*THE INTERNATIONAL JOURNAL OF BUSINESS & MANAGEMENT*

# An Investigation of the Effectiveness of Project Communication on Enterprise Resource Planning (ERP) Projects at UCS Solutions (Pty) Ltd, South Africa

**Albert Tichatonga Mubako**
Dissertation Supervisor, Management College of Southern Africa (MANCOSA), RSA

***Abstract:***
*The business management focus of this study was to evaluate the effectiveness of project communication as part of project management at UCS Solutions. It was inspired by the fact that effective project communication is a vital success factor for any project. Many projects in the information systems (IS) industry fail due to poor communication in the projects environment and many consultants lack formal training in project management and only learn soft skills on demand. The study is intended to gather data and test theory in the project management standards using project management best practices and personal experience. The study adopted a quantitative approach. It involved descriptive and analytical research designs. The study targeted Systems Application Products (SAP) Enterprise Resource Planning (ERP) projects that were undertaken by UCS Solutions.*
*Findings showed that there were significant gaps and shortcomings in the project communication process on the UCS Solutions ERP projects and perceived project performance. It was concluded that effective project communication, use of evaluation models and soft skills training for SAP Consultants are pre-requisites for better performance of SAP ERP projects at UCS Solutions Pty Ltd. It was recommended that for UCS Solutions to improve performance of ERP projects, commitment of individual stakeholders and effective communication need to be enhanced through designing communications tailored to the preferences of their varied stakeholders.*

***Keywords:*** *ERP, Project Management, Leadership*

## 1. Introduction

The business management issue of effective project communication and its relevance to project management in an Enterprise Resource Planning (ERP) project is introduced in this chapter.
Project communication refers to the internal and external communication that occurs within the project environment described in the PMI PMBOK (2008: 243). Systems Applications Products (SAP) ERP projects are information technology and business processes related, involving an entire company's wide range of project stakeholders from top executives to the business users. Constant, effective communication among all project stakeholders ranks high among the factors leading to the success of an ERP project (Françoise, Bourgault and Pellerin , 2009: 372). It is a key prerequisite of getting the right things done in the right way at the right time considering project constraints. Project constraints include but are not limited to time, budget and resources according to Krezner (2006). However, though SAP project managers understandably see project communication as a part of project management the question still remains as to how effective the methods, planning and administration of communications for project success is delivered. This study will investigate effectiveness of project communication on SAP ERP projects at UCS Solutions South Africa, in this study it is argued that organisational experience in planning communication strategically seems to be lacking in projects management and the potential of project team's competence in effective interpersonal communication is underestimated.
The purpose of the quantitative study was to investigate the effectiveness of project communication at UCS Solutions to ascertain the shortcomings and gaps, because ineffective communication contributes to project failures. The problem that was investigated therefore surrounded the project communication planning process so that recommendations may be made to management to ensure more effective project communications on ERP projects. Project communication can often be more difficult due to challenges unique to project management due to the dynamic nature of projects. A failure in communication can negatively impact the success of the ERP projects. The introductory section is followed by an overview of the research methodology and a literature review on ERP project communication as a tool in project management. Findings are then discussed and limitations, recommendations and conclusions are reviewed in the final section.

## 2. Literature Review

This section provides a review of literature in communication as a tool in project management. This review begins by defining effective project communication and then explaining the steps in communication planning process; the various factors of

communication in a project environment will follow and finally the recommendations to improve project communication effectiveness will be introduced. The importance of soft skills in project management is highlighted and explained as well in this chapter. While acknowledging the works of earlier researchers, the review brings out gaps that require redress.

*2.1. Effectiveness of Project Communication*

In literature, project management is often covered from the technical viewpoint. The Project Management Institute (PMI) (2008:5) defines a project as a temporary endeavor undertaken to create a unique product, service, or result. A project is regarded as a way of solving technical problems and project management has thus been limited to only containing a set of planning methods and reporting practices (the hard side of project management). However modern project management is a much wider concept, the PMI PMBOKs are being criticised for focusing on the hard side than of the soft side due to the need to change and adapt to a more flexible approach suitable for harnessing the dynamic nature of projects (Azim, Gale, Lawlor-Wright, Kirkham, Khan and Alam, 2009:387-400). Successful project management depends ultimately on the right leadership, a proper functioning of the informal organisational structures and the decision making processes; and last but not least the project team's ability to communicate effectively with the project's immediate environment, the soft side of project management (Ruuska,1996 : 67).

Ramsig (2009: 345) avers that there are several examples supporting the argument that communication in projects is essential for projects to succeed. This argument is supported by Azim et al. (2009:392) in their paper on the importance of soft skill in complex projects. This infers that the hard skills in the project management which are the processes, procedures, tools and techniques; must function with the "soft" skills which deal with human issues, i.e. the "people" part of the project including communication. Thus, the understanding is that project communication is the vehicle that project team members use to achieve the desired outcomes. However, effective project communication according to Weaver (2007:17) requires a collective effort from the entire project management community that includes senior management for maximum effect. This is a view shared by Lehmann (2009) in her paper on communication and project management where she recommended that communication would be supported and enriched by the various project stakeholders from senior management to clients. According to Bourne (2010: 5) to be effective, communication must fulfil certain criteria which follow:

- It must be focused on the needs of the receiver, along with needs of the project and project team
- The message must be tailored in in the right context, i.e. - build or increase support , maintain or enhance existing relations to increase credibility and Deliver information to manage stakeholders perceptions
- The format and content of the message should be appropriate to the stakeholder's influence on the project:

a. Upwards for senior management
b. Downwards for team members
c. Outwards for stakeholders outside the project
d. Side wards for peers of the project manager

- Barriers to effective communication, these barriers are identified as "noise"

They include:

a. Physical environment
b. Level of interest by recipient in subject matter of message
c. Power differences between sender and recipient
d. Cultural differences (nationality, gender, professional)
e. Social issues (emotional intelligence)

*2.2. Factors of ERP Implementation Projects Environment and the Significance of Communication Plan at Each Lifecycle Stage*

Goczol and Scoubeau (2003: 62-63) explain that in order to establish the link between corporate communication and project communication it seems important to envisage the different phases in the development of a project. In discussion of this the methodology of the SAP ERP implementation and support project will be explored.

Early articles assert that communication should start early on ERP implementation projects. This means that project communication should be active in the first phases of ERP projects for reasons such as providing an overview of the system and reasons for implementing it for the client. This has the most important role in determining the success of ERP implementation and in addition to gaining approval and user acceptance, the communication will allow the implementation to initiate the necessary final acceptance according to Bhatti (2005:4).The PMI (2008:254) highlights the project environment as a factor that influences effective communication , does the team meet and operate on a face-to-face basis or in a virtual environment? The environmental factors that affect the project will determine the communication strategy because different communication methods will have to be employed to ensure effective communications.

Dejong, Schalk and Curseu (2007:364) assert that working in virtual teams is an emerging phenomenon in organizations and increasingly virtual communication tools have to be used. Virtual communication has an influence on the team processes and team outcomes, as evidenced in the fast-growing literature on virtual teams. Project staff communicates with project stakeholders that are in different countries such as Egypt to solve ERP project tasks at UCS Solutions, the use of video and telephone conferencing tools is a necessity, the use of these needs training. The project environment can also be seen as the human networks and complex human interrelations. People interact and transfer knowledge of the project work. Small and Walker (2011: 392) emphasize projects as being part of a social process and human activity system and social process which highlight the need of soft skills.

*2.3. Project Communications for Project Success*

McKeever (2006:6) infers that the use of a project charter as a tool will improve effective communication; the project charter is an effective planning tool used in the project initiation phase and is a communication tool that can be continually referenced. It is both a quick reference guide and an executive summary of what the project is about, why it is being done, who is involved, roles and responsibilities, schedule, and general approach it entails the vision of the project. This argument agrees with Christenson and Walker, (2008: 616) on effective communication and maintenance of knowledge relating to a project vision being able to produce positive impacts on expected project outcomes.

According to Weaver (2007: 11) all project forecasts are wrong and tasks will be accomplished quicker or slower than planned, and will cost lower or higher than planned. In a mature organisation the likely degree of uncertainty is recognised and managed where in immature organisations tend to seek certainty where none exists. This statement is to highlight the need for uncertainty management; project environments are dynamic and have a degree of uncertainty. This is the reality of project management, but the damage caused by uncertainty can be minimized by applying effective communication to aid all project stakeholders. This decreases ambiguity of what is expected by provision of a project vision, clear roles and responsibilities for all project practioners.

Karlsen (2009: 647) states that internal project communication approach has changed in some firms because they have understood that it is a mistake for effective uncertainty management to ignore or not involve the project owner or other stakeholders. Loo (2002) conducted a study of internal best practices with a sample of project managers from 34 Canadian project-driven organizations. He found an almost even split in top-rated internal best practices between "technical" and "people" practices. "The people best practices were: having high-calibre project teams; having stakeholder participation; effective communication within teams and externally; and customer satisfaction." (Loo, 2003:30).

Accenture's Sargent and Panico (2007) recommend maintaining effective relationships with business users in their Ten Guidelines for Sustainable Program and Project Management, that by understanding sponsor goals and expectations within the context of the business user, and (2) building and sustaining executive leadership.

The use of communication technology also ranks high as an effective communication tool; at UCS there is an investment in networking and conferencing equipment for use by ERP project staff. The PMI (2008:254) argues that the methods used to transfer information among project stakeholders can vary significantly. Culo and Skendrović (2010: 231) reinforces the PMI by agreeing that the communication item determines which vehicle or methods the project team members will use to carry out the communication, methods include:

- E-mail - Allows project teams to communicate text, audio, and video files between team members
- Interoffice memos- Provides a formal forum to communicate key dates, policies, and
- Procedures
- Project status meetings - Provides regular status updates and reviews of the project
- Instant messaging (IM) – Allows team members to communicate in real-time
- Intranet/ Intranet boards- formally communicates status, progress, highlights and objectives to all
- Telephone/video conferences- Provides a medium to team members not in the same geographic regions to connect
- Project road show – provides feedback to your clients or users
- Walk about - Involves a hands-on face-to-face approach with your team and clients.

With the enhancement of project communications by using technology theory argues that face-to-face communication is still needed, especially in the early stages of a project, to establish understanding and trust among members.

The literature review confirmed that soft skills for effective communication are necessary in building effective relationships and clarity of purpose on ERP projects towards success.

## 3. Methodology

*3.1. Research Objective*

The research approach is explained in this section beginning with the research objective. The research was guided by the central research questions:

- What is the effectiveness of internal and external project communication at UCS Solutions?
- What are the gaps and shortcomings in the project communication process at UCS Solutions?
- What are the factors affecting effective project communication planning on ERP projects at UCS Solutions (Pty) Ltd?
- What can project staff recommend improving project communication for greater project success at UCS Solutions Pty Ltd?

*3.2. Research Approach and Design*

A quantitative approach was used to gain an insight into the project team members' perspective of the effectiveness of project communication in their project environment. Since the study was meant to build theory rather than test, a quantitative approach was used, which focused on evaluating the findings from ERP project team members on their experiences with communications within project environment.

Denscombe (2010:237) states quantitative research uses numbers as the unit of analysis and qualitative research uses words or visual images as the unit of analysis.

Lancanster (2005:61) defines quantitative methods of data analysis to involve a variety of statistical techniques whereas in the case of qualitative data different methods of analyzing and interpreting data can be used. Quantitative research, on the other hand to be more

concerned with questions about: how much? How many? How often? To what extent? Leedy and Ormond (2010: 187) state that a survey research involves acquiring information about one or more groups of people, perhaps about their characteristics, opinions attitudes or general, or previous experiences by asking them questions and tabulating their answers. Thegoal is to learn about a large population by surveying a sample of that population; thus, we might call this approach a descriptive survey or normative survey.
Therefore, a quantitative questionnaire survey methodology was adopted for this study.
Using a five-point Likert scale, with one (1) as strongly disagree, (3) Neutral and five (5) as strongly agree, the respondents rated five statements on Project communication Gaps and Shortcomings. The results on the summary of how respondents rated the statements were tested using the One sample Wilcoxon signed rank test. The null hypothesis was the median was equal to the mid-point of the 5-point Likert scale against the alternative hypothesis that the median is not equal to 3.

*3.3. Demographics and Length of Time working for/with the RunSAP division:*
The sample was made up of 70 SAP Practitioners. Of the 70 questionnaires given out there were 60 respondents of which 35% had 0 – 1 years working for/with the RunSAP division at UCS Solutions, 50% had 1 – 5 years and the other 15% had 5 – 10 years' experience refer to Figure 1.

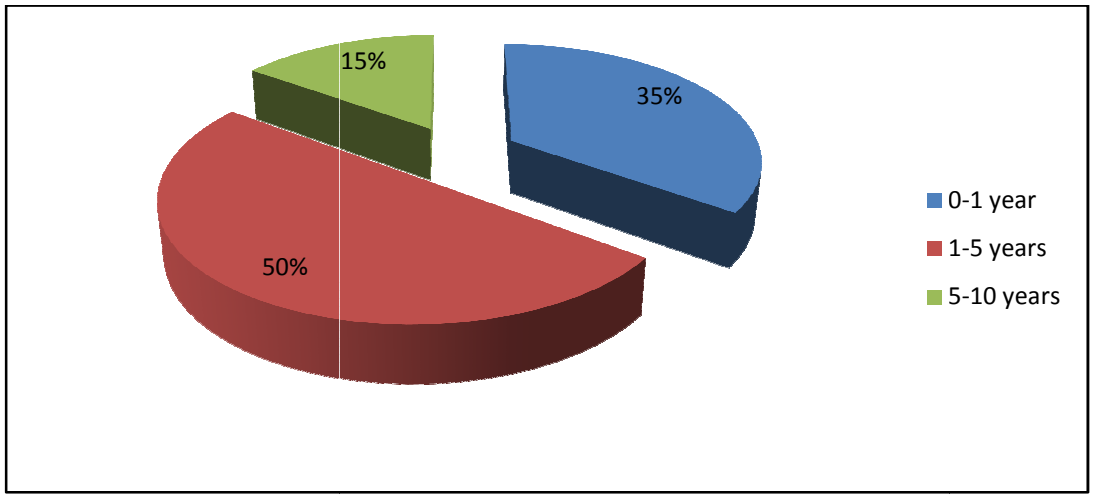


*Figure 1: Length of Time working for/with the RunSAP division*

The largest proportion of respondents was mid-level consultants (48%), followed by service delivery / client services managers (25%), then customer lead and senior consultants with 10% and 8% apiece. Application Services Managers held 5% and Principal Consultants with 3% of the sample respectively in the graph in Figure 2;

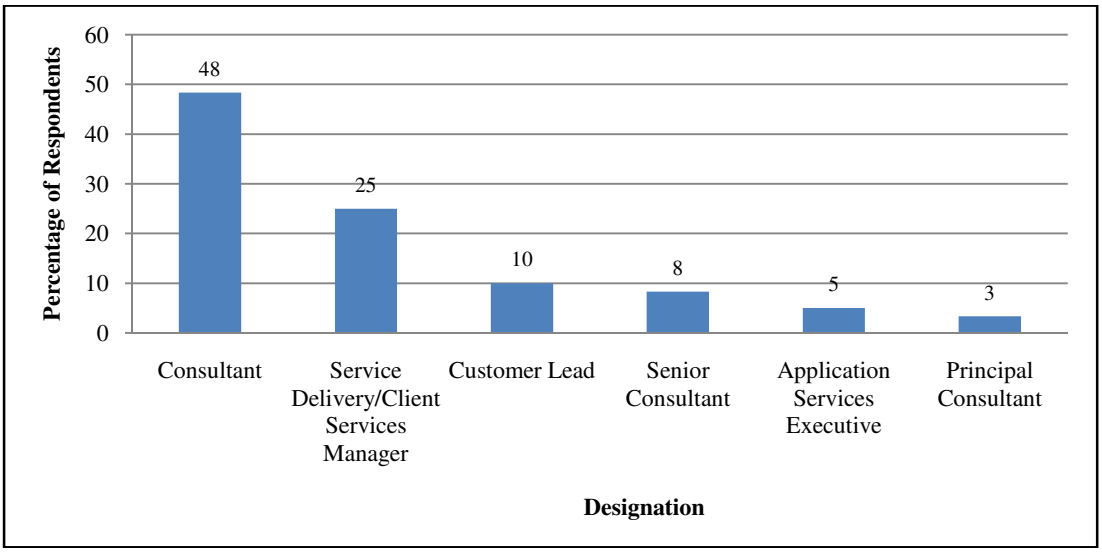


*Figure 2: Designation*

The distribution of the length of years served by each respondent and the designation of the respondents represent the target population well with the largest proportion being of Mid-Level Consultants in the RunSap division at UCS Solutions. The SAP practitioners provided experienced answers for ERP projects communication and represented the target population.

**4. Results and Discussion**

This section contains the discussion and interpretation of the results of the quantitative research. The presentation was guided by the following research themes;

a. To evaluate the effectiveness of project communication
b. To identify the gaps and shortcomings in the project communication process
c. To analyze factors of ERP implementation projects environment and the significance of the communication plan at each lifecycle stage.
d. To provide recommendations to the project staff to improve the project communication process.

The researcher ensured that the research questions and the questionnaire are linked to one another. In deducing quantitative analysis, responses from a captured primary data sheet were used to verify and validate the findings.

The response rate for the questionnaires was 85 % (60 out of 70) and the responses added a lot of value to the study. According to Nulty (2008:302) this response rate that was achieved with this survey is relative to paper-based surveys which generally achieve higher response rates than online – based surveys.

*4.1. Hypothesis to evaluate the Effectiveness of Project Communication*

H0: Opinion on effectiveness of communication with present client is independent of one's experience

H1: Opinion on effectiveness of communication with present client differs with years of experience. The Kruskal Wallis Test was used to assess whether opinion on effectiveness of communication was dependent on one's experience. The analysis was carried out at 5% significance level and the null hypothesis is rejected if the p-value of the Kruskal Wallis test is less than 0.05. The results are shown below in Table 1;

| **Ranks** | | | |
|---|---|---|---|
| | How long have you been working for/with the RunSAP division | N | Mean Rank |
| I feel that communication is effective with my present client | 0-1 year | 21 | 27.81 |
| | 1-5 years | 30 | 31.12 |
| | 5-10 years | 9 | 34.72 |
| | Total | 60 | |
| **Test Statistics[a,b]** | | | |
| | I feel that communication is effective with my present client | | |
| Degrees of freedom df | 2 | | |
| Asymptotic. Significance. | .548 | | |
| a. Kruskal Wallis Test | | | |
| b. Grouping Variable: How long have you been working for/with the RunSAP division | | | |

*Table 1: Kruskal-Wallis Test: Comparison of the mean rank values of opinion on effectiveness of communication by Years of experience*

There is no evidence to support the hypothesis that opinion on effectiveness of communication differs with one's experience ($p>0.05$),meaning regardless of the number of years the respondent has worked in the department all the respondents perceive that communication with their client on various projects is effective. This finding is significant and provides support for one of the objectives of the research to investigate project communication effectiveness at UCS Solutions. However, another objective to ascertain if there is room for improvement for project communications with their clients and provide recommendations to improve project effectiveness follows;

*4.2. Hypothesis on the existence of a room for improvement of communication present project/ service delivery is independent of one's experience*

H0: Opinion on the existence of a room for improvement of communication present project/ service delivery is independent of one's experience

H1: Opinion on the existence of a room for improvement of communication present project/ service delivery differs with years of experience.

The Kruskal Wallis Test was also used to assess whether opinion on existence of a room for improvement of communication present project/ service delivery is independent of one's experience. The analysis was carried out at 5% significance level and the null hypothesis is rejected if the p-value of the Kruskal Wallis test is less than 0.05. The results are shown below in Table 2;

| Ranks | | | |
|---|---|---|---|
| | How long have you been working for/with the RunSAP division | N | Mean Rank |
| There is room for improvement of communication on my present project/service delivery | 0-1 year | 21 | 22.88 |
| | 1-5 years | 30 | 35.87 |
| | 5-10 years | 9 | 30.39 |
| | Total | 60 | |

| Test Statistics[a,b] | |
|---|---|
| | There is room for improvement of communication on my present project/service delivery |
| Degrees of freedom df | 2 |
| Asymptotic. Significance. | .012 |
| a. Kruskal Wallis Test | |
| b. Grouping Variable: How long have you been working for/with the RunSAP division | |

*Table 2: Kruskal-Wallis Test: Comparison of the mean rank values of opinion on effectiveness of communication by Years of experience*

There is evidence that supports the hypothesis that opinion on improvement of communication on my present project/service delivery depends with one's experience ($p>0.05$), thus there was significant difference among the experience segments and the null hypothesis is rejected.

To discuss this finding showing that depending on the number of ERP project experience years, the respondents differed that project communication was effective with their clients as well as they differed on whether there was room for improving effectiveness of communication in their project environment. This result from the SAP consultants' responses to these statements adds weight to the research to provide recommendations for project communication effectiveness at UCS Solutions. According to the approaches to project communication effectiveness discussed in the literature review, even in organizations where project management methodology was well established, the focus on communications was minimal and effectiveness in project communications is not well understood Kleim (2004:187) and Campbell (2009).

Disterer (2002:512) argues the need to improve project communication effectiveness in the IT and IS environments such as SAP ERP implementations and support; the respondents recognised that there were gaps that can be improved in the communication process at UCS Solutions which were investigated.

- Findings on the statement "I feel communication is effective with my present client" indicated the respondents perceive it to be effective as they agreed with the statement. This forms an integral part of the investigation and leads to study what the respondents perceive to be requisites for effective project communications.
- "There is room for improvement of communication on my present project and service delivery" findings on this statement show that respondents agreed significantly on the need to evaluate and improve communications in line with the Project Handbook (2007:9).
- "I am fully aware of each project stakeholders' communication needs " findings on this statement show that respondents strongly agreed, highlighting a key part of the communication management process where stakeholders communication needs must be defined according to the Project Handbook (2007:9), PMI (2008:251) and Bourne (2007: ).
- "Many times errors happen not because of poor skills or performance but because of inadequate communications". On this statement the respondents strongly agreed indicating that the importance of project communications supporting Ramsig (2009:345) and Baker (2007).
- "Interpersonal communications is always active between my team members" the respondents agreed to this statement but not significantly indicating that they were not sure about interpersonal communications in their project environment. Interpersonal communications must be active for effective communication according to Kerzner (2006:232) and Ramsig (2009:353)
- Although the research indicated negatively to the statement "There is a lack of essential soft skills on present project/support role" meaning that respondents did not recognize a shortage of soft skills. However early research by Culo & Skendrović (2010: 228) emphasises the importance of soft skills as does research by Azim et al (2009).
- "New information always circulates between team members and clients in time" is a statement which findings show a gap in project communication effectiveness because respondents did not agree with it. For project communications to be effective timely dissemination of information is needed according to the PMBOK Guide (2004: 249)
- Respondents did not agree significantly with the statement "I am fully aware of my present clients' project charter' showing a gap in the communication process. The shortcoming does not agree with Mckeever (2006) and the Project Management Handbook (2007:4) communication planning process
- The statement "Our communication plan details change management, escalation and conflict resolution procedures" was strongly agreed by the majority of the respondents of the research. The findings here are supported by the Project Management Handbook (2007:9) where a good communication plan includes a conflict management strategy which is designed to make issues between stakeholders more manageable.

- Findings on the statement "I feel I am fully aware of the communication plan for my present project or client" were that respondents felt that they did not agree. This means that most of the SAP Consultants felt that they did not know their communication plans within their environment. This can be categorized as a major gap as it is contrary to early literature by the Project Management Handbook (2007:4) on the communication planning process.
- A gap in project communications is indicated by the findings on the statement "I am happy with communications and handovers between support teams and projects' in which the respondents disagreed with. Cross team communication is lacking which indicates a shortcoming in the communication process, according to Hanisch et al. (2009:149) knowledge transfer is important in temporary organizations such as projects.
- Lastly a gap in project communications is indicated by the findings on the statement "there is always sufficient communication between UCS teams and the client' in which the respondents disagreed with. The finding on this statement indicated that there is no timely dissemination of information which is one requisite for project communications to be effective according to the PMI (2008:249), it contradicts the belief by the respondents that project communications are effective with their clients.
- factors of ERP implementation projects environment and the significance of the communication plan at each lifecycle stage.

*Hypothesis testing on factors of ERP implementation projects environment and the significance of the communication plan at each lifecycle stage.*

The respondents also rated five statements on the significance of the communication plan at each lifecycle stage and the results showing the asymptotic significances from the One –Sample Wilcoxon Signed Rank Test are presented in the Figure 3.

**Hypothesis Test Summary**

| | Null Hypothesis | Test | Sig. | Decision |
|---|---|---|---|---|
| 1 | The median of Key communication points in project schedules must monitor communication effectiveness equals 3.00. | One-Sample Wilcoxon Signed Rank Test | .000 | Reject the null hypothesis. |
| 2 | The median of The communication plan is relevant in all phases of the ASAP Methodology equals 3.00. | One-Sample Wilcoxon Signed Rank Test | .000 | Reject the null hypothesis. |
| 3 | The median of Communication is significant in all phases : Preparation, Blueprint, Realization, Go Live & Run equals 3.00. | One-Sample Wilcoxon Signed Rank Test | .000 | Reject the null hypothesis. |
| 4 | The median of Communication plans are regularly updated taking into consideration project phase dynamics equals 3.00. | One-Sample Wilcoxon Signed Rank Test | .431 | Retain the null hypothesis. |
| 5 | The median of I am fully aware of each project stakeholders communication needs in all ASAP phases phaMethodologyphases equals 3.00. | One-Sample Wilcoxon Signed Rank Test | .881 | Retain the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Figure 3: One sample Wilcoxon signed rank test on Section C: the significance of the communication plan at each lifecycle stage*

The results show that the median for the ratings of the statements; "Key communication points in project schedules must monitor communication effectiveness", "The communication plan is relevant in all phases of the ASAP Methodology", and "Communication is significant in all phases: Preparation, Blueprint, Realization, Go Live & Run" were significantly different from the mid-point of the scale (3). The graphs in Figures: 3 to 6 below indicated the medians were significantly greater than the mid-point of the scale (3).

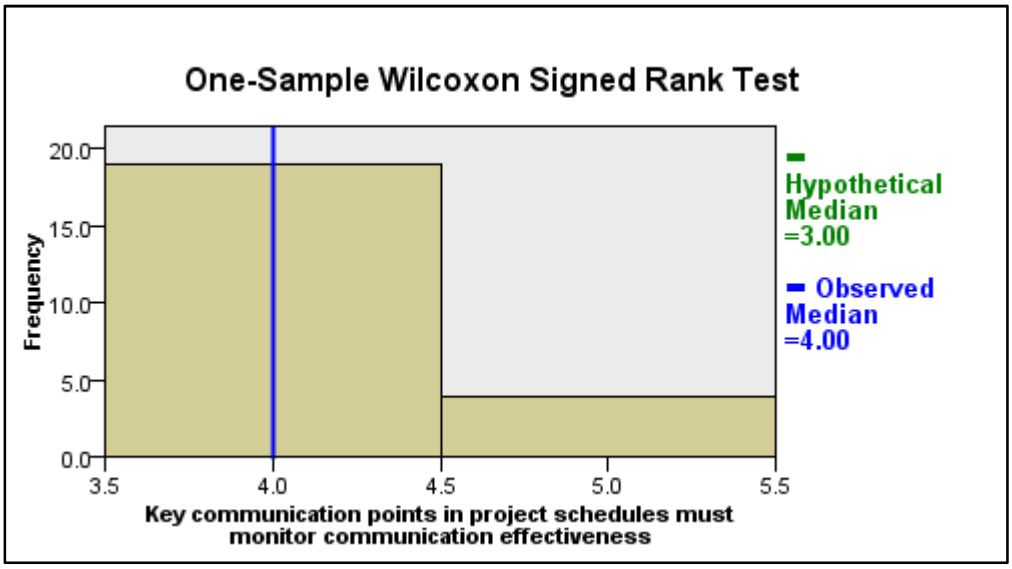


*Figure 4: Observed Median on statement "Key communication points in project schedules must monitor communication effectiveness"*

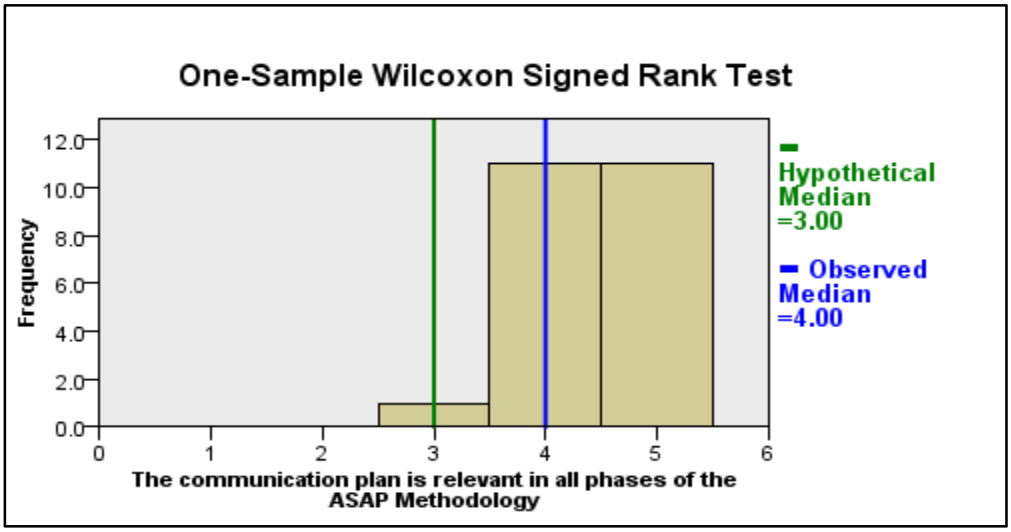


*Figure 5: Observed Median on statement "The Communication Plan is relevant in all phases of the ASAP Methodology"*

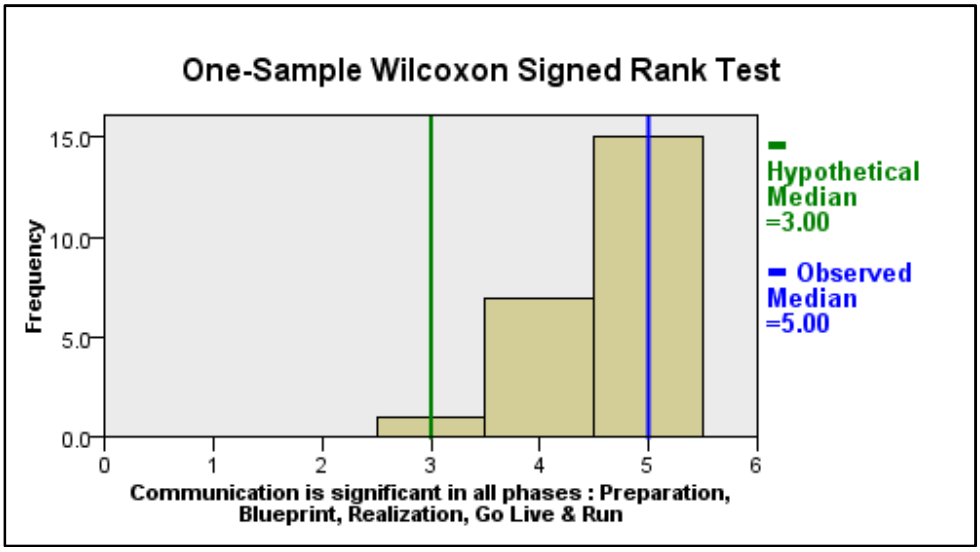


*Figure 6: Observed Median on statement "Communication is significant in all phases: Preparation, Blueprint, Realization, and Go-Live& Run"*

Figure 4, Figure 5 and Figure 6 indicated that the actual medians were significantly greater than the mid-point of the scale (3). Thus, the respondents agreed with the three statements, this is an important finding that SAP consultants at UCS Solutions were aware that communication on ERP projects was vital in all phases of implementation and support and that the project schedule must monitor communication effectiveness at key milestones. The awareness of the importance of project communication is vital for planning for effectiveness and success (Bourne, 2007)

The finding of the statements; "Key communication points in project schedules must monitor communication effectiveness" follows Mckeever (2006) argument of using the Project Charter as an effective planning tool in the project initiation phase and as a communication tool that can be continually referenced. Literature by Bourne (2007: 8) suggested that the principal communication points must be included in the project schedule therefore monitoring of effectiveness of communication of which the research findings suggested the same.

Findings on the two statements "The communication plan is relevant in all phases of the ASAP Methodology", and "Communication is significant in all phases: Preparation, Blueprint, Realization, Go Live & Run" are in line with the literature by Bhatti (2005); Metaxiotis et al. (2005: 65) and Esteves & Pastor (2009: 1023). However, contrary to the approach by Goczol and Scoubeau (2003: 62-63); the research did not establish a link between corporate communication and project communication.

Furthermore the other two statements "Communication plans are regularly updated taking into consideration project phase dynamics" and "I am fully aware of each project stakeholders communication needs in all ASAP phases" were not significantly different from 3. This shows the grey area where the respondents were not entirely sure of what their communications plan were for their various clients, and generally did not participate or know how regularly the communication plans were updated. The findings reveal the fact that project communication planning did not involve all team members in determining the project stakeholders' information needs regularly and defining a communication approach, unfortunately not following the PMBOK Guide (2004: 251) recommended approach in planning for communications, thus leading to ineffective project communication.

The respondents also rated eight statements and questions on how they wish improvement of project communication process can be at UCS Solutions. The results showing the median of the ratings from the mid-point of the scale are presented in Figure 7;

**Hypothesis Test Summary**

| | Null Hypothesis | Test | Sig. | Decision |
|---|---|---|---|---|
| 1 | The median of The project charter is an effective planning tool used in the project communication planning plplcancontinually referenced equals 3.00. | One-Sample Wilcoxon Signed Rank Test | .000 | Reject the null hypothesis. |
| 2 | The median of Should project teams regularly update the project communication plan? equals 3.00. | One-Sample Wilcoxon Signed Rank Test | .000 | Reject the null hypothesis. |
| 3 | The median of On-site support and meetings are important for getting familiar with the client's needs equals 3.00. | One-Sample Wilcoxon Signed Rank Test | .000 | Reject the null hypothesis. |
| 4 | The median of Do you regard project communications to be of strategic importance? equals 3.00. | One-Sample Wilcoxon Signed Rank Test | .000 | Reject the null hypothesis. |
| 5 | The median of There is a need for modern analytical tools to assess and improve communications cococommemployecommunication may be used to increase effectiveness of project communication equals 3.00. | One-Sample Wilcoxon Signed Rank Test | .000 | Reject the null hypothesis. |
| 6 | The median of Is there is a need to train SAP Consultants on the use of video/telephone technology? tettttechtechconferencing equals 3.00. | One-Sample Wilcoxon Signed Rank Test | .000 | Reject the null hypothesis. |
| 7 | The median of Use of instant messaging (IM) like Skype / GTalk allows realtime communication on projects equals 3.00. | One-Sample Wilcoxon Signed Rank Test | .000 | Reject the null hypothesis. |
| 8 | The median of Should you be involved in the communication planning process? equals 3.00. | One-Sample Wilcoxon Signed Rank Test | .000 | Reject the null hypothesis. |

Asymptotic significances are displayed. The significance level is .05.

*Figure 7: One sample Wilcoxon signed rank test on Section D: Project Communication Effectiveness, Gaps and Shortcomings*
*Source: Primary Data*

The results in Figure 7 show that the median of the ratings of the all the statements on improvement of project communication process are significantly different from the mid-point of the scale (3) due to the result of rejecting the null hypothesis. All the observed medians were significantly greater that the mid-point of the scale displayed in figures 8 to 15 below.

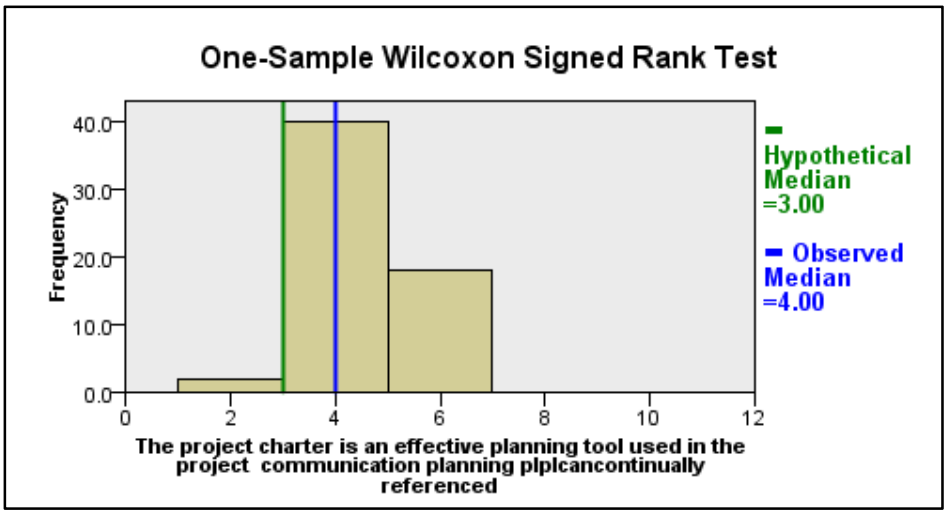


*Figure 8: Observed Median on statement "The project charter is an effective planning tool used in the project communication planning process and can be continually referenced"*

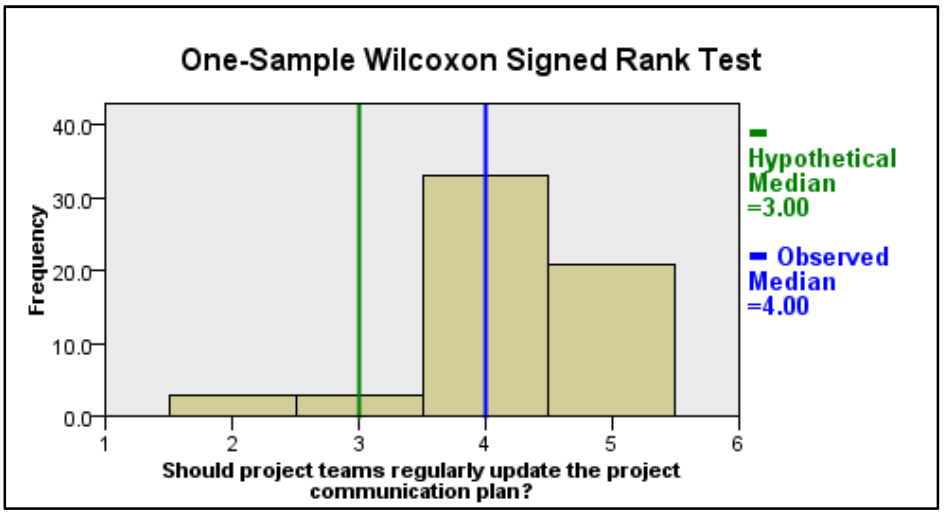


*Figure 9: Observed Median on statement "Should project teams regularly update the project communication plan?"*

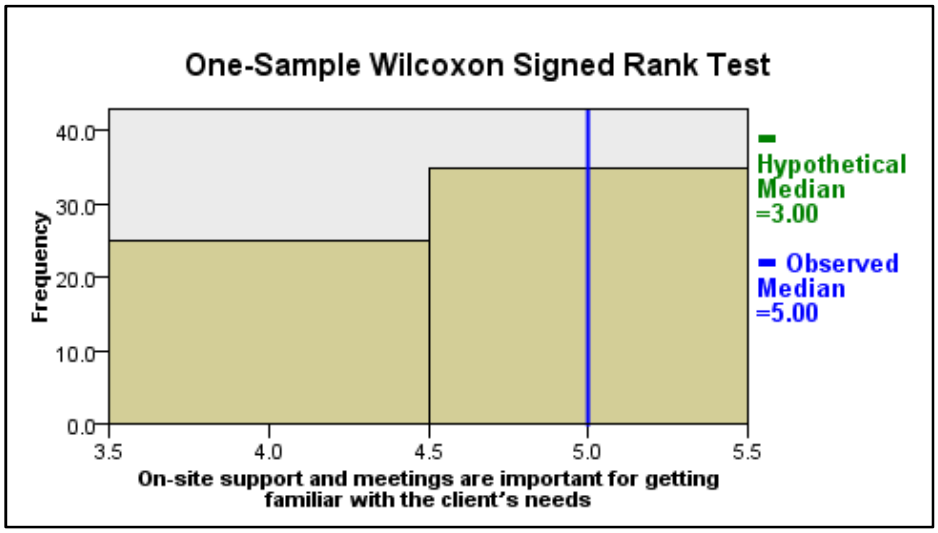


*Figure 10: Observed Median on statement "Onsite support and meetings are important for getting familiar with the client's needs"*

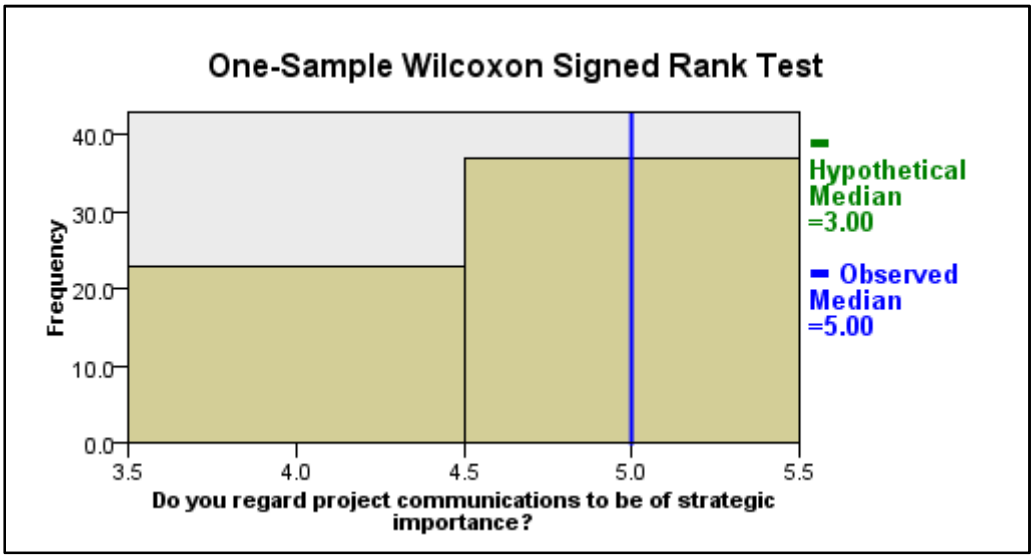


*Figure 11: Observed Median on statement "Do you regard project communications to be of strategic importance?"*

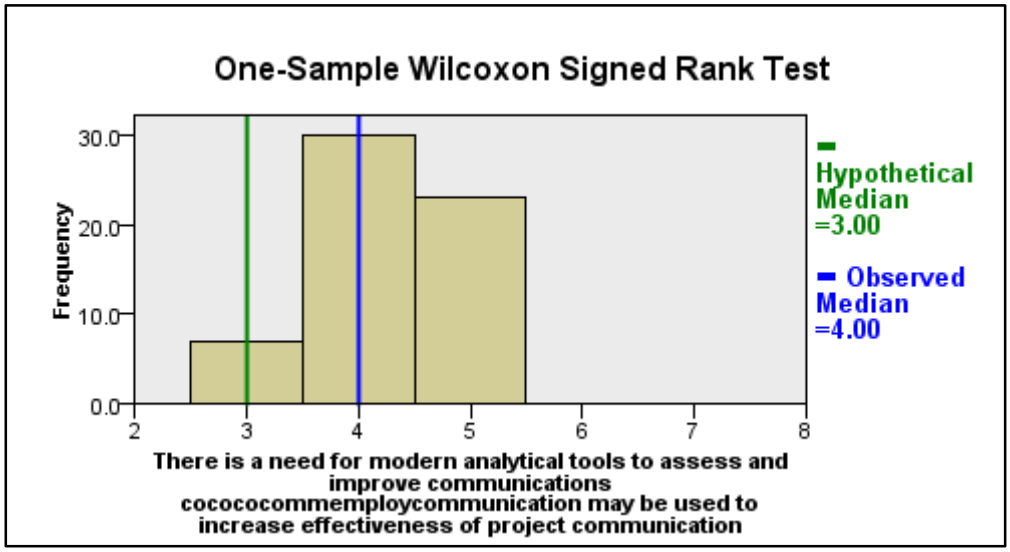


*Figure 12: Observed Median on statement "There is a need for modern analytical tools to assess and improve communications"*

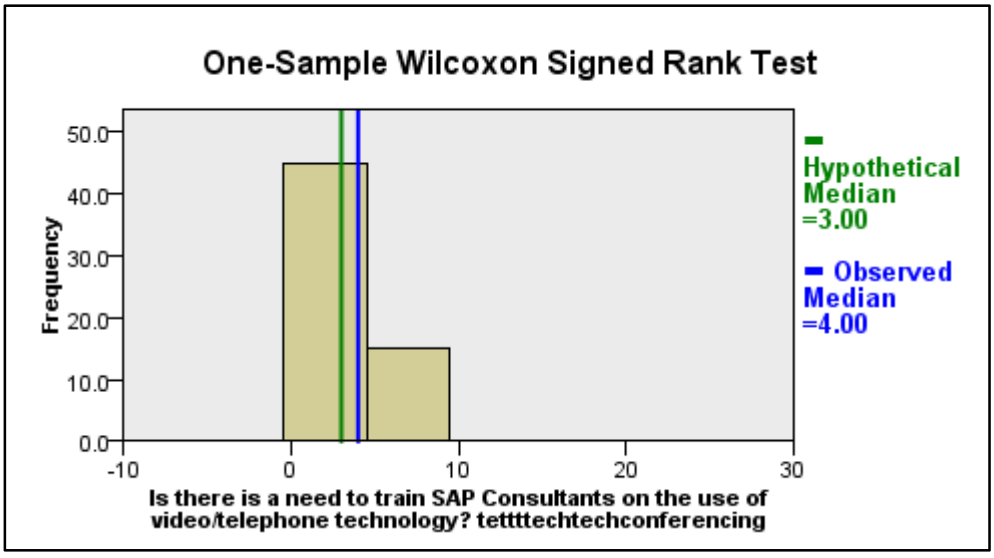


*Figure 13: Observed Median on statement "Is there a need to train SAP Consultants on video/telephone technology?"*

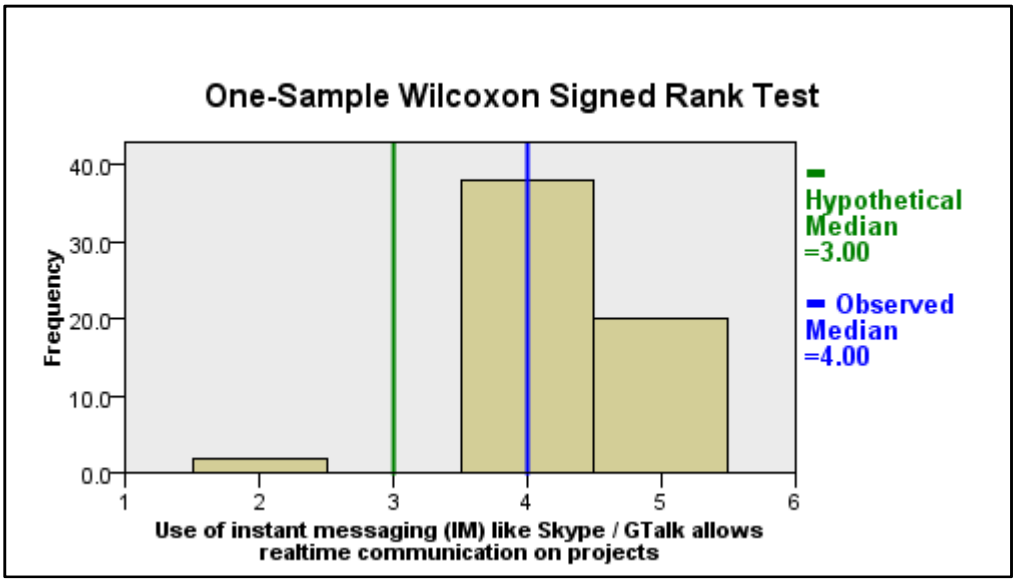


*Figure 14: Observed Median on statement "Use of instant messaging (IM) like Skype/ GTalk/GChat allows real-time communication on projects"*

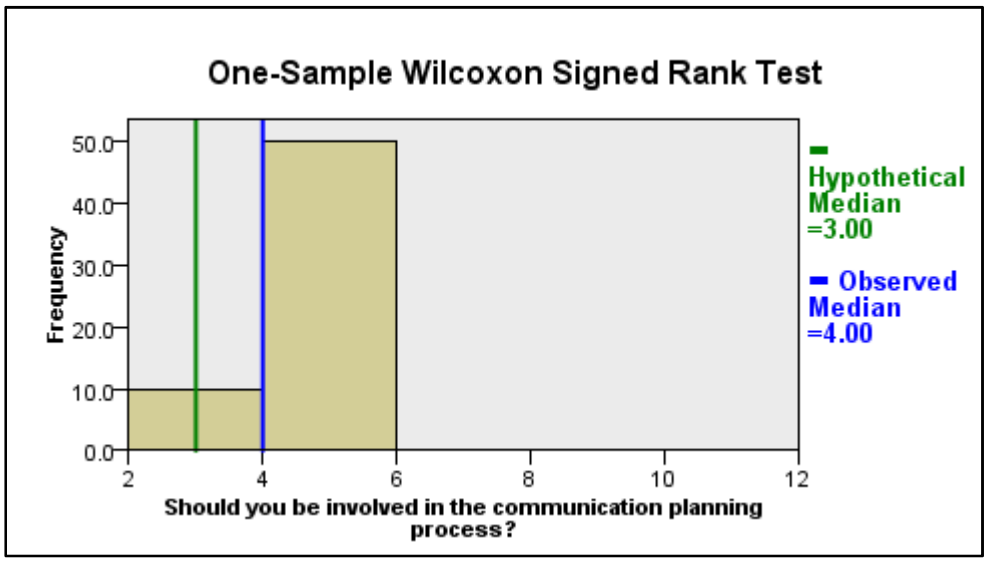


*Figure 15: Observed Median on statement "Should you be involved in the communication planning process?"*

Thus, the respondents strongly agreed with the following statements;

The project charter is an effective planning tool used in the project communication planning. The SAP consultants strongly agreed that the project charter which details the scope and work breakdown structure of the client's project and support was essential to planning effective project communications. It provides inputs such as timing, key stakeholders, communication requirements, escalation procedures and deadlines. Mckeever (2006) supports this finding, stating the usefulness of the project charter because it provides input for effective communication planning by describing what the project is about, why it is being done, who is involved, roles and responsibilities, schedule, and general approach. Furthermore the Project Management Handbook (2007: 4) communication planning process includes the project charter as key to the gathering planning inputs stage.

Should project teams regularly update the project communication plan? The question relates to the step in the project communication planning, there is a need to regularly update and make relevant the project communication plan. The SAP consultants all agreed that there is need to evaluate and ensure that the project communication plan is relevant to the project at applicable milestones or intervals to ensure project communication effectiveness. The research findings showed that the communication plans were not regularly updated contrary to the recommendations by Bourne (2007: 8); Weaver (2007: 7) and The Project Management Handbook (2007: 20).

"On-site support and meetings are important for getting familiar with the client's needs." The respondents who were all involved in on-going support and project work with various clients all agreed that central to getting familiar with stakeholders expectation and more effective project communication is on-going engagement such as onsite visits and collaboration. Face to face meetings and problem solving as supported by Sargent and Panico (2007) are essential for getting an understanding between two or more parties.

"Do you regard project communications to be of strategic importance?" This means that project communications is of strategic importance especially for a company such as UCS Solutions where it is core to the operations. Project communications must be

planned for and managed within the project environment to enable strategic success for both UCS Solutions and its stakeholders, the finding is in agreement with Christenson and Walker (2008: 616) and Hanisch et al, (2009).

There is a need for modern analytical tools to assess and improve communications. The statement, to which respondents agreed, recognizes the need to use modern analytical tools to assess whether communications in the project environment at UCS Solutions. Literature on evaluating and reporting project communication performance according to the Project Management Handbook (2007: 20) and the Strategic Employee Communication Model by (Barrett, 2002:223) provides support to the finding.

"Is there is a need to train SAP Consultants on the use of video/telephone technology?" The respondents agreed that it is essential for effective project communication, knowing how to operate high tech communication tools will enhance effective project communications between clients or project team members that are based in different regional locations or countries. Virtual teams can collaborate more effectively with the use of video and call conferencing. The finding here is in line with Culo and Skendrović (2010: 231) who infer that the communication item determines what vehicle or methods the project team members will use to carry out the communication thus it is important to know how to use the different communication tool.

Use of instant messaging (IM) like Skype / GTalk/Google Chat allows real-time communication on projects. SAP consultants realised that instant messaging and chats can provide a means of effective project communication by providing a platform to exchange critical information and ideas between project team members using real time as compared to e-mails which may be missed. The findings can be supported by Dejong et al. (2007:364) approach to managing virtual project team communications with the use of technology.

Should you be involved in the communication planning process? Responding SAP consultants agreed that they must be involved in the communication planning process for projects and have valuable input and need to be aware of the plan. The Project Management Handbook (2007:4) communication planning process requires distribution of communication plan drafts to project stakeholders so that they may review and incorporate changes as the next step in the process.

## 5. Conclusion and Recommendations

This section highlights the conclusions obtained from the study and highlights the research questions and objectives.

The aim of this research project has been to investigate the effectiveness of internal and external project communication at UCS Solutions.

The respondents who are SAP practitioners eluded the gaps and shortcomings in the project communication process at UCS Solutions and the factors affecting effective project communication planning on ERP projects. The contribution to the research on what project staff suggests improving project communication for greater project success was documented. The recommendations are in fulfilment of the research question of what can project staff recommend improving project communication to create more ERP project successes.

### *5.1. Findings from the Primary Research*

The research objectives have been fulfilled and are presented here along with the presentation of the findings as per the research questions.

- In investigating the effectiveness of project communication at UCS Solutions Pty Ltd. The research indicated that the SAP practitioners were in consensus that project communication was effective; responding that both internal project communications involving interactions between project team members were active and that external communications with their respective clients was effective. However, there was a room for improvement providing a basis for argument as to how effective project communications are at UCS Solutions.

- In identifying the gaps and shortcomings in the project communication process at UCS Solutions. The research has highlighted the following shortcomings and gaps of the project communication planning process at UCS Solutions according to the SAP Practioners. The methods or actions to close the gaps are also displayed:

| Problem | Closing the gap |
|---|---|
| **Gap 1** Recording knowledge of stakeholders communication needs: | ▪ Researching clients' expectations;<br>▪ Using a stakeholder analysis ;<br>▪ Involving SAP Consultants in communication<br>▪ planning;<br>▪ Tracking satisfaction with individual transactions. |
| **Problem** | **Closing the gap** |
| **Gap 2** Lack of knowledge of the project charter | ▪ Introducing the project charter to team members;<br>▪ Using the project charter as a reference for<br>▪ communication plan drafting ;<br>▪ Using the project charter for key milestones<br>▪ communication points. |

| Problem | Closing the gap |
|---|---|
| **Gap 3** New information not circulating in time | ▪ Researching communication methods;<br>▪ Being aware of recipient audience;<br>▪ Involving SAP Consultants in communication planning;<br>▪ Creating projects driven by and based on communications. |
| **Problem** | **Closing the gap** |
| **Gap 4** Insufficient Soft skills for SAP Consultants. | ▪ Researching clients' expectations;<br>▪ Using complaints strategically;<br>▪ Creating client panels and on- site meetings;<br>▪ Tracking satisfaction with individual transactions;<br>▪ Identifying needs and training. |
| . | |
| **Problem** | **Closing the gap** |
| **Gap 5** Lack of project communication plan updating | ▪ SAP practitioners must form project development team (PDT);<br>▪ Need to ensure that the project communication plan is relevant;<br>▪ Reviewing of communication plans by<br>▪ project team members regularly. |
| **Problem** | **Closing the gap** |
| **Gap 6** Lack of modern analytical tools to assess and improve communication | ▪ Using key project milestones to assess communications;<br>▪ Researching analytical communication tools in<br>▪ similar industries;<br>▪ Creating client panels. |
| **Problem** | **Closing the gap** |
| **Gap 7** Handover between projects and support teams | ▪ Using key project milestones to assess functional changes;<br>▪ Timely co-ordination of handover sessions;<br>▪ Creating and updating project documentation;<br>▪ - Involving support team members in project closeout meetings. |

*Table 3: Summary of Gap problem sand methods of closing the Gaps*

- To analyse factors of ERP implementation projects environment and the significance of the communication plan at each lifecycle stage. The following are factors that the research found to be relevant :

| |
|---|
| • SAP ASAP7 Methodology phases (Preparation, Blueprint, Realization, Go Live & Run)<br>• Project environment (virtual and physical)<br>• project schedules must monitor communication effectiveness<br>• Stakeholders communication needs assessment in all phases of the project<br>• Relevance of communication plan in each project phase<br>• Updating of communication plan |

*Table 4: Summary of project environment factors affecting effective communication*

In line with the findings, discussions and the conclusions of the study, the following recommendations were drawn from the SAP practitioners involved in the study;

- Project communications should be regarded with strategic importance thus providing projects that are driven by communications. Designating communication gaps as real impediments to the success of a project. Once gaps and shortcomings are identified with such importance senior management can drive corrective change initiatives. Projects must not include communications as one of its inputs but must be based on effective communications.
- The use of On-site support and meetings are important for getting familiar with the client's needs. This would ensure that SAP project practitioners are aware of the stakeholders' needs by regular meetings and walkabouts at the client premises. As literature indicates that face to face meetings are still important in this time and age of technology to give a forum for mutual understanding.
- SAP Consultants as project team members should be involved in the communication planning process and form part of the communication development team as recommended by the PMI and The Project Communication Handbook's (2007) plan communications process. These steps may be utilised as a standard for crafting communication plans for the SAP ERP implementation and support projects. The formation of project development teams (PDTs) and the inclusion of project team members will indeed lead to effective project communication becoming the driver for successful projects.
- Project teams consisting of SAP Consultants should regularly update the project communication plan for their particular clients. This provides the SAP practitioners with the chance of being part of project development teams and providing input into the communication plans used for effective communication on projects.
- There is a need for modern analytical tools to assess and improve communications, thus providing UCS Solutions with a means to evaluate current project communication practices. UCS Solutions cannot afford not to improve the current communication practices if they find them lacking. The use of The Strategic Employee Communication Model is an option for companywide change and brings to the surface a company's strengths and weaknesses pertaining to communication and change communication program needed.
- Use of technology such as instant messaging (IM) like Skype / GTalk and Microsoft Lync 2010 which allows real-time communication on projects does enhance communication methods. By allowing SAP practioners to interact on these chat platforms with one another may encourage quicker dissemination of project information and knowledge as the SAP Consultants interact with one another informally.
- The project charter is an effective planning tool used in the project communication planning and must be referenced when planning the communication process of each project. It must continue to be a basis of reference throughout the project and support contract. The "rolling" nature of support often has implications on the original project charter and communication plan which may be lost or forgotten. New project team members must be introduced to the project charter for the different projects that UCS Solutions executes. The project charter provides clarity and the work breakdown structure of the project undertaken. The vision and purpose of the project along with roles and responsibilities lessening uncertainty and improving effective communications.
- Communication plans must detail change management, escalation and conflict resolution procedures for each particular client. The inclusion of the detail will create an environment for successful resolutions and lessen uncertainty of projects. The projects will hence be driven by communications.
- Key communication points in project schedules must monitor communication effectiveness. The milestones that warrant meetings and update become the platform to ascertain the performance of project communications, the communication plan may be updated at these meetings to ensure relevance in each project phase being completed and beginning according to the SAP ASAP7 Methodology.
- Handover between implementation and support projects needs to be improved to ensure knowledge transfer is effective. The handover by project implementation teams to support teams in the final phase of "Run" as per the SAP ASAP7 methodology. Needs to be detailed and the project documentation such as functional specifications, user signoffs, unit tests and user acceptance tests be produced. Comprehensive explanation on new functionality must be well documented and handed over to support teams with the use of different communication methods such as in face to face meetings and knowledge share points. Involving support team members or management in project closeout meetings to be aware of outstanding issues and accepted outcomes.

The implementation of the suggested recommendations and plans to close gaps will improve its service quality through successful ERP projects and help UCS Solutions gain competitive advantage.

**6. References**


i. Ara, A. and Al-Mudimigh, A. (2011) The Role and Impact of Project Management in ERP project implementation life cycle. Global Journal of Computer Science and Technology, pp 8-9.

ii. Azim, S.; Gale, S.; Lawlor-Wright, T.; Kirkham, R.; Khan, A. and Alam, M. (2009) The importance of soft skills in complex projects. pp 387-400.

iii. Badar, S. and Sulaiman, A. (2009) Successful enterprise resource planning implementation: Taxonomy of critical factors. Industrial Management & Data.

iv. Barrett, D.J. (2002) Change communication: using strategic employee communication to facilitate major change." Corporate Communications: An International Journal, Vol. 7 Iss 4, pp 219 - 231.

v. Bhatti, R. (2005) Critical Success Factors For The Implementation Of Enterprise Resource Planning (ERP):Empirical Validation. The Second International Conference on Innovation in Information Technology (IIT'05). Dubai.
vi. Boesso, G. and Kumar, K. (2009) An investigation of stakeholder prioritization and engagement: who or what really counts. Journal of Accounting & Organizational Change, Vol. 5 Iss: 1, pp 62-80.
vii. Bourne, L. (2007) Acheiving a Successful Engangement. Project Management Australia, pp1-10.
viii. Bourne, L. (2011) Advising upwards: managing the perceptions and expectations of senior management stakeholders." Management Decision: pp 1001-1023.
ix. Bourne, L. and .Walker, D.H.T. (2008) Project relationship management and the Stakeholder Circle. International Journal of Managing Projects in Business.
x. Bourne, L. (2010) Beyond Reporting: The Communication Strategy." PMI Global Congress Asia Pacific. Melbourne, Australia, pp 1-11.
xi. Campbell, G. (2009) Communications Skills For Project Managers [e-book] AMACOM. Ipswich, MA: Available from: eBook Collection (EBSCOhost) Accessed Feburary 26, 2013,
xii. Christenson, D and Walker, D.H.T. (2008) Using vision as a critical success element in project management. International Journal of Managing Projects in Business.
xiii. Chui-Ha, T. and.Walker, D,H. (2008) Study of project management leadership styles across life cycle stages of an IT project in Hong Kong. International Journal of Managing Projects in Business Vol. 1 Iss: 3, pp 404 - 427.
xiv. Culo, K. and Skendrovic, V. (2010) Communication Management is Critical for Project Success." Informatol, pp 228 -235.
xv. Dawson, C. (2002) Practical Research Methods. New Delhi: UBS Publishers' Distributors.
xvi. Degu, G. and Yigzaw, T. (2006) Research Methodology." University of Gondar.
xvii. Dejong, R., and R. and Curseu, P. L. Schalk. (2007) Virtual communicating, conflicts and performance in teams. Team Performance Management, pp 364-380.
xviii. Denscombe, M. (2003) The Good Research Guide : For small-scale social research projects. New York: McGraw-Hill Education.
xix. Dezdar, S. and Anin, S. (2011) Examinig ERP implementation success from a project environment perspective. Business Process Management Journal, pp 919-939.
xx. Diamantopoulos, A. and Schlegelmilch, B. B. (2000) Taking the Fear Out of Data Analysis. Singapore: Brendan George.
xxi. Disterer, G. (2002) Management of project knowledge and experiences." Journal of Knowledge Management.
xxii. Eppler, M.J. and Mengis, J. (2004) The concept of information overload: a review of literature from organization science, accounting, marketing, MIS, and related disciplines." Information Society, pp 325-44.
xxiii. Françoise, O.; Bourgault, M. and Pellerin, R. (2009) ERP implementation through critical success factors' management. Business Process Management Journal.
xxiv. Frese, R. and Sauter, V. (2013) Project Success And Failure: What Is Success, What Is Failure, And How Can You Improve Your Odds For Success? UM-St. Louis, pp1-12.
xxv. Goczol, J. and Scoubeau, C. (2003) Corporate communication and strategy in the field of projects. Corporate Communications: An International Journal, pp 60 - 66.
xxvi. Greener, S. (2008) Business Research Methods. Ventus Publishing,.
xxvii. Hanisch, B., F. Lindner, and A. and Wald, A. Mueller. (2009) Knowledge management in project environments. Journal of Knowledge Management, 148 - 160.
xxviii. Hofstee, E. (2006) Extract from Constructing a Good Dissertation : A Practical Guide to Finishing a Master's, MBA or PhD on Schedule.
xxix. Holland, C.P. and Light, B. (1999) Critical Success Factor Models For ERP Implementation. University of Manchester.
xxx. Improvement, Caltrans Office of Project Management Process. (2007) Project Communication Handbook. Sacramento.
xxxi. Institute, Project Management. (2004, 2008) A Guide To The Project Management Body Of Knowledge.
xxxii. Jugdev, K. and Muller, R. (2005) A Retrospective Look At Our Evolving Understanding Of Project Success. Project Management Institute Vol. 36, No. 4, pp 19-31.
xxxiii. Karlsen, J.T. (2010) Project owner involvement for information and knowledge sharing in uncertainty management. International Journal of Managing Projects in Business, pp 642-660.
xxxiv. Kendra, K. and Taplin, L. (2004) Project Success: A Cultural Framework. Project Management Journal, pp 31-45.
xxxv. Kerzner, H. (2006) Project Management, A Systems Approach to Planning Scheduling,and Controlling. Ohio: John Wiley & Sons, Inc.
xxxvi. Kliem, R. (2004) Leading High-Performance Projects [e-book]. Ipswich, MA: J Ross Publishers Accessed February 27, 2013 Available from: eBook Collection (EBSCOhost).
xxxvii. Kloppenborg, T.; Tesch, D. and Manolis, C. (2011) Investigation of the sponsor's role in project planning. Management Research Review, Vol. 34 Iss: 4, pp 400 - 416.
xxxviii. Lancaster, G. (2005) Research Methods in Management : A concise introduction to research in management and business consultancy. Oxford: Elsevier Butterworth-Heinemann.
xxxix. Leedy, P. and Ormrod, J.E. (2010) Practical Research (Planning and Design). New Jersey: Pearson Education International.
xl. Lehmann, V. (2009) Communication And Project Management: Seeds For A New Conceptual Approach. ASAC . Niagara Falls, Ontario.

xli. Loo, R. (2003) A multi-level causal model for best practices in project." Benchmarking : An International Journal, pp 29-36.

xlii. Loo, R. (1996) Training in project management: a powerful tool for improving individual and team performance. Team Performance Management, pp 6 - 14.

xliii. MANCOSA (2012) Project Management Study Guide. Durban: Management College of Southern Africa.

xliv. MANCOSA (2013) Research Methods study guide. Durban: Management College of Southern Africa.

xlv. Maxwell, J.A. (2004) Designing a Qualitative Study. Chapter 7.

xlvi. McKeever, C. (2006) The Project Charter – Blueprint for Success. The Journal of Defense Software Engineering, pp 6-9.

xlvii. Metaxiotis, K. , Zafeiropoulos, I., Nikolnakou, K. and Psarras, J. (2005) Goal directed project management methodology for the support of ERP implementation and optimal adaptation procedure. Information Management & Computer Security, pp 55-71.

xlviii. Muscatello, J.R. and Chen, I.J. (2008) Enterprise resource Planning (ERP) Implementations: theory and Practice. International Journal of Enterprise Information Systems, 4(1), pp 63-78.

xlix. Musil, J. and Hoeliner, R. (2009) The new ASAP Methodology : Overview of the new ASAP Methodology for Implementation 7.x and ASAP and Business Add-Ons." SAP AG. Germany, pp 1-42.

l. Nulty, D. (2008) The adequacy of response rates to online and paper surveys: what can be done? Assessment & Evaluation in Higher Education,Vol. 33, No. 3

li. Olesen, K. A and Myers, M.D. (1999) Trying to improve communication and collaboration with information technology: An action research project which failed." Information Technology & People, pp 317 - 332.

lii. Rad, P and Levin, G. (2003) Achieving Project Management Success Using Virtual Teams [e-book]. Ipswich, MA.: J. Ross Publishers Accessed February 27, 2013: Available from: eBook Collection (EBSCOhost).

liii. Rad, P.F. (2003) Project Success Attributes." Cost Engineering Journal, pp 23-29.

liv. Ramsing, L. (2009) Project communication in a strategic internal perspective." Corporate Communications: An International Journal, pp 345-357.

lv. Ranjit, K. (2005) Research Methodology-A Step-by-Step Guide for Beginners,(2nd.ed.). Singapore: Pearson Education.

lvi. Sargent, S. R and Panico, R.P. ( 2007) The Structures of Success:Ten Guidelines for Sustainable Program and Project Management, pp 1-6.

lvii. Saunders, M.; Lewis. P. and Thornhill, A. (2009) Research Methods for Business Students. Harlow: Pearson Education Limited.

lviii. Small, J. and Walker, D. (2011) Providing structural openness to connect with context: Seeing the project entity as a human activity system and social process. International Journal of Managing Projects in Business.

lix. Smith, M. (2002) What client employees say about consultants." Leadership & Organization Development Journal, pp 93-103.

lx. Weaver, P. (2007) Getting the "Soft Stuff " Right - Effective Communication is the Key to Successful Project Outcomes! Atlanta , Georgia, pp 1-20.