

ASSESSMENT OF THE APPLICATION OF MONITORING AND EVALUATION ON CONSTRUCTION PROJECT PERFORMANCE BY QUANTITY SURVEYORS IN NIGER STATE

IBRAHIM, ZAINAB MOHAMMED; & ADAMU, ANITA DZIKIWI

Department of Quantity Surveying, Federal University of Technology, Minna

ABSTRACT

Quantity surveyors who are known to be the cost engineers of the construction industry, and are known to ensure that clients get value for their money, currently do not match the demands of other market participants. Monitoring and Evaluation tend to be neglected in the building and construction sector, while other project management sectors have a lot of interest in it and practice it religiously. As a result, the supervision and review of the whole project execution process to ensure the satisfactory completion of projects is neglected and given less priority. The rationale of this study was to assess the application of monitoring and Evaluation on construction project performance by Quantity Surveying in Niger State, Nigeria. The study used a survey as well as interviews among Quantity Surveyors, registered with the Niger state chapter of the Nigerian Institute of Quantity Surveyors. Some data were collected using a structured online questionnaire, whose link was shared with 60 Quantity Surveyors who make up the research population. 43 responses were received and were analysed using percentages, coding and ranking. Other data were collected via interviews with a Lead Quantity Surveyor from some selected organizations. The data was tabulated. The study showed that detailed drawings, bill of quantities, programme of work, material schedule, labour schedule are tools used by quantity surveyors to monitor and evaluate projects. Site visits, site meetings and intermediate valuations are also used as a medium to monitor and evaluate projects. It was found that only 26% of the respondents use monitoring and evaluation tools very often. Majority of the respondents understand the tenets of Monitoring and Evaluation very well and believe it is important as the respondents believe it would improve the output of constructions work. However, Corruption, Skills and Know how were believed

to be a barrier to the usage of Monitoring and Evaluation. It was recommended by the respondents that by ensuring professionalism, observing due process, timeliness and concision of monitoring and evaluation activities with further training and enlightening professionals on the technicalities of Monitoring and evaluation; those barriers can be broken

Keywords: *Quantity Surveyors, Monitoring and evaluation, and Project performance*

INTRODUCTION

Quantity Surveyors play a critical part in the financial management and execution of building projects, and their importance in the construction industry cannot be overstated. The success or loss of a building project is a function of the Quantity Surveyor's competency and experience on the construction team (Moore, 2020).

The field of Quantity Surveying has evolved over time to meet the evolving and growing needs of project owners. The building industry suffered some economic decline between 2007 and 2011, creating confusion in the profession, leading to the suggestion that Quantity Surveyors should develop and diversify their jobs and give greater value to project owners, as the profession seemed promising (Wao, 2015).

According to Ofori & Toor (2009), the construction industry is undergoing a time of transition, with the roles of professionals in the industry as a whole, especially Quantity Surveyors, shifting as well. In addition, Surveyors have the opportunity to take the lead to expand their presence in initiatives, as well as advance to competitive roles within the sector. Nonetheless, they must continue to develop their skill sets and expand their knowledge bases. Any Senior Quantity Surveyors believe that the Quantity surveying profession will only be able to address the unending problems it faces if it focuses more on creativity and professional growth (Ofori & Toor, 2009)

Understanding the implications of a building project design decision early in the design process means that good performance is achieved with the resources spent. Quantity Surveying is traditionally concerned with building project costs and contracts. Additionally, Quantity Surveyors manage the cost of construction by precisely estimating the work needed. The Quantity Surveyor simplifies the

design process by applying different cost metrics in a standardized manner in order to ensure a practical and cost-effective relationship between production, cost, presentation, and utility, making it possible to meet the client's needs while remaining within the negotiated budget (Maarouf, 2011).

Proper monitoring and timely input aid in the management of workmanship, thus improving the project's efficiency. It helps to achieve the desired quality standard if each part of a project's operation is effectively controlled and instances of poor workmanship and excessive use of resources – be it material, labor, or plant and machinery – are recorded promptly (Mwangu & Iravo, 2015). Construction project monitoring and evaluation are critical parts of the project delivery process because they ensure that major goals and expectations are met (Callistus & Clinton, 2016).

With the potentials of monitoring and evaluation to the successful deliverance of projects and the need for Quantity Surveyors to step up to meet the expectations of both the client and other professionals in the construction industry, the extent to which Quantity Surveyors practice and utilize monitoring and evaluation skills and tools can be a determining factor of how efficient their services are to project success. This makes it important to study the application of Monitoring and evaluation tools by Quantity Surveyors in Nigeria.

PURPOSE AND USES OF MONITORING AND EVALUATION

M&E is carried out for a variety of reasons, and the effects are used in a variety of ways (Weiss 1998, Babbie & Mouton 2001). However, it is claimed that the ultimate goal of M&E is to quantify and evaluate success in order to better control results and outputs (UNDP 2002).

Organizational preparation is another reason for doing evaluations. Evaluation is carried out for a variety of purposes, including documenting the past of a policy, giving guidance to practitioners, emphasizing the program's importance, ensuring transparency, and further identifying social strategies (Palumbo & Hallet 1993).

Scriven (1967) made a distinction between formative and summative assessment (Weiss 1998). In general, formative assessments are evaluations that contribute to the conception of certain programs, since they are normally performed prior to the program's start. During the formulation stage of a program or strategy, this type of assessment is used to assess its necessity and

desirability (Weiss 1998). When summative evaluation is used to provide guidance before or during the execution of a program with the aim of changing it, it is referred to as summative evaluation. The summative appraisal is a review of the completed product. This is usually performed after the software has been put in place. It contains data that can be used to determine if the service can be scrapped or significantly altered. According to Palumbo & Hallet (1993), this leads to program progress, either by deciding if the program met or exceeded its goals, or by implementing changes to the program to make it more efficient. This application of assessment is founded on the logical premise that all of the evaluation's prerequisites are in place.

Governments and organizations across the world are under relentless and increasing pressure to be more open to the demands of internal and external stakeholders for better governance, accountability, and openness, as well as greater policy effectiveness and implementation of meaningful outcomes (Gorgens & Kusek 2009). These increasing stresses, as well as the need for improved efficiency, necessitate the production of valuable and functional data. The need to create 'usable, result-based' M&E systems is to assist in the production of the data required by different stakeholders, whether internal or external (Ile, Eresia-Eke & Allen-Ile 2012). According to van Ransburg (2009), it is important to put mechanisms in place for monitoring and evaluation of programs from the beginning, as this aids in the tracking of program success during execution.

CONCEPT OF PROJECT PERFORMANCE

Project success is characterized as a project's overall quality in terms of whether or not it has affected recipients and whether or not the interventions are long-term (Chandes *et al.*, 2010). Because of the special technical structure of the programs, project output differs from that of the industrial or manufacturing sectors. Project building efficiency, like that in other industries, may be improved by evaluating against appropriate requirements, measuring and evaluating, or benchmarking against set expectations or prior project performance (Warmode, 2002). The project's success can be assessed using key metrics such as whether it is meaningful, reliable, and effective, whether it has benefited the recipients, and whether the programs are long-term (Hill, 2005).

Relevance refers to whether or not the project's activities are aligned with the goals of the target audience, recipient, donor, or supporter. The key issues in determining validity are whether the project's priorities lead to the needs of the beneficiaries and whether the project's operations and outputs are in line with those goals. The effectiveness of a project is determined by its ability to achieve its objectives. The term "effect" refers to the positive and negative improvements that occur as a result of the project. In order to determine whether the project is using the most efficient tools available to produce the desired outcomes, efficiency compares inputs to outputs. The willingness of project gains to proceed after the project ends is measured by sustainability (Chandes *et al.*, 2010)

Project success is described as action that can be assessed to see if it adds benefit or improves the effectiveness of the enterprise (Onukwube, Iyabga & Fajana, 2010). Illriegel, Jackson, & Slocum (2009) define success as an individual's work accomplishment after exerting effort. According to the concepts above, project success refers to a worker's capacity to complete the tasks assigned to them and how those tasks contribute to the organization's objectives.

APPROACHES TO CONSTRUCTION PROJECT MONITORING AND EVALUATION

Mwangu & Iravo (2015) stated that site visits, site meetings, intermediate valuations, and financial statements are the four activities that reflect project monitoring. Interim valuations are reports of valuations performed on a regular basis, such as monthly or bi-monthly, to assess if the value of the contractor's work is sufficient. Financial statements apply to a project's account statement, which includes payments obtained from asset sales as well as expenses. The regularity or time period of these tasks may be used to determine the extent of project control (Mwangu & Iravo, 2015).

RESEARCH METHODOLOGY

The study adopted the survey as its research design. This is considered appropriate because according to Wimmer and Dominick (2014) it is an effective way to investigate the positions of people and also assess their perspectives about a particular matter. Survey research is also defined as a method of descriptive research used for collecting primary data based on verbal

Relevance refers to whether or not the project's activities are aligned with the goals of the target audience, recipient, donor, or supporter. The key issues in determining validity are whether the project's priorities lead to the needs of the beneficiaries and whether the project's operations and outputs are in line with those goals. The effectiveness of a project is determined by its ability to achieve its objectives. The term "effect" refers to the positive and negative improvements that occur as a result of the project. In order to determine whether the project is using the most efficient tools available to produce the desired outcomes, efficiency compares inputs to outputs. The willingness of project gains to proceed after the project ends is measured by sustainability (Chandes *et al.*, 2010)

Project success is described as action that can be assessed to see if it adds benefit or improves the effectiveness of the enterprise (Onukwube, Iyabga & Fajana, 2010). Illriegel, Jackson, & Slocum (2009) define success as an individual's work accomplishment after exerting effort. According to the concepts above, project success refers to a worker's capacity to complete the tasks assigned to them and how those tasks contribute to the organization's objectives.

APPROACHES TO CONSTRUCTION PROJECT MONITORING AND EVALUATION

Mwangu & Iravo (2015) stated that site visits, site meetings, intermediate valuations, and financial statements are the four activities that reflects project monitoring. Interim valuations are reports of valuations performed on a regular basis, such as monthly or bi-monthly, to assess if the value of the contractor's work is sufficient. Financial statements apply to a project's account statement, which includes payments obtained from asset sales as well as expenses. The regularity or time period of these tasks may be used to determine the extent of project control (Mwangu & Iravo , 2015).

RESEARCH METHODOLOGY

The study adopted the survey as its research design. This is considered appropriate because according to Wimmer and Dominick (2014) it is an effective way to investigate the positions of people and also assess their perspectives about a particular matter. Survey research is also defined as a method of descriptive research used for collecting primary data based on verbal

or written communication with a representative sample of individuals or respondents from the target population (Walizer & Wienir, 1978). According to Tan (2004), a survey is a systematic method of collecting data based on a sample. Surveys may be used for exploratory, descriptive, and casual studies. Surveys are popular because they provide a relatively quick and efficient method of obtaining qualitative and quantitative information from the population (Tan, 2004).

Thus, the researcher made sure questions framed are simple so as to get the needed response from respondents for valid analysis of investigation.

A research population is generally a large collection of individuals or objects that is the main focus of a scientific query. A research population is also known as a well-defined collection of individuals or objects known to have similar characteristics. That is to say all individuals or objects within a certain population usually have a common, binding characteristics or traits (Research Population - The Focus Goup of a Scientifi Query, 2009) For this study, the population are practising Quantity Surveyors who are registered under the Niger State chapter of the Nigerian Institute of Quantity Surveyors with no emphasis on their membership grade. They are totally 60 in number.

The most commonly used forms of surveys are questionnaires and Interviews. Questionnaires are written surveys that that contain questions to help address the goals of the research (Goddard III & Villanova, 2005) An interview guide is simply a list of the topics that a researcher plan on covering in an interview with the questions that need to be answered under the topic (Jamshed, 2014). It guides a face-to-face conversation between a researcher and participants with the sole purpose of collecting relevant information to satisfy a research purpose.

This research used an online questionnaire and interviews to collect data.

The method of data collection that was used for this study is a census survey method. This involves sharing the link to the online questionnaire on the WhatsApp platform of the Niger state Chapter of the Nigerian Institute of Quantity Surveyors, so as to reach each member of the research population in order to retrieve data with high level of accuracy. Not only that but also, interviews were carried out with Representatives of the population whose services are rendered in the public and private institutions in Niger state.

Data from the questionnaires were presented using charts and descriptive tables with figures and corresponding percentages, while data from the interview were

transcribed. This is to ensure easy understanding of data collected. It will also enable the data collected to be easily categorized.

The method of data analysis used was transcription and descriptive statistics utilizing percentages. That is, the ratio between frequency and total frequency multiplied by 100

DATA PRESENTATION AND ANALYSIS

Response rate to Questionnaires

This chapter presents and interprets data collected from the field after the analysis of data collected have been carry out. It also discusses findings by answering the research questions set to answer in this study. The study had a population of 60 practising Quantity Surveyors who are registered under the Niger State chapter of the Nigerian Institute of Quantity Surveyors. However, out of the 60 outlined population, 43 responses were received.

Data Presentation, Analyses and Interpretation

Background of respondents

Figure 1 below shows the educational qualification of the respondents for this study. This shows that majority of the respondents, that is 30% were Bachelor degree holders while 28% of the respondents hold a Master Degree. Post Graduate Diploma and Higher National Diploma holders each formed 19% of the respondents while Doctor of Philosophy and National Diploma Holders formed 2% each

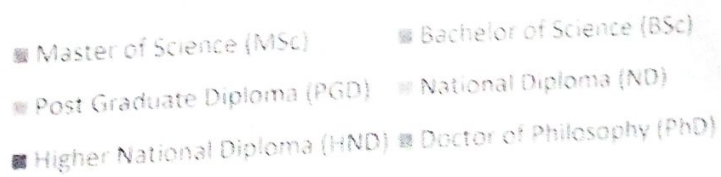


Figure 1: Educational qualification of respondent

Figure 2 shows that 60% of the respondents are of the Member grade of the professional body, while 28% are Probationer members and 7% are Corporate affiliate members. Fellow and Student members were 2% each.

■ Fellow ■ Member ■ Probationer ■ Student ■ Corporate affiliate member

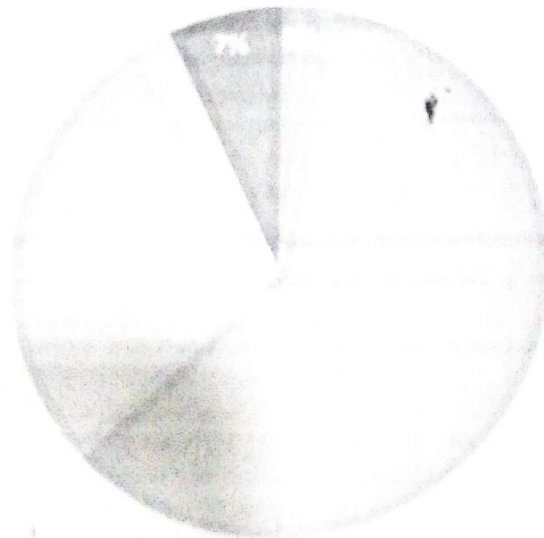


Figure 2: Membership grade of professional associations

THE MAJOR MONITORING AND EVALUATION TOOLS USED BY QUANTITY SURVEYORS IN NIGER STATE.

An interview with Quantity surveyors practising in Government institutions and private institutions within the state revealed that they all use detailed drawings, bill of quantities, programme of work in paper format, interim valuation, site visits and site meeting as a medium through which they monitor and evaluate projects. Other tools used are material schedule, labour schedule, programme of work applications and financial statements.

Table 1

Monitoring tools	Stages of construction	Federal organization	State organization	Private practice
Detailed drawings	Inception to finish	✓	✓	✓
Bill of Quantities	Inception to finish	✓	✓	✓
Material schedule	Construction phase		✓	✓
Labour schedule	Construction phase		✓	✓

Programme of work (paper)	Inception to finish	✓	✓	✓
Programme of work application (Microsoft Project, Primavera)	Inception to finish		✓	✓
Interim valuation	Construction phase	✓	✓	✓
Financial Statement	Construction phase		✓	✓
Site visit	Inception to finish	✓	✓	✓
Site meeting	Construction phase	✓	✓	✓

Figure 3 shows that all of the respondents believes that Monitoring and Evaluation tools are very impactful to project delivery.

■ Very impactful ■ Not impactful ■ Does not make any difference



Figure 3: Impact of Monitoring and Evaluation tools to projects

Figure 4 shows that 95% of the respondents make use of Monitoring and evaluation tools on their projects, while 5% of the respondents don't.

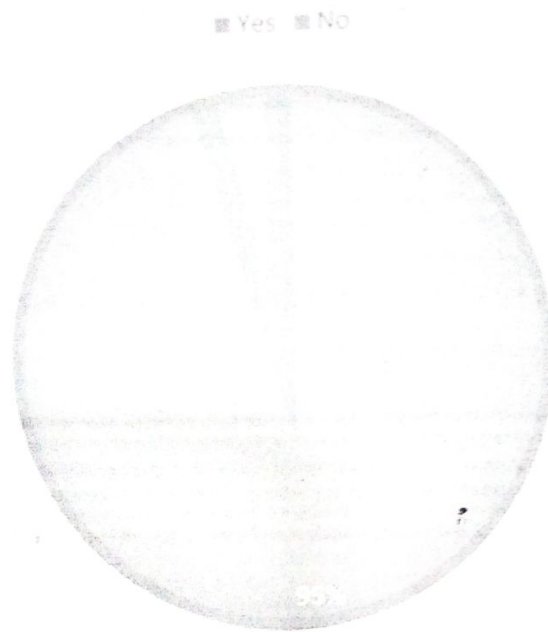


Figure 4: Utilization of Monitoring and Evaluation Tools in project processes

Figure 5 shows that 65% of the respondents often use Monitoring and Evaluation tools on their projects they handle, while 26% often use it and 9% rarely do.

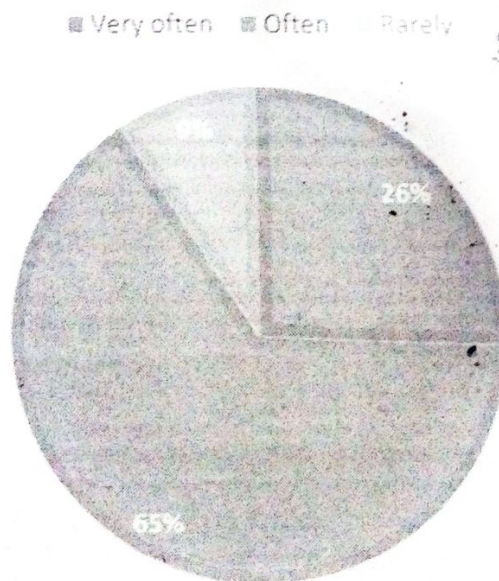


Figure 5 Frequency of use of Monitoring and Evaluation tools for projects
1: Monitoring tools and activities used by Niger State Quantity Surveyors

DISCUSSION OF FINDINGS

The major monitoring and evaluation tools used by Quantity Surveyors in Niger State.

Mwangu & Iravo (2015) stated that site visits, site meetings, intermediate valuations, and financial statements are the four activities that reflects project monitoring. Findings from this research also reinforced it, in addition, it was revealed that detailed drawings, bill of quantities, programme of work material schedule and labour schedule are also tools through which projects can be monitor and evaluated to ensure performance.

The employment of monitoring and evaluation tools have fast become a seldom practice in the building field (Odhiambo 2016). According to this study, figure 4.4 shows that 95% of the respondents says that they use Monitoring and Evaluation tools in their projects, while figure 4.5 shows that 65% of the respondents attest that they often use Monitoring evaluation which is a huge margin against 26% percent of them who use it very often. In studying the data, figure 4.3 shows that all of the respondents believe that Monitoring and Evaluation is important in practice, however, in figure 4.4 that measures who uses and does not use, the number dropped by 5% and when the question of frequency was asked, most of the respondents says they often use it. This could mean that there is an understanding in the importance of Monitoring and Evaluation but a gap exists between understanding importance and implementing knowledge.

The World Bank (2010) emphasizes the importance of monitoring and evaluation, stating that any project, whether construction or not, must be carried out from beginning to end within a specific time period and directed by monitoring and evaluation tools.

This refers to the project's willingness to begin benefiting and being used by the recipients at the appropriate time in order to ensure performance, feasibility, longevity, and sustainability. As a result, monitoring and assessment are critical to the long-term success of a project. According to Odhiambo (2015), a fruitful project in any discourse and expenditure, including development, is sufficiently viable depending on the modalities of it. The delivery modalities span the entire duration from the start of the project to its conclusion and handover to the customer. Aside from that, another significant metric and determinant is the project's long-term viability after completion and handover to the beneficiaries. For example, if a road is built and deemed to be in good shape and condition for the next thirty (30) years, it must last at least as long, if possible and appropriate. In this way, the project may be considered to have met its objectives, and vice versa. To ensure that this aim is completed, project management, construction staff, and all related stakeholders must ensure quality

guarantees as work progresses, which can be accomplished successfully by proper M and E.

CONCLUSION AND RECOMMENDATION

The importance of monitoring and evaluation in project management has been shown in the preceding, implying that the project monitoring and evaluating process is the only one that is present from the beginning through to the end of the project lifecycle. The advantages of introducing M&E, as well as the underlying problems of M&E, are discussed. In conclusion, M&E is an essential management method in the construction industry. Despite the various obstacles that M&E faces, such as insufficient financial capital for M&E, poor structural capability of M&E divisions or teams, and a weak linkage between project preparation and M&E, when M&E is applied successfully, projects are completed to specification, expense, timeline, health and safety legislation, and to the satisfaction of stakeholders.

It is advised that project managers think around, schedule, and execute M&E on all projects from start to finish. This would continue to reduce the chance of rework, which may have resulted in a cost and time overrun for the project. M&E can also be factored into the budgeting and preparation for the project's main support elements. Finally, successful project M&E requires the participation of project stakeholders in M&E, preparation and capability building for M&E, and an enabling climate for M&E.

Monitoring and evaluation tools should be used religiously on all construction projects to ensure project performance.

In order to adequately make informed decisions towards the achievement of a successful project, Quantity surveyors should ensure professionalism and adherence to due process as they monitor project activities against intended results.

Since monitoring and evaluation ensures result, accountability and productivity, it should be an integral part of project from inception to the end of its life cycle

REFERENCES

- Babbie, Earl, and Johann Mouton. (2001). *The Practice of Social Research*. Cape Town: Oxford University Press.
- Callistus, T., & Clinton, A. (2016). Evaluating Barriers to Effective Implementation of Project Monitoring and Evaluation in the Ghanaian Construction Industry. *Procedia Engineering*, 389-394.
- Goddard III, R., & Villanova, P. (2005). Designing Surveys and Questionnaires for Research. In F. Leong, & J. Austin, *The Psychology Research Handbook: A Guide for Graduate Students and Research Assistants* (pp. 114-124). Thousand Oaks: SAGE Publications.
- Gorges, Marlize, and Jody Zell Kurek. (2009). *Making Monitoring and Evaluation Systems*

- Work: A Capacity Development Toolkit*. Washington D. C.: The World Bank
- Ile, Uregu I., Chuks Eresia-Eke, and Charles O. Allen-Ile. 2012. *Monitoring and Evaluation of Policies, Programmes and Projects*. Pretoria: Van Schaik
- IEG. 2009. "Independent evaluation/Municipal management." Accessed October 10, 2020. <http://web.worldbank.org/WBSITE/EXTERNAL/EXTOED/EXTMMNGT0,contentMDK:22491796~pagePK:64829573~piPK:64829550~theSitePK:6198932,00.html>
- Ile, Uregu I., Chuks Eresia-Eke, and Charles O. Allen-Ile. 2012. *Monitoring and Evaluation of Policies, Programmes and Projects*. Pretoria: Van Schaik
- Jamshed, S. (2014). Qualitative research method-interviewing and observation. *Journal for Basic and Clinical Pharmacy*, 87-88.
- Maarouf, R. (2011). *Quantity surveying role in construction projects -a comparison of roles in Sweden and the UK*. Retrieved from Malmö University Electronic Publishing: <http://s00012.mah.se/handle/2043/13533>
- Moore, S. (2020, September 7). *RICS professional education and training for quantity surveyors and the extent to which it is relevant in the current UK built environment market - University of Salford Institutional Repository*. Retrieved from University of Salford Institutional Repository: <http://usir.salford.ac.uk/id/eprint/57733>
- Mwangu , A. W., & Iravo , M. A. (2015). How Monitoring and Evaluation Affects the Outcome of Constituency Development Fund Projects in Kenya: A Case Study of Projects in Gatanga Constituency . *International Journal of Academic Research in Business and Social Sciences*, 13-31.
- Ofori , G., & Toor, S.-u.-R. (2009). Role of Leadership in Transforming the Profession of Quantity Surveying. *The Australasian Journal of Construction Economics and Building*, 37-44.
- Palumbo, Dennis J., and Michael A. Hallet. 1993. "Conflict Verses Consensus Models in Policy Evaluation and Implementation." *Evaluation and Programme Planning* 16: 11- 23.
- Research Population - The Focus Goup of a Scientifi Query*. (2009, November 15). Retrieved January 25, 2014, from Explorable.com: <http://explorable.com/research-population>
- Tan, W. (2004). *Practical Research Methods*. Singapore: Pearson Education South Asia Pte Ltd .
- UNDP. 2002. *Handbook for Monitoring and Evaluation for results*. New York. UNDP
- Van Rensburg, Madri Jansen. 2008. "Monitoring at Non-Governmental Organisations." *New Voices in Psychology* 4 (1): 25-40.
- Walizer, M., & Wienir, P. (1978). *Research Methods and Analysis: Searching for Relationships*. New York: Harper & Row Publishers.
- Wao, J. O. (2015). Predicting the future of Quantity Surveying. *Journal of Management*. Springer International Publishing AG, 571-582.
- Weiss, Carol H. 1998. *Evaluation: Methods for Studying Programmes and Policies*. New Jersey: Prentice Hall.
- Wimmer, R., & Dominick , J. (2014). *Mass Media Research: An Introduction*. Boston: Cengage Learning.