitioner (Schon, 1991). Employers endeavouring to obtain the Investors in People Standard (Taylor and Thackwray, 1995) responded very favourably to the initiative. The universal conclusion of all employers, mentors and associates was that the effort invested is disproportionately rewarded by enhancing quality of productivity and value addition in the context of construction services.

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