INTERNAL SUPPORT MECHANISMS IN GROUPS AND TEAMS

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Few studies have investigated the attributes of group interaction that are used to support individuals and help them contribute to the group product. This exploratory study, aims to help address this problem and looks at groups in various contexts, including construction, to establish what group members do to encourage and support their colleagues. Most studies that have examined support mechanism have done so in educational setting. Therefore, in grounding this work reference is made to educational research. The focus of the research is group interaction and attempts made to encourage others to participate in the group discussion. The observations focus on data collected from professionals attending management and design team meetings. Also, interaction behaviours and tendencies that produce positive social responses are discussed and explored. In the construction meeting, few attempts were made to actively encourage those reluctant to participate to engage in the group discussion. The findings show that those who did successfully draw members into active conversation used a combination of techniques to encourage participation.

Keywords: engagement, group dynamics, interaction, support.

INTRODUCTION

Although many aspects of construction are competitive, projects are delivered through team-based activities requiring collaboration. Each project is composed of multidisciplinary teams, with the success of the team being dependent on the integration of specialist knowledge held by the members. Unfortunately some individuals may be reluctant to engage and share their knowledge or do not have the social skills necessary to undertake an active part in the group process. McCroskey (1997) and Gorse (2002) have noted that group interaction is often skewed; with some of the members dominating interaction while others are reluctant to participate. Failure to expose and exploit individual knowledge and expertise limits the effectiveness of the group (Egbu *et al.* 2000). If the attributes of individual members are important to group success, then it is essential that members have the ability to interact, encourage and support the participation of others. Socially apt individuals can use their skills to encourage the less willing to engage in the group process.

While other management schools and educationalist have recognised the importance of cooperative behaviour (Akan 2005; Macgowan and Newman 2005; Siegel 2005) and introduced it to teaching and training methods the construction industry has yet to properly embrace the topic. The first stage of this exploratory research is to identify

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how participants encourage other members to take part in the group discussion and under what circumstances cooperative behaviour occurs.

GROUP DEVELOPMENT

Group interaction changes the behaviour of individuals. Some individuals excel in the group whereas others experience a level of apprehension and difficulty with the group processes. Emmitt and Gorse (2006), reporting on their research involving project management students undertaking information building experiments, noted that groups would not generate as many ideas as the equivalent number of students undertaking the exercise individually. While a proportion of the underperformance was due to mechanistic operations, such as members having to wait their turn, some of the students avoided contributions, were blocked, suppressed or were fearful of making a contribution because of potential embarrassment. During this short exercise, it was noted that where individuals did not play an active role in the group discussions few attempts were made by the other, more active, group members to include the reluctant contributors. The formal time constrained environment which was imposed on the students seemed to inhibit helping and supportive behaviour. Also, some individuals found it difficult to interrupt others, gain the floor or generally participate in the group processes and discussions. In order to encourage a more even distribution of participation across the group and to ensure that reluctant members contributed Emmitt and Gorse introduced turn-taking and participation rules to some groups. When the strict mechanisms were used to ensure that each member of the group had to play a part in the group process, the natural flow of the group discussion and the ability of the group to generate ideas became further hindered. Those previously reluctant to participate still lacked the confidence speak and often held up the flow of the group interaction. Other studies have found that groups often experience a dip in performance as they go through what is described as the 'entrenchment' phase (Dainty *et al.* 2006). During this phase the members become more familiar with each other and the task, and explore different perceptions and beliefs, some of which contribute to the group activity and others do not. Interestingly, when students in Emmitt and Gorse's study were asked to repeat the experiment a number of times it was noted that some of the more confident interactors started to encourage and support those members who were less active. Greater effort was made to include those reluctant to contribute in the discussion; some members asked questions, prompted and provided openings for the reluctant individuals to make their contribution. While the exercise and experiment, has limited relationship with construction teams, the observation that members can help others integrate and engage in the group process is important. As with every other industry, construction has some specialists who are not confident speakers and seem to experience difficulty with engaging in group discussions.

Some individuals within construction teams have specialist knowledge and expertise, but lack the confidence or social skills to engage in the group. While most studies that examine participation are conducted in educational settings the patterns of behaviour found are not peculiar to other environments. Bell (2001) and Gorse's (2002) study of *bona fide* workgroups suggests that group interaction is unevenly skewed and some members play a minimal role in the group process. In both Bell and Gorse's research, occasionally, it was key members of the groups who were reluctant to contribute and without such specialist contribution the group decision may be flawed.

Social inclusion

Sociable members of the group can encourage members to participate and join in the group process. Such individuals, who play a key role in maintaining the group's social dynamic, have been referred to as social leaders. Two roles that are considered key to group performance are the accomplishment of the task and maintenance of the group. Studies have shown that individuals can perform both roles (Turk 1961; Wallace 1987; Wyatt 1993) or the roles can be undertaken by different members of the group (Pavitt 1999). The distinction between task and socio-emotional leader can sometimes appear rather artificial (Pavitt 1999); however, the importance of the roles within the group is sound. Social leaders maintain relationships within the group, developing and encouraging participation and helping to manage the positive and negative emotions expressed. The role of ensuring that members are included in the group's social system is an important one. Amongst other things, the social leaders of a group will establish informal support structures that can be used to recognise and encourage individuals that need help.

Reluctant interactors

Some members may blame individuals for their reluctance to become involved in the group experience and even suggest that members should ask for help or assistance, yet most people at some point will avoid seeking help. Indeed, research shows that high-ranking professionals often avoid asking questions that imply the need for help or do not seek help in formal situations (Lee 1997). The fear of embarrassment, humiliation and the need to defend status and position can cause individuals not to engage and to avoid seeking help. This is often unfortunate since assisting and helping behaviours can encourage the development of relationships. Help-seeking behaviours are fundamentally interpersonal, with one person seeking assistance from another (Lee 1997). Research shows that individuals are more likely to seek help from others who are perceived to be of equal status (Morrison 1993; Lee 1997) and others who have helped them earlier. Co-operative patterns of behaviour tend to be reciprocal (Patchen 1993). For example, where help is offered and accepted or sought and given, then it is likely that reciprocal gestures will occur in the future.

Studies have found that changes in the environment remove some of the barriers and help to distribute participation. Kirkpatrick (2005) noted that when a student discussion group was set up on a web site there was an increased willingness to speak, when compared to the classroom experience. Lee (1997) also found that professionals would avoid seeking help in formal environments, such as meetings, but would be prepared to discuss the same issues during chance meetings in corridors. Many decisions are made outside of the formal meeting environment (Emmitt and Gorse 2003), formal structures can and do present barriers to open discussion (Otter den 2005a, b; Dainty *et al*. 2006).

Intervention and informal 'chat'

During Kirkpatrick's (2005) study of student groupwork he found that although lecturer intervention and guidance resulted in improved grades and greater student satisfaction, it had an adverse affect on group cohesion. When regular face-to-face direction and guidance was given by the tutor, student members tended to work on their own rather than discuss problems and share ideas. The study also found that lecturer intervention in a web based discussion groups could, if too directive, cause members of the class to drop out of the discussion. Although initially concerned about the degree of 'nonsense' that students discuss in group situations, Kirkpatrick

concluded that the unstructured 'chat' component of groups is important because it often forms the start of more productive interaction between members. Interestingly, Lee (1997) noted that professionals often used informal environments to 'strike up' general conversations. Such informal interaction would often lead onto the discussion of a work related topic. The use of chat, small talk and other unstructured and informal interaction can be important when establishing a relationship and forum where other issues can eventually be introduced.

Capturing supporting interaction: Engagement research methods

The exploratory nature of this investigation and unstructured nature of 'chat' and interaction can make data collection and analysis difficult. Much of the early groupwork research uses the Bales (1950) interaction process analysis method to observe and classify data. The positive socio-emotional categories used in the Bales' IPA do recognise and capture supporting and cooperating behaviour, but are not entirely focused on group engagement. A model that has greater focus on the degree of engagement is the five item scale developed by MacKenzie (1983). Using this scale interaction is classified in terms of liking and caring for members, cognitive understanding of behaviour, participation, interpersonal challenge and confrontation and self-disclosure. Recently Macgowan and Newman (2005) have extended classifications to seven key areas of group engagement. The group engagement measure (GEM) has 37 descriptions of behaviour that support the seven key areas (Table 1). Macgowan's GEM scale currently offers the most comprehensive engagement scale and can be used to explore individual and group interaction. Within the current study, the GEM scale is used to set the qualitative observations in the GEM context, pairing the observations with the classification. Whilst all items are important, the aspects that focus on the encouragement of others include: relating to worker, relating with members and working on other members' problems.

RESEARCH METHOD

The observer was present prior to, during and after group meetings. The observer took no active role in the meetings. Qualitative records were made during the meetings, no other recording devices were used. Observations were focused on interaction that helped participants become part of the group process. Acts observed were those that encouraged interaction or participation and behaviours that offered help and support. The study draws on those behaviours that attempt or succeed in engaging members in the group's social processes.

No attempt has been made to quantify interaction; the study attempts to explain various events and interaction behaviours that are used to capture, motivate and encourage others to become part of the group or contribute to the group activity. Rather than classify all of the interaction, the research observations are qualitative reflections of interpersonal behaviour. Once described, the reflections were compared with the Macgowan' GEM scale to identify the relationship with the classification system. At this stage the method is used to see how observations fit against the GEM scale. It is envisaged that the GEM scale will be used to a greater extent, forming the basis of quantitative analysis, in future studies.

Table 1: Group engagement measure GEM (adapted from Macgowan and Newman 2005)

Attendance	Arrives on or before start time.
	Stays for the duration of the session or leaves for an important reason.
	Does not hurry to leave at the end of the session.
Contributing	Contributes his/her share of talk time (not too much nor too little).
	Seems to follow and understand what others are saying.
	Responds thoughtfully to what all others are saying (not just one or two).
	Verbally interacts with members on topics related to the group's purpose.
	Participates in group projects / activities.
Relating to worker	Follows guidance of work, discusses what the worker wants to discuss, is involved in activities suggested by the worker.
	Shows enthusiasm about contact with worker, demonstrates interest, eager to speak with worker.
	Supports work that the worker is doing with other members e.g. by continuing to discuss the topic or expanding related discussion.
	Interferes with or contradicts work that the worker is doing with other members in destructive ways.
Relating with members	Shows enthusiasm for conversation with at least one other member.
	Shows enthusiasm for conversation with two or more other members.
	Likes and cares for other members.
	Seems close to most (more than half) of the group's members.
	Helps other group members to maintain good relations with each other, encourages members to work out interpersonal problems, attempts to stop unproductive arguments among members, attempts to cheer up group.
	Helps and encourages other members.
Contracting	Expresses continual disapproval about the meeting times.
	Expresses continual disapproval about the number of meetings.
	Expresses continual disapproval about what the group members are doing together.
	Expresses continual disapproval about member roles (e.g. does not support other members, and / or does not ask the group for help with problems).
	Expresses continual disapproval about worker roles such as to facilitate group process and not one-to-one work, and a commitment to both the individual in the group and the group as a whole.
Working on own problems	Divides problems and works on their parts.
	Works on achieving the goals of the group.
	Makes an effort to achieve his / her particular goals.
	Finds avenues to solutions to specific problems.
	Works on solutions to specific problems.
	Tries to understand the things s/he does.
	Reveals feelings that help in understanding problems.
Working on other members' problems*	Talks with or encourages other members in ways that help them focus on their problems.
	Talks with or encourages others in ways that help them specify their problems.
	Talks with or encourages others in ways that help them to do constructive work on solving their problems.
	Challenges others constructively in their efforts to sort out their problems.
	Helps others focus on group goals.
	Helps others attain group goals.
	Helps others achieve the group's purpose.

RESULTS AND DISCUSSION

The study reviewed data colleted from 36 management and design team meetings. Group sizes ranged from five to eleven members, the most common size being nine

members and the average was eight. The results show that one or two individuals dominated the majority of the group interaction, with participation being distributed among the remaining members to a much lesser extent. In a few of the meetings observed some individuals appeared very reluctant to engage in general discussions and made minimal contributions. In most of the meetings, the more active members did very little to encourage others to participate; however, episodes of interaction from two notable exceptions are reported below.

The initiation of interaction prior to meetings was considered to be an important part of the group's early social development. In some cases interpersonal relationships that were initiated and developed prior to the meeting were evident during the main meeting. The research briefly reports the nature of interaction prior to meetings.

Initiating social interaction

In most of the meetings observed informal discussion would take place prior to the meeting starting. Where this did occur it would normally commence almost immediately as a person entered a room. Where people were already familiar with each other or had met at previous meetings, those of a more sociable nature would quickly initiate conversations with openings of a general nature. Various issues such as parking, weather, travel and recent news would often be used to strike-up the discussion. The content of the initial interaction was sufficiently common so that others could share interest or have some knowledge of the topic. The nature of the initial interaction tended to avoid topics that could offend or were sensitive. Although project issues were occasionally discussed it was not usual for such issues to form part of initial interaction.

It was interesting that the most talkative members of the group would often introduce themselves to those members that they did not know before other members had a chance to introduce them. The speed and apparent spontaneity of the initial conversation was an important determinant of whether informal 'chat' would take place before meetings. Where there was no attempt to initiate conversation during the earliest opportunity social interaction prior to the meeting was limited. Occasionally informal discussions would be limited to small sub-groups and would not include all members. Sometimes sub-groups would be familiar with each other, from the same team or share common social or subject interests.

In some instances, members were resistant to engage in initial conversations, some members avoided face-to-face engagement, or when interaction was attempted the respondent did not reciprocate with enthusiasm or interest. Particularly talkative members would often continue talking, offering opportunities to respond, introducing more topics and asking questions, even though the initial degree of enthusiasm was not reciprocated. It was noted that even those initially resistant to engage in conversation could be encouraged and coerced into discussions.

Initial interaction attempts, as long as they do not contain negative connotations fall into 'relating with members' classification of the GEM scale. Early interaction attempts demonstrate enthusiasm and commitment to a basic level of conversation. As with Lee's (1997) and Kirkpatrick's (2005) study, initial interaction tends to be 'chat', statements about the weather, current issues or positive gestures, such statements carry low social risks and help initiate relationships.

On occasions interaction prior to the meeting was avoided. Such acts could be a result of the parties having limited social skills or fear embarrassment, as found in

McCroskey's (1997) studies. In meetings where controversial issues were tabled on the agenda some parties seemed reluctant to engage in conversation. The pending negative issues presented a barrier to the formation of positive socio-emotional interaction. Gibb (1961) found that such behaviour can lead to increased defensiveness and escalate the level conflict. However, in the meetings observed, the increased pressure caused by moderate levels of tension did not seem to exacerbate conflict. Adopting defensive approaches or showing disapproval with proceedings falls within the GEM 'contracting' category.

Engaging members in discussion

In two of the meetings continued effort was made by individual members to encourage other reluctant contributors to take part in the discussion and decision making process. In one meeting, the structural engineer appeared reluctant to engage in open discussion. The project manager first asked the structural engineer a direct question about the strength of a beam and its ability to carry an air-handling unit. The initial question was a closed question allowing the structural engineer to answer yes or no. Once the structural engineer answered the question no further elaboration or explanation was given. The project manager rephrased the question prompting the structural engineer for further information; however, the response was succinct and lacked explanation. Failing to draw the explanation desired from the structural engineer, the project manager asked if they could have a discussion following the meeting regarding the problem. Following the meeting an open discussion took place where the engineer gave considerable explanation and, due to the discussion, new decisions were made regarding the problems. In the formal situation, the engineer seemed uncomfortable discussing the matter, but with a short time to contemplate the issue and the discussion taking place outside the main meeting he seemed more amenable to discussing the issues. Such findings have some synergy with Lee's observations of doctors and consultants. In Lee's research professionals sought assistance and discussed important issues during chance meetings in corridors, outside of formal environments.

The most successful attempt to include a reluctant member into the discussion was achieved by a female member of a construction team. Unfortunately, very few women were observed in this study so it is not possible to state whether the observation is gender related.

In this instance a female member of the building users' management team encouraged the facilities manager, from the same team, not only to engage in discussion, but also to take action. Up until the female member's encouragement, the facility manager had not been involved in the open discussion and even when asked questions had given little input. Prior to asking for involvement, the building user raised the group's awareness of the importance of the facility manager. Using the facilities manager's name she prompted an initial response in the form of face-to-face (eye) contact. Following this introduction she praised the ability of the facility manager, noting that he had played key roles in previous decisions. Most of the comments were made towards the other members of the group; however, the building user made occasional face-to-face contact with the facility manager, smiling and making other facial gestures that showed respect and presented friendly demeanour. During this episode the facility manager lifted his head and body, presenting a more confident stature. In response to the building user, the facility manager made some acknowledging gestures and returned the occasional smile. Having drawn the facility manager into the group,

the building user asked the facilities manager a ‘quick’ question about one of his responsibilities. Before he had properly finished his response, the building user asked what would be required to undertake a particular task. The facility manager responded in a positive manner explaining what would need to be done. The building user asked the facility manager if he could undertake the task. As the facility manager gave his response, the building users quickly drew another member of the group into the discussion and asked them to assist the facility manager. Discussion then ‘naturally’ followed between the facility manager and other group members. Once the building user had drawn the relevant member into the discussion, she withdrew from the exchanges, only making odd utterances to keep interaction moving and positive. The building user had managed to place a positive spin on the discussion, she raised the importance of the issue and the facility manager. The positive comments and gestures reassured the facility manager. The non-verbal clues initiated interaction between the building user and facility manager. Attempts to include the facility manager in the interaction were made before any verbal utterance was directed towards him. The building users used many different techniques in quick succession to draw the facility manager into the discussion. Use of the persons name to attract attention, initial eye contact, positive socio-emotional expression, praise, questions, prompts to help the continuation of comments and encouraging others to engage in interaction, all in quick succession helped draw the reluctant communicator into open discussion.

Drawing on the Macgowan GEM scale, the building user engaged in ‘relating to worker’, ‘relating with member’, and ‘working on other members’ problems’ to engage others and develop the task requirements. This observation does suggest that individuals can be both task and social leaders (Turk 1961; Wallace 1987; Wyatt 1993). Although the building user did initiate discussion on the task, she also left the discussion to the experts. In this instance the building user drew a key member into the discussion, and then helped initiate interaction between other key members to form a sub-group to deal with the task. The directive behaviour of the building user was intermingled within acts that expressed positive emotion, showed enthusiasm and established relationship. The direction offered did not result in participants withdrawing from the discussion, as experienced on Kirkpatrick’s (2005) observations. The difference noted between Kirkpatrick’s observation and the action of the building user, was that the direction offered by the building user was from within the group. Although the building user showed strong attributes associated with an emergent social leader, she had no appointed authority over the group.

CONCLUSIONS

One theme that has emerged from this study is that the environment is an important determinant of interaction. An individual may be more willing to exchange information in less formal contexts prior to or after meetings. To ensure that information is available informal engagements may be necessary before formal events.

Clearly, those who can engage in and encourage others to participate in group interaction have an important role to play in the group process. Individuals who are reluctant to participate pose a potential barrier to the group’s effectiveness. Social apt members may be able to induce conversation. Overt issues observed that were considered important to the development of the framework in which the reluctant communicator chose to interact were: use of initial non-verbal interaction, supportive socio-emotional exchanges, building up confidence, development of a sub-group of

main meeting in which interaction could take place and the use of prompts to initiate interaction.

Construction project are dependent on the integration of specialist knowledge. While some professionals within the construction industry are socially gifted others are reluctant to interact. In the few cases cited, the findings suggest that where the beholder of the expertise is reluctant to engage in group discussion, those who are more comfortable with group and interpersonal interaction can use their skills to encourage participation. The examples of episodes of interaction where individuals are persuaded to interact and engage in the group process are to a large extent anecdotal. However, it is important that such studies are repeated and explored to identify the significant features of interaction that are most capable of developing effective group interaction. Understanding the attributes, behaviours and actions of groups is essential if we are to properly inform and develop construction professionals. Further research will be undertaken to classify and quantify interaction that encourages cooperation.

Some caution must be taken in the finding of this study. The sample size is small and due to the exploratory nature of the subject observations are relatively unclassified and wide. At this stage, the results cannot be generalised; nevertheless, the findings provide discussion into the area of supportive behaviour and cooperation.

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