Communication skills impact on sustainable and green project management

Zulch, Benita

Department of Quantity Surveying and Construction Management, University of the Free State, Bloemfontein, South Africa

This study’s aim was to identify the impact of the construction project manager’s communication skills on the success of areas in construction project management. Although communication is an area of project management, it is actually the means to achieve the deliverable objectives, considering the limited resources.

A research questionnaire was circulated. The questionnaire focused on the importance of the communication skills of a project manager in terms of project management.

The results of this research illustrate the areas mostly influenced by the communication skills of project managers. The results of the research indicated the skills that contribute to successful green management through communication.

The conclusion of the study identifies those communication skills that are important in managing a sustainable construction industry. Developers and construction companies should pay attention to developing project managers’ communication skills and management processes for the construction industry to benefit and improve the outcome of green projects.

Keywords: Communication, Communication skills, Construction industry, Project management, Sustainability

Introduction

Sustainability means the quality of not being harmful to the environment or depleting natural resources, thereby supporting a longterm ecological balance (7). Sustainability is not just another social responsibility programme, it is fundamental to the way projects are managed.

The Phoenicians developed the alphabet in 3500 BC (1). The term communication originates from the Latin word communicare, which means ‘to make common’, and when communicating a common understanding is created (5). Barrett (3) defines communication as: “the transmission of meaning from one person to another or many people, whether verbally or non-verbally”.

The single most significant factor affecting the success of a project is the communication ability of the project manager. If it seems true that everything rises and falls on communication and leadership, it stands to reason that leadership communication ability is the foundational skill that must be attained for a project manager to be effective and communicate...
effectively on sustainability.

This paper focuses on communication, communication skills and the project management areas needed by the project manager for communication of sustainability.

**Planning project communication**

Aspects such as uniqueness, uncertainty, risk, budgets, deadlines and strict time schedules make the management of projects complex and exciting, but stressful. Considering that a variety of stakeholders, each with similar or different requirements for the project, participate in the process, it is clear that effective communication planning is essential in order to be sustainable (24). Greenleaf (23) states that the ways to promote communication are to ensure that reports reach members in time; to schedule times when members gather and communicate; and to ensure that communication records are available to team members. Poor communication during projects affects the schedule, the cost, the safety of workers and the project quality (16).

To be able to complete construction projects and be sustainable, the conclusion may be reached that each of the parties involved should have a thorough understanding of what is required. Information becomes essential to each of the parties involved in sustainable project management and such information results from effective communication.

**Project management areas**

PMBOK (19) divides generic project management into nine knowledge areas, namely integration management, scope management, time management, cost management, quality management, human resources management, communication management, risk management and procurement management. The Construction Management Body of Knowledge (20) adds four additional areas, namely safety management, environmental management, financial management and claims management. Throughout the management of a project the project manager needs skills to be able to deal with all these areas and achieve the objectives of the project. The project manager also needs communication skills to convince stakeholders to follow a sustainable approach in managing the project.

**Project management communication skills**

The survival of any organised human activity depends largely on man’s ability to communicate with others. It is important to determine the skills needed to communicate effectively for the project to be sustainable. At various stages of a construction project people will have to explain, ask questions and discuss issues and ideas (10). Communication during a construction project mainly comprises speaking and listening, and less reading and writing. The communication skills considered in this research are as follows.

**Questioning**

Communication is most effective when asking questions during a conversation. The reason for asking questions in project management is to allow time for interaction with the audience on matters such as sustainability (6).
Reinforcement
Reinforcement involves a stimulus which, when linked to a response, will most likely lead to that response being repeated. Verbal and non-verbal communication takes place using adept facial expressions and other gestures to provide or react to information (13). Positive reinforcement involves letting members know that they do well and that their sustainable inputs are appreciated; this will encourage those members who feel insecure (17).

Reflecting as skill
Reflecting as a skill is closely associated with listening (13), responding to others in such a way as to convey interest, understanding and engaging in the conversation. Feeling reflection focuses on the feelings, for example anger, and may be dealt with when the team clearly expresses feelings to the project manager (17). The difference between reinforcement and reflecting is that in reinforcement, the team member repeats an understanding of sustainability, and in reflecting, the whole message of sustainability is repeated as it was communicated.

Explaining
Explaining means to simplify and contribute to an understanding of the nature of explaining (13). Explaining and questioning are linked. In construction project management, the project manager has to communicate about sustainability in a way that is clear and comprehensible to the project team members, in order for the team to understand the sustainable goals and allow them to ask questions.

Self-disclosure
“Self-disclosure, the process whereby people verbally reveal themselves to others, constitutes an integral part of all relationships” (13). Self-disclosure serves an important function in relationship development. People reveal information such as names and skills that help people to get to know each other.

Humour and laughter
Hinde (14) states that smiling and laughter are patterns that differ in degree. While smiling is less intense and laughing more intense, they are of the same emotion. Humour and laughter may be used to discover the attitudes, motives and values of the team members, without asking directly.

Negotiation
Negotiation involves conferring with others to come to terms with or reach an agreement, for example, about sustainability. The fundamental element of negotiation is to create an environment in which those who are in conflict may work together towards a resolution (8). Negotiation as a skill may come into play at various stages of communicating about sustainability during the construction project, and may be useful in making numerous agreements with parties.

Presentation
Project team members are often requested to deliver presentations to the project stakeholders regarding the sustainability of the project. Presentations are often used in conjunction with reports (24).

Skill of writing
As part of daily projects, it is necessary to record sustainable matters in writing. Written sustainable reports are essential for the smooth running of projects and may be used as evidence in the event of disputes (10). Written communication may be a more reliable and accurate form of communication, and may be accessed repeatedly. It is therefore important that the construction project manager, as sustainable communicator of a project, develops and improves the skill of writing.

Public and mass communication
Public communication takes place when the project manager addresses a large known audience (10) to inform them about the sustainability of the project. Mass communication occurs when the project manager sends information about sustainability to a large, anonymous audience. Thus, mass communication is one-way communication (9).

Meetings
Project meetings are the construction project manager’s principle forum to manage the project and communicate about sustainable matters with the team members and stakeholders, thus project meetings are an important part of project communication (4).

Conflict management
Effective conflict management prevents sustainability differences becoming destructive elements in a project. Effective project managers realise that conflict is inevitable, but that procedures may help resolve conflict whatever the reason. Once conflict occurs, the project manager has to study the reason for the conflict and collect the available information to develop an approach and create the appropriate atmosphere for negotiation to solve the conflict (15). Therefore, the construction project manager is the person responsible for the project and has the task to deal with conflict when it arises and needs skills to manage conflict effectively before it becomes catastrophic; negotiation may be the skill to apply in the communication process about sustainability to resolve and prevent conflict.

Decision making and problem solving
Decision making is a process to gain collective support and team commitment about sustainability. Decision making differs from problem solving. Problem solving is a process of analysing sustainability and identifying a number of possible solutions (4). Gorse and Emmitt (12) state that decision making is an essential component of a project manager’s set of skills.

Team development and team building
Teams are defined as “groups of people with complementary skills who are committed to a common purpose and hold themselves mutually accountable for its achievement” (11). The project manager guides and leads the team to achieve sustainability through effective communication. To achieve this, the project manager needs communication skills (4).
Motivation
Motivation may be defined as “providing the right conditions for people to work effectively” (22). A lack of sustainable motivation often leads to conflict, strikes, lower productivity, stress and the failure of a project (24). The project manager should show enthusiasm and commitment towards sustainability as well as creating an environment. Pells (18) adds that a project manager who supports the team may multiply success. Motivation towards sustainability is not a product of emotion, but a product of sound planning and management (27).

Listening
Clements and Gido (6) state that the heart of communication is not words, but understanding; not only to be understood, but also to understand, which implies understanding sustainability. Active listening increases understanding. Sweeney (26) states that the skill of listening is an important skill. A project manager therefore needs the skill of listening, to be able to accomplish a sustainable project.

Persuasion
Persuasion is the art of guiding, convincing and directing team members towards sustainability (10). Construction project managers, who apply communication persuasion to guide, encourage, convince and direct team members towards sustainability of a project, are able to complete a project successfully.

Trust
Pryke and Smyth (21) define trust as “a disposition and attitude, giving rise to a belief, concerning the willingness to be vulnerable in relation to another party or circumstance”. Anantatmula (2) states that “trust and communication are essential to nurture human relationships” and “openness” is important in establishing trust in sustainable matters. Trust may be summarised with a statement by Sunter (25): “trust is central to civilization and progress”.

Empirical
A survey was conducted by sending questionnaires to a selected group of quantity surveyors, construction managers, engineers, architects and project managers. The number of questionnaires sent out was 302. The total response rate was 32%. It is significant in respect of the reliability of the response rate that 72% of the responses received were from project managers. However, the responses from the project managers did not distort the response data. The questionnaire included questions regarding the communication skills a project manager needs to enhance and ensure project success. The opinion of respondents was collected on a Likert scale of 1 to 5, where 1 is not important, 2 fairly important, 3 important, 4 very important and 5 extremely important. ‘None’ indicated ‘did not respond to the question’.

The purpose of the questions was to rate the communication skills a project manager should possess or use. Secondly, to determine if leadership is an important skill needed by a project
manager to communicate effectively. Thirdly, to determine the extremely important communication skills a project manager needs to communicate effectively regarding sustainability. Table 1 shows the importance of the communication skills a project manager should possess or use.

Table 1: Communication skills

<table>
<thead>
<tr>
<th>Communication skills a construction project manager should possess</th>
<th>Response (%)</th>
<th>1 Not important</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Average</th>
<th>Ranking</th>
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</thead>
<tbody>
<tr>
<td>Leadership skills</td>
<td>3.1</td>
<td>0</td>
<td>1.0</td>
<td>6.2</td>
<td>20.6</td>
<td>69.1</td>
<td>4.5</td>
<td>1</td>
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<tr>
<td>Decision making and problem solving</td>
<td>3.1</td>
<td>0</td>
<td>1.1</td>
<td>7.2</td>
<td>20.6</td>
<td>68.0</td>
<td>4.5</td>
<td>2</td>
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<tr>
<td>Listening</td>
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<td>0</td>
<td>0</td>
<td>15.4</td>
<td>33.0</td>
<td>48.5</td>
<td>4.2</td>
<td>3</td>
</tr>
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<td>Motivation</td>
<td>4.1</td>
<td>0</td>
<td>1.0</td>
<td>7.2</td>
<td>42.3</td>
<td>45.4</td>
<td>4.2</td>
<td>3</td>
</tr>
<tr>
<td>Conflict management</td>
<td>4.1</td>
<td>0</td>
<td>3.1</td>
<td>15.5</td>
<td>33.0</td>
<td>44.3</td>
<td>4.1</td>
<td>4</td>
</tr>
<tr>
<td>Meetings</td>
<td>4.1</td>
<td>0</td>
<td>0</td>
<td>15.5</td>
<td>41.2</td>
<td>39.2</td>
<td>4.1</td>
<td>4</td>
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<tr>
<td>Team development and team building</td>
<td>3.1</td>
<td>0</td>
<td>4.1</td>
<td>9.3</td>
<td>45.4</td>
<td>38.1</td>
<td>4.1</td>
<td>4</td>
</tr>
<tr>
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<td>3.1</td>
<td>0</td>
<td>1.0</td>
<td>14.4</td>
<td>46.4</td>
<td>35.1</td>
<td>4.1</td>
<td>4</td>
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<tr>
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<td>4.1</td>
<td>16.5</td>
<td>36.1</td>
<td>40.2</td>
<td>4.0</td>
<td>5</td>
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<tr>
<td>Explaining</td>
<td>4.1</td>
<td>1.1</td>
<td>4.1</td>
<td>8.2</td>
<td>42.3</td>
<td>40.2</td>
<td>4.0</td>
<td>5</td>
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<tr>
<td>Trusting</td>
<td>5.2</td>
<td>0</td>
<td>2.0</td>
<td>19.6</td>
<td>41.2</td>
<td>32.0</td>
<td>3.9</td>
<td>6</td>
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<td>Presentation</td>
<td>4.1</td>
<td>0</td>
<td>3.2</td>
<td>23.7</td>
<td>38.1</td>
<td>30.9</td>
<td>3.8</td>
<td>6</td>
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<tr>
<td>Persuasion</td>
<td>4.1</td>
<td>0</td>
<td>2.1</td>
<td>26.8</td>
<td>38.1</td>
<td>28.9</td>
<td>3.8</td>
<td>6</td>
</tr>
<tr>
<td>Reinforcement</td>
<td>5.2</td>
<td>1.0</td>
<td>5.2</td>
<td>18.5</td>
<td>42.3</td>
<td>27.8</td>
<td>3.8</td>
<td>6</td>
</tr>
<tr>
<td>Public and mass communication</td>
<td>4.1</td>
<td>4.1</td>
<td>7.2</td>
<td>37.2</td>
<td>29.9</td>
<td>17.5</td>
<td>3.4</td>
<td>7</td>
</tr>
<tr>
<td>Questioning</td>
<td>19.6</td>
<td>0</td>
<td>3.1</td>
<td>13.4</td>
<td>43.3</td>
<td>20.6</td>
<td>3.2</td>
<td>8</td>
</tr>
<tr>
<td>Humour and laughter</td>
<td>4.1</td>
<td>5.2</td>
<td>13.4</td>
<td>32.0</td>
<td>37.1</td>
<td>8.2</td>
<td>3.2</td>
<td>8</td>
</tr>
<tr>
<td>Reflecting</td>
<td>7.2</td>
<td>9.3</td>
<td>7.2</td>
<td>33.0</td>
<td>33.0</td>
<td>10.3</td>
<td>3.1</td>
<td>9</td>
</tr>
<tr>
<td>Self-disclosure</td>
<td>4.1</td>
<td>19.6</td>
<td>28.9</td>
<td>21.6</td>
<td>20.6</td>
<td>5.2</td>
<td>2.5</td>
<td>10</td>
</tr>
</tbody>
</table>

The skill of leadership is ranked first as an extremely important communication skill a construction project manager should possess to enhance and ensure communication. Decision-making and problem-solving skills are ranked second; listening and motivation third. All these skills are rated as extremely important or very important, except public communication and reflecting that are ranked important and self-disclosure, which is ranked fairly important. Although the respondents ranked leadership the highest, it is not a communication skill; project managers need to be leaders, to be able to communicate effectively.

The communication skills that are rated the highest are decision making and problem solving, listening, motivation, meetings, writing, team development and team building, and conflict management. These communication skills can be seen as the important communication skills that a project manager needs to communicate effectively about sustainability. Leadership is rated the highest, which indicates that a project manager, as the leader of a project, needs the skills of decision making and problem solving, listening, motivation, meetings, writing, team development and team building, and conflict management to communicate effectively with all stakeholders of the project regarding green project management. Leaders can achieve sustainability through effective communication skills such as decision making and problem
solving, listening, motivation, meetings, writing, team development and team building, and conflict management. With these communication skills, the project manager will convince all stakeholders to follow a sustainable approach in managing projects.

**Conclusion and recommendations**
The construction project manager has to communicate effectively regarding cost, time and quality as three of the four cornerstone factors on which the success of a sustainable project depends, followed by scope. Time influences cost, and cost is communicated to the client, functionaries and stakeholders to execute the project within the approved budget and in time, according to the request of the client – the scope. The project manager needs to be a leader to communicate effectively with all parties and convince them to follow a sustainable approach. Therefore, successful execution of sustainable projects depends heavily on the construction project manager’s ability as communicator to lead the team and manage a construction project successfully. A communication foundation model is thus proposed.

![Communication foundation model](image)

The project manager’s communication skill has an impact on the cornerstone areas of project management. Communication is the function that the project manager can apply in the sustainable integration of cost, scope and time to achieve a quality product and therefore can be seen as the cornerstone in this sustainable approach for green project management.

**References**


