

A stylized illustration in shades of olive green and black. It depicts a group of approximately 15 human figures arranged in two rows, carrying a long horizontal beam on their shoulders. The background features a dark, angular structure resembling a building or a construction site, with several parallel lines suggesting a sky or a set of beams. The overall aesthetic is modern and graphic.

Communication in Construction

Theory and practice

Andrew Dainty,
David Moore
and Michael Murray

Communication in Construction

Communication within project-based environments presents special challenges. This is especially true within the construction industry, where interaction tends to be characterised by unfamiliar groups of people coming together for short periods before disbanding to work on other endeavours. Many of the problems that develop in construction projects are a result of both the temporary and inter-disciplinary nature of project teams. This complicates an already problematic communication environment in which technical language, an adversarial culture and noise/distraction all combine to prevent straightforward information flow from one party to another.

This book examines communication at a number of levels ranging from interpersonal interactions between project participants to corporate communication between organisations. Several non-typical perspectives on the process of communication are introduced, to encourage the reader to think about communication in a more innovative manner. The combination of differing perspectives illustrates the diversity of communication problems facing those working within project-based environments. Practical guidance is provided on possible solutions to communication problems, and a number of examples and case studies are presented.

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Michael Murray is a Lecturer in Construction Management within the Department of Architecture at the University of Strathclyde. He is co-editor of several books including *Construction Industry Reports 1944–1998* (Blackwell, 2003) and the *RIBA Handbook of Construction Project Management* (RIBA, 2004).

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Preface

I believe that social study should begin with careful observation of what may be described as communication; that is, the capacity of an individual to communicate his feelings and ideas to another, the capacity of groups to communicate effectively and intimately with each other. This problem is, beyond all reasonable doubt, the outstanding defect that civilization is facing today.

(Elton Mayo, 1945)

The construction industry is wholly reliant upon effective communication between individuals, teams and organisations. However, in a project-based industry, interaction tends to be characterised by unfamiliar groups of people coming together for short periods before disbanding to work on other endeavours. This temporal dimension complicates an already problematic communication environment in which technical language, an adversarial culture and noise/distraction all combine to prevent straightforward information flow from one party to the other. Indeed, the sheer number of stakeholders involved in the processes undertaken during a construction project renders communication networks exceptionally complex and subject to change. Furthermore, with the current imperative to improve industry performance by designing and constructing more rapidly, many processes that are reliant upon effective communication occur concurrently. This increases the probability of problems occurring in the transmission and reception of vital information to the construction effort.

Texts abound on how to communicate more effectively. These proffer a variety of approaches and techniques for ensuring that information flows are well managed, that messages are conveyed properly and that the receiver interprets and acts on information in a manner that is congruent with the desired objective. So why is there a need for a book which specifically examines communication practices in the construction project environment? The answer to this question is that the complexity and dynamism of the industry's project-based structure and culture threaten to undermine the applicability of many central tenets of effective communication practice that have been applied successfully in other sectors. Indeed, many of the management practices that have evolved in

response to the structural and cultural conditions typical of the sector have done little to engender an open communication environment that ensures conjoined team working, process integration and improved performance. Thus, it is incumbent upon construction managers and professionals to adopt appropriate communication strategies which accord with the particular constraints under which they work.

All too often, communication is paid scant attention in project management texts, in which it is often relegated to an ‘underpinning’ or ‘crosscutting’ issue, implicit in what managers do, but unworthy of special attention. Even in practice, it appears to be an area deemed suitable for an occasional CPD event, rather than being seen as the fundamental enabler of all processes, activities and behaviour comprising project management. In this book, the profile of communication as an enabler of effective construction project management is elevated to the top of the agenda. Rather than viewing effective communication as an important facet of project-based management, it is viewed as the essential *prerequisite* to successful project-based management; if we communicate more effectively, then other managerial processes should work more effectively as a result. Thus, by exploring the principles of effective communication and applying these concepts between people, groups, organisations and corporations, the aim is to provide a concise, but nevertheless targeted framework of theoretical and practical tools for the reader to apply as their individual situation dictates. Moreover, we hope that by grounding the art of communication within everyday project and organisational practices, this will help those working in the industry to understand more about both their own approach and that of others to the act of communication.

Rather than prescribe a set of guiding principles for managers to adhere to and thereby improve communication performance, in this book we recognise the fact that there is no single communication paradigm or panacea for a multifarious industry such as construction; managers should tailor their approaches to the situation and demands of the project in hand. Thus, we adopt a ‘contingency view’ in explaining the principles of effective communication. We encourage the reader to apply the principles contained within this text to identify the communication needs and difficulties within their own workplace environment. In this way they can establish more effective ways of identifying and responding to their own communication strengths and weaknesses and to the changing circumstances which characterise the dynamic construction project environment. The case studies contained within the text provide some tangible examples of how others have successfully (or unsuccessfully) developed their own communication strategies in the past, and we encourage the reader to identify their own illustrations from which appropriate methods of communication can be discerned.

Andrew Dainty
David Moore
Michael Murray
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Part I

Communication concepts and contexts

This introductory part outlines the theory and practice of communication in general terms and relates this to the challenges of the contemporary construction project environment. Guidance is provided for using the book as a study aid and as a practicable handbook of communication techniques and methods.

Introduction

Although managers in different industries and sectors undertake diverse tasks and activities, it has long been recognised that they spend most of their time involved in communication (Baguley, 1994: 3; Huczynski and Buchanan, 2001: 178). If viewed as a fundamentally social activity, communication activities can include engaging in conversations, listening to colleagues, networking, collecting information, directing subordinates, writing letters or transferring information through electronic devices such as telephones or computers. Hence, in many ways the communication effectivity of managers defines their performances as managers; superior performance demands superior communication. This introductory chapter defines the concept of communication and its importance in the context of the contemporary construction industry. It outlines the role and importance of the project manager in the communication process and discusses the way in which the issues central to effective communication are explored within this text. Thus, it provides a contextual backdrop to the ways in which communication will be explored in relation to the construction industry in the remaining chapters.

Defining communication

Communication can be viewed as a metaphorical ‘pipeline’ along which information is transferred from one person to another (Axley, 1984). It is the lifeblood of any system of human interaction as without it, no meaningful or coherent activity can take place (Thomason, 1988: 400). Nonetheless, defining ‘communication’ is difficult as it is such a multidimensional and nebulous concept. It can have a variety of different meanings, contexts, forms and impacts and so will mean different things to dissimilar people in different situations. This is certainly the case within the construction industry, where a plethora of different communication occurs concurrently as the following simple examples illustrate:

Example 1 Consider a personal conversation between an architect and a project manager around how a particular design detail should be

constructed on site. This could comprise a focused conversation between the two as they seek to achieve a consensus on the implications of the detail for the production process, and also of any necessary changes to the detail in order that it interfaces the elements of the structure already completed. This consensus-reaching process may be facilitated by a variety of communication-enhancing tools and forms of information, such as a visual representation of the design detail. In this example, the communication process involves two specialists utilising their common understanding of industry-specific terminology and concepts through verbal and non-verbal channels. This common understanding will have taken both parties several years to achieve as they moved from novice to expert status through their experience of working in the industry. To an industry outsider (or an inexperienced insider) who does not possess such an understanding, the communication between these experts would be largely impenetrable and they would be able to extract little or no meaning from the message being communicated.

Example 2 Consider the communication of the image of the construction industry as a whole portrayed by a newspaper article about problems associated with ‘cowboy builders’. Such a view may have been compounded by the typical image of the industry as invariably portrayed by the press, where it is seen as being characterised by hazardous, dirty working conditions and a ‘macho’ culture. In this example, it is unlikely that there will be industry-specific terminology used as the audience is the general public, rather than industry practitioners themselves. In addition, the communication is purely visual (written and perhaps graphical, but with no verbal input and so the visual aspect of body language is not part of the message). Finally, the process does not readily allow the development of a debate and/or consensus between all those ‘involved’ in the communication, so any errors in the message cannot be easily corrected.

Although both of the scenarios are examples of communication, each comprises radically different forms and contexts. Thus, it is important to recognise that the term ‘communication’ is in itself a multifarious and complex term, which can mean different things in different contexts and situations. This is a theme that will recur throughout this book as communication barriers are explored in relation to the situations within which they are rooted and techniques for improving communication are examined in the contexts for which they are appropriate.

Despite the difficulties inherent in describing what is meant by communication, it is important that a working definition of the concept is developed to underpin the analysis of communications practice contained within this book. In order to achieve this, it is appropriate to break down the term so as to define its composite dimensions. Important characteristics of the

communication concept can be summarised as follows:

- Communication usually involves the transfer of *information*, a generic term that embraces meanings such as knowledge, processed data, skills and technology (Cheng *et al.*, 2001). Within construction, information is exceptionally diverse given the huge number of parties involved with construction operations.
- To communicate is to *bridge a distance* of some description, which can range from being short and simple (e.g. between two people) to long and complex (e.g. across the world) (see Skyttner, 1998). Again, in construction the disparate location of many of those involved with projects regularly necessitate communication over longer distances than in, for example, manufacturing environments.
- Successful communication (at an interpersonal level in any case) is a *social skill* involving the effective interaction between people (Hargie, 1986). Despite development in off-site production techniques, construction remains a labour-intensive industry and hence, social activity demanding communication between a wide variety of participants.
- Interpersonal communications between people usually involve *conveying facts, feelings, values and opinions* (Kakabadase *et al.*, 1988). Hence, interpersonal communications can be considered subjective and value-laden. In many respects construction is not an exact science and as such demands a degree of subjective interpretation from those participating.
- Communications do not only occur between individuals, but *can occur between groups or organisations* (Baguley, 1994). Construction is inherently a team activity involving the concurrent involvement of many specialists in order to successfully deliver project objectives.
- Communication can be seen as a *transactional process* where something is exchanged between the parties involved (see Eisenberg and Goodall, 1993: 22). Construction can be seen as a series of transactions between the parties involved. Facilitating these transactions has been widely recognised as a key issue for the industry to address if it is to improve its performance in the future.

These wide-ranging perspectives on communication all suggest that communication is essentially about the transfer of information between people. Thus, the point of communication in most cases is that one person (or team or organisation etc.) wishes another to receive information from another. Within an organisational context this could be to convey an instruction to influence the actions/behaviour of others, or may involve an exchange of or request for information. To some extent, this interaction will be determined by the rules and norms of social behaviour, as it is people who translate the meanings and utilise the information (Gayeski, 1993).

This also suggests that communication has to be a two-way process, as unless the transmitter of the information receives feedback that the message has been received, then they will be unsure as to whether communication has actually taken place or if it has taken place successfully. Put simply therefore, communication involves the giving out of messages from one person and the receiving (and successful understanding) of messages by another in response (Torrington and Hall, 1998: 112). The ways in which these messages can be conveyed are multifarious and may include speech, body language, writing, graphical or electronic media or any combination of these forms. As such, communication can be viewed as a professional practice where appropriate rules and tools can be applied in order enhance the utility of the information communicated, as much as it can a social process of interaction between people.

The importance of effective communication

The importance of effective communication to individuals, teams and organisations cannot be overstated. Virtually every text on how to manage people will contain important principles of how to communicate effectively with the workforce. At an individual and team level, people find it difficult to function in the industry if they do not develop a mutually agreed communication *modus operandi* to underpin their work activities. Similarly, the management of organisational processes also demands that robust and effective communication channels are developed which enable their various components to be conjoined appropriately. The importance of communication to organisations is succinctly summarised by Armstrong (2001: 807):

- *Achieving coordinated results* – organisations function by means of the collective actions of people, but independent actions lead to outcomes incongruent with organisational objectives. Coordinated outcomes therefore demand effective communications.
- *Managing change* – most organisations are subject to continuous change. This, in turn, affects their employees. Acceptance of and willingness to embrace change is likely only if the reasons for this change are well communicated.
- *Motivating employees* – the degree to which an individual is motivated to work effectively for their organisation is dependent upon the responsibility they have and the scope for achievement afforded by their role. Feelings in this regard will depend upon the quality of communications from senior managers within their organisation.
- *Understanding the needs of the workforce* – for organisations to be able to respond effectively to the needs of their employees, it is vital that they develop an efficient channel of communication. This two-way

channel must allow for feedback from the workforce on organisational policy in a way that encourages an open and honest dialogue between employees at all levels and the top-level managers of the organisation.

Given the benefits of effective communication outlined above, the corollary of poor communications for an organisation is that employees will misread management decisions or react to them in a way that was not intended. Similarly, managers will misunderstand the needs of employees and will therefore suffer from lower performance and a higher turnover of staff. Communication has become even more important as the business world has begun to shift towards what is now described as a 'knowledge-based economy'. A knowledge revolution has underpinned the shift towards a predominance of service sector organisations (and a gradual erosion of the manufacturing base). Arguably, most large construction firms have now become service sector firms, outsourcing the majority of their productive capability and effectively acting as managers of the process. Professional and managerial employees dominate their payroll and it is these 'knowledge workers' whose intellectual capital becomes the substance which underpins organisational growth and development. The challenge for such organisations is how to engender knowledge sharing and nurture 'communities of practice' for improved performance. Communities of practice are where groups of people who share a concern for the same issues, or set of problems, come together and interact on an ongoing basis (see Wenger *et al.*, 2002: 4). They can be considered the building blocks of effective problem-solving within contemporary organisations.

Another requirement for effective communication in construction stems from the industry's propensity to undergo change and transition. Coping with change is more problematic in traditional industries like construction, which have shown a reluctance to embrace new ways of working, but is arguably more important, considering the disparate pools of knowledge that must be combined within construction projects. In the past, a 'silo' like mentality has prevailed which has been shown to stymie knowledge sharing within the industry (Dainty *et al.*, 2004). However, effective communication has the power to break down such barriers by bringing people together, thereby propagating improved collaboration and integrated working within the sector. Thus, effective communication can be seen as the cornerstone of future industry improvement.

Why study the human aspects of communication in construction?

As will be explored in more depth in Chapter 2, the construction project environment presents a particularly problematic arena within which to apply communication practices proven to be effective in other sectors.

Everyone involved in construction plays a part in a complex communication network. Seeing the project environment as an interconnected network of actors is appropriate because every such venture, no matter how small or well defined, can be successfully completed without interactions and transactions between people and organisations. This is best appreciated by way of a simple example. Consider the construction of a simple, single floor domestic extension to a traditional brick-built dwelling. The communication network for even a relatively straightforward project such as this will involve interaction, between the house owner (the client), the designer (the architect), the contractor (and its workforce), the materials suppliers and the planning and building control officers as a minimum. Now consider the construction of a new terminal building and runway at a major international airport. This type of project might require years of planning and investigation before the onsite activities can even be mobilised. It will probably involve many hundreds of organisations and thousands of individuals from around the world working together in an integrated and collaborative effort. The information flows involved with such an endeavour are potentially enormous, and yet must be carefully managed if the desired outcomes are to be achieved. However, in both examples, the success or otherwise of the project will depend upon the effectiveness of those involved to convey their needs and perspectives to others. It is the multifarious nature of human interaction that renders the understanding of communication and effective communication practice so problematic.

Construction is not peculiar in its reliance upon effective communication. Indeed, without the ability to communicate, it is possible that any contemporary organisation would cease to exist as we understand them (Katz and Kahn, 1978). Construction does, however, present a particularly complex (and, for that matter, interesting) environment within which to explore communications phenomena. Because it is project-based, its groups and networks are temporary in nature and relationships and interactions continually change to reflect the dynamic nature of the workplace. The projects themselves can be summarised in terms of their uniqueness, complexity and discontinuity. Every project will have unique characteristics and will involve a number of different actors, all of whom will have a specific and finite involvement with the endeavour. Overcoming the complex and temporal constraints that projects place on their participants is fundamental to their successful development (Goczol and Scoubeau, 2003). Hence, whilst construction is an established sector within which processes and protocols have been refined to facilitate communication within it, an element of uncertainty always exists that has the potential to undermine the communication channels necessary for project success.

Despite the massive investment in information and communications technologies (ICT) in recent years, it is impossible to divorce interpersonal and inter-group communication from the construction process. It is in these interactions that the success or failure of any project is rooted, and not the speed

of an Internet connection or the compatibility of two Computer Aided Design (CAD) systems, important as these technical issues are to underpinning the process. Thus, as was alluded to above, it is essential that construction is viewed as a social activity within which communication plays a vital role.

Given the centrality of effective human communication to the success of the industry, it is surprising that so many of the recent calls for the industry to improve its performance concentrate on process and product improvements at the expense of the need to improve the complex inter-organisational and interpersonal relationships that define the industry's culture (see Emmitt and Gorse, 2003: 2). Indeed, people working in construction cannot be relied upon to act and interact in an identical manner because they will be coming from a variety of different perspectives and backgrounds and thus, will have differing needs from their interactions with others. As was discussed earlier, it is precisely because of people's idiosyncrasies and the diversity of the industry that construction presents such a fascinating environment within which to explore communication practices, as this book will reveal later.

Why study organisational aspects of communication in construction?

Communication is often treated as a background or underpinning variable in determining organisational performance, conceptually related to the structure, culture, leadership and rewards of an organisation (Church, 1996). Such a definition belies the central importance of communication as an enabler of other organisational activity. Indeed, given its influence over the efficacy of the construction industry's processes and practices, the lack of attention to the organisational aspects of communication within many construction management texts is somewhat surprising. Although information technology solutions can help to relay information rapidly and effectively, understanding of the social, structural and cultural constraints of the organisation on the communication process is arguably more important. Thus, as well as exploring the processes of human interaction and its impact on effective communication, a concurrent emphasis of this text is to explore how human interaction takes place within the broader contextual framework of the organisation. By exploring human communication processes within both the temporary (project) and permanent (firm) organisational contexts of the industry, this allows the interplay of these mutually influential factors to be understood and a more holistic understanding of how communication can be managed more effectively in the future.

Communication within the 'knowledge economy'

Knowledge is the vital resource which lies at the heart of both organisational and project success (Nonaka and Takeuchi, 1995; Egbu, 1999). As was

alluded to earlier in this chapter, within the post capitalist society, knowledge cannot be considered just another resource alongside the traditional factors of production (land, labour and capital), but is in fact the *only* meaningful resource (Drucker, 1993). Unsurprisingly, there has been a great deal of attention on developing ways to manage knowledge more effectively in recent years, primarily through the development of new ICTs. However, this emphasis has largely been at the expense of efforts to explore the human dimensions of effective knowledge management (Scarbrough, 1999; Swan *et al.*, 2000). Arguably, the overemphasis on technological solutions for managing knowledge within large organisations has contributed to the relatively high failure rate of knowledge management (KM) initiatives within many industries and organisations (Ambrosio, 2000; Carter and Scarbrough, 2001; McDermott and O'Dell, 2001). Thus, there is a practical need to integrate KM programmes with human resource management (HRM) policy, to ensure its effective contribution to the performance of the modern business (Blackler, 1995; Swan *et al.*, 2000; Carter and Scarbrough, 2001).

Explicit knowledge represents only the metaphorical 'tip of the iceberg' of the entire body of knowledge. As Polanyi (1966: 4) states 'we can know more than we can tell', which implicitly suggests that there are difficulties inherent in the communication of tacit knowledge, or even that there are aspects we as individuals cannot convey to others (Kane, 2003). Tacit knowledge is therefore not easily visible and expressible, but is highly personal and therefore difficult to communicate or share with others (Smith, 2001). This acknowledgement reflects the belief of many theorists and practitioners, that knowledge must be harnessed and communicated more effectively for organisations to develop and for performance to be improved. The importance of knowledge capture and transfer will be returned to throughout this book in relation to the changing role of construction organisations within the knowledge-based economy. Notably, many firms are transforming into service-oriented firms, which employ few people outside of those involved in their core service provision. This has created new challenges for such firms who have to procure additional services and productive capacity from external suppliers, which arguably opens up new communication interfaces which have to be managed.

The principles of effective communication

The problematic context of communicating in construction raises questions as to how the industry can go about overcoming the structural and cultural conditions and constraints which define its operation, in order that it can develop an infrastructure that facilitates more effective communication in the future. Moreover, it suggests that the industry needs to find ways of effecting change within the sector in such a way as to overcome existing cultural constraints on the sector's development. In a theoretical sense,