Exploring Communications Management System in Management and Construction Sector: A Review for Research and Applications

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ABSTRACT
The purpose of this research is to exploring and analyzing the previous studies related to the Communications management system (CMS). Twenty one of previous studies were presented and discussion, the summary of the previous studies through the Research Author, Research Year, Research Location (country), The research aim, Research Population, Research Tools and techniques and Research results.

Keywords— Communications Management System (CMS), Project Management,

I. INTRODUCTION
Communications management system (CMS) has received special importance from engineers, researchers and projects managers, because of its important role in the management and success of any organization, government or private institution. Its importance in the flow of necessary information for decision-making at right time and speeding up of performance across different communication channels, that is the main reason for the presence of various studies in this field. The number of studies would be reviewed related to communications systems and techniques in engineering projects and their relation to decision-making process, performance and information providing.

Considered consultant bureaus of leading organizations in Iraq's construction sector, Communications management plays a pivotal role in the success or failure of performance of these bureaus and therefore, the process of evaluation of communications management construction sector are index and scale, which is based upon the evaluation.

II. RESEARCH OBJECTIVES

The main aim of this study is to exploring the applications of Communications management system (CMS) in the construction management sector. And comparison between past studies in order to explored the strong and weak points for each study. Another aim of this study was a comparison between the latest study in 2016 and previous studies, and discovers points of differences and similarities, and the statement of the addition and renovation of the current study in the project management field.

III. DEVELOPMENT OF (CMS) IN PROJECTS AND ORGANIZATIONS

Due to the importance of communication in construction projects and big development in technology of communication and the appearance of various communication mediums which play a role in the development of communication in construction projects and organization, various studies were conducted to address this role:

The main goal of the study of (Peltoniemi and Jokinen , 2004) was to discuss the communication processes in high technology product enhancement projects. A questionnaire form was adopted and sent to 269 participants and 117 responded to it, empirical parts include a product development program. The recommendations was to deal with communication as an important project resource, and to achieve this goal by planning, controlling and following up the outcomes of this process are necessary.

The link between information and communication technology (ICT) and the processes of communication in construction projects, were studied by (Adriaanse , et al , 2004). And the type of action that needed to be supported by (ICT) was investigated in addition to needed types that could be supported by the
The employment of modern electronic communication management systems was studied by (Saboni and Aouad, 2009) and the effect of these system on the success of construction projects in United Arab Emirate. Was studied two case studies were introduced, followed by an analysis of results and conclusions. The first case study, based on action research, employs interactive tools to collect the data. The second case study takes into consideration the co-existence of the new modern project electronic communication systems with the other traditional communication media. It has been shown that such an arrangement works both for the strategic benefit of the projects, and the projects stakeholders. In the areas of improvements to schedule and project control, the current research results are in agreement with pertinent published literature and research findings.

(Yang et al 2010) was to introduce research that explores the technical, managerial and social issues of strategy for small and medium enterprises (SME) in order to formulate such a strategy. The study used questionnaire survey of (SME) in the Indian construction industry and interpretive structural modeling (ISM) technique has been applied for developing structural equation model. A framework was developed for information communication technology (ICT) enhanced communication protocols with potential for industry, organization and project level adoption during the management of building projects by SME.

The assessment of the effectiveness of web-based project management information system (PMIS) that is used extensively in Korean construction sector was studied by (Lee and Ho Yo, 2011). Number of (253) questionnaires formed of 23 assessment items were obtained from the ASP-PMIS participants. The results analyzed by used importance satisfaction analyses (ISA) and importance performance analyses (IPA). The outcomes of this study were to introduce an easy tool for estimating the quality of ASP-PMIS with some quality estimating factors that were obtained from past researches and studies.

The aim of (Onyegiri et al, 2011) study was to document and analyze information and communication technology (ICT), from the aspects of it importance, barriers and provision to attain an effective use by studying the literatures and papers focusing on communication in construction projects. This study paved the way to a critical decision which was the quick progression of ICT present chances to develop communication between participants in construction projects and to allow better communication.

The study of (Ean, 2011) examined the employment of computer mediated communication (CMC) as a communication basis in the workplace. The main objectives are to gauge the use of CMC by employees in five Malaysian organizations and to appraise the value and effectiveness of CMC as a communication platform in the workplace. The study used data collection method, the result showed that the participant communication processes depended on CMC, face to face communication, electronic and printed media, the frequently used processes with manager and among employ were the E-mail and instant messaging. And participants consider E-mail as the most effective tool in the organization. The results showed that although CMC has been employed usually as a communication mean in the workplace.

The study of (Natu and Kennedy, 2012) investigated the role of three types of communication system that adopted collaborative information technologies (CIT) (i.e, a synchronous, in synchronous and both) basic project measures of communication cost and project progression performance with regard to projects of different complexity. The results showed that the communication cost and progression largely differ on the basis of the choice of communication plan which has more cost or schedule risk (i.e, variation) across project complexity than others.

The research of (Oppong, and Birikorang, 2014) discussed the communication method, barriers of communication, and present instructions for managers to enhance communication efficiency. Managers must improve the effectiveness of communication by increasing the awareness of the necessity of the responsibility of the sender and receiver to adopt active listening skills, so that managers should be encouraged to support an environment where problem, plans, ideas and opinions pertaining to work are discussed in an efficient and professional manner for effective communication.

The study of (Ceric, 2014) investigated the risk and trust of communication in construction projects, the study is based on empirical research that has developed in four stages, and on wide literature review that has developed through three stages. The study presents a procedure for interdisciplinary research into communication risk and trust ranging economics, sociology and psychology. This procedure is based on solid theoretical foundation concerning inter-firm, intra-firm and inter personal relationships characteristics of construction projects, which depends on trust between different staff members.

The study of (Al Saffar et al, 2014) aimed to invest in information and communication technology (ICT) to improve the performance of information and communication management of construction projects. The study introduced a technological system to process different problems, challenges and inefficiencies. Questionnaire was used in the study, which involved
closed – ended and open – ended questions. The results show that the proposed system can improve the performance of the current state of project management through improving the processes of information and communication management.

The study of (Rimmington et al., 2015)\(^{[13]}\) aimed to show information and communication technology (ICT) impact on the social environment of construction projects team and the project results. A literature review was conducted to enhance a theoretical review of the roles of (ICT) on construction project team. This review addressed a number of cases that were then examined in the site through monitoring and two validation interviews. The study confirms the presence of tension and conflicts in the human electronic and human communication interfaces in the studied environment.

The study of (Yitmen, 2015)\(^{[14]}\) investigated the impact of cross cultural communication (CCC) on stakeholder management process (SMP) in international construction projects from the Turkish stakeholders perspective. The survey adopted in this study is of Turkish stakeholder such as (consulting engineers, insurance brokers, contractors and financial consultants), the total number of questionnaire form that were distributed is 205 form, and the response rate is (68.78%). The study suggests the structural equation modeling (SEM) to achieves the relation between previous factors of communication and operation of stockholder.

The results demonstrate that “Communication behaviors” and “Communication strategies” proved to be strongly significant and positively related to SMP, whereas “Communication barriers” have significantly negative effect on SMP. Research findings may encourage the principles and practices of CCC between the stakeholders to be adequately recognized and understood by the international contracting firms operating abroad.

IV. FUTURISTIC ASPECTS OF (CMS)

The futuristic aspects for communication management system (CMS) in construction projects are considered and investigated, some of the studies that discuss the topic are reviewed:

The study of (Al. Bidewi, 2014)\(^{[15]}\) aimed to define the concept of electronic leadership, its role in supporting higher leadership and the transformation of traditional leaders into effective electronic leaders who are able to exploit effort, time and space for the purpose of organizational development. This study emphasizes, in particular, the trend of transformation of organizations, which use old systems, into ones that use E-Leadership, which will become an effective strategic factor within these organizations.

The study of (Kazi, et al., 2009)\(^{[16]}\) shows the positive impacts that can be achieved from a secure and wireless IT infrastructure. This study also explore their impact on the construction industry through a series of scenarios with practicing professionals. And provide the opportunity to demonstrate practical problems in day-to-day communications and how the technology can provide appropriate solutions. The foreseen industrial impact will be to promote wireless communications as a safe and secure medium for construction organizations. Also provide the opportunity for enhanced collaborative working and information sharing throughout the supply chain and the various construction processes. Additionally, this helps promote confidence in the use of the technology so that wireless communication systems become an integral part of work operations in the future.

V. EFFECT OF (CMS) ON PERFORMANCE

The study of (Ruumatr, 2005)\(^{[17]}\) aimed to find out the role of the Internet and its applications to the efficiency of project management and improving performance. The study used analytical method by distributing a questionnaire to 225 entrepreneurs from various administrative levels. The study found that communication techniques raises the performance of employees, and contributes significantly to the accomplish tasks on time.

The study of (Saleh, 2013)\(^{[18]}\) aimed to identify the computer program and the level of information used in engineering consulting organizations communication technologies and its effect on performance. The study conducted practical study through a questionnaire distributed among consultant organizations and discussed the findings and determine conclusions. The study showed that the fundamentals of knowledge of the basic value and understanding the importance of information and communications technology lie in the understanding of the new technology of computer, network and the realization of ICT and it is necessary in raising the efficiency of performance in time and cost.

The study of (Tipili, et al., 2014)\(^{[19]}\) aimed to evaluate the impact of communication in Nigeria construction project delivery. The number of study sample is (40) that were working in the Bauchi, Nigeria. The study achieved that among the Nigeria construction industry, there’s a strong estimation of the necessary of project communication and its impacts on the construction. And the study showed that the projects delays were caused by poor communications.

VI. EFFECT OF (CMS) ON DECISION MAKING

The Study of (Al Mamary, et al., 2013)\(^{[20]}\) provided best and clearest understanding of technology adoption and data system success in administration decision making by reviewing current studies. The
expected result of this study suggests the integrated model for management information system (MIS) and the administrative decision making.

(Yatrakis, 2003) Studied the connection between the uses of on-line technologies and making the decision among decision making within the People's Republic of China. It was the study of the relationship between the use of the Internet and the effectiveness of decision-making. The study recommends full use of the Internet and the development of skilled workers to use it, because the Internet leads to increase the effectiveness of management decisions, which are major factors in the competitiveness of organizations.

The study of (Mykkänen and Tampere, 2014) showed the organizational communication about decision making and decision communications have mostly involved however selection which ought to be created and promoted. The original aim of the study was to find out and explore how decision-making and communication processes are planned and realized in an everyday work environment among managers and employees in this specific organization. Data collection was used in this study and contains two different parts: the results from interviews and a survey. Results showed the Organizations as systems need a rational type of order to follow the decision-making process. The public relations or communication management workers’ (specifically internal relations management) role in organizations has traditionally been to communicate the goals and objectives of current decisions at hand.

VII. BARRIERS OF (CMS) IN CONSTRUCTION PROJECTS

The study of (Mailabari, 2014) aimed to find out the factor that causes communication barriers in the construction industry. The study sampled 82 professionals working with consultant, project clients and contractors. Statistical package for social sciences (SPSS Version 20) was used for the analysis. This study showed that within the Nigerian construction industry there have been many obstacles in communication on construction project in Nigeria and the inherent factors that influence the occurrence of this barriers were also determined which include: badly expressed message, limited vocabulary, environment, Job dissatisfaction, disturbing moment, religious beliefs, time schedule pressure, ethics, social differences, body language, gestures, accent, grammar, and unconscious incompetence. And also the study showed that poor communication as a result of barriers in communication which lead to project delay, project cost overrun, poor project quality and affects workers safety on site.

VIII. CHARACTERISTICS AND ADVANTAGES OF THE INTERNATIONAL STUDY

Appendix (A) shows the summary of the previous studies through the following points:
1. Research Author.
2. Research Year.
3. Research Location (country).
4. The research aim.
6. Research Tools and techniques
7. Research results.

IX. LATEST STUDY IN 2016 IN IRAQ

The title of the latest study in Iraq in 20016 is "Statistical Evolution for Communication Management in Iraqi Consultant Bureaus". The purpose of this study is assess the reality of the communications management in Iraqi consultant bureaus, data collection completed by personal interview and questionnaires, then analysis questionnaire by using the Statistic Packages for Social Science, the results have shown in third section that is a lack of knowledge about the efficiency of the communication system in the consultant bureau, Finally, four section include communication barriers, and individual in to three axis (technical communication barriers, financial communication barriers and communication barriers on worker performance ) in consultant bureaus, the results of study sample agreed on the existence of communication barriers. There are many Iraqi studies on the subject of modern methodologies in project management such as Al-Zwainy et al (2004) [24][25][26].

X. CONCLUSIONS

Compare between international studies and Iraqi study, which is summarized as following points:
1. Year of Study: The international studies Ranged from 2003 to 2015, but the latest Iraqi study conducted at 2016.
2. Location study: International studies have conducted in Arabic and foreign countries, but latest Iraqi study was conducted in Iraqi.
3. Study Population: Most of the studies are addressed the construction projects, organizations and companies. But the population of the latest Iraqi study was Iraqi engineering consultant bureaus.
4. Study Objective: Employment of modern electronic communication management systems and the effect of these systems on the success of
construction projects. Examined the employment of computer mediated communication (CMC) as a communication base in the work site. Discussed the communication method, obstacles of communication, and present instructions for managers to enhance communication efficiency. Aiming to invest in information and communication technology (ICT) to improve the performance of information and communication management of construction projects. These studies introduces a technological system to process different problems, challenges and inefficiencies. But latest Iraqi study aims to assessment and improvement the communication management system in Iraqi consultant bureaus.

5. Statistical Method: Most of studies use descriptive statistical method and regression analyses, and Iraqi study used descriptive statistical and multi limited equations.

6. Methods Use: Interpretive structural modeling (ISM), Product development program (PDP), Model for management information system (MIS), structural equation modeling (SEM), Technological system, Framework developed for information communication technology (ICT), Computer Media Communications (CMC). But latest iraqi study has derived two main equations for evaluates the efficiency and barriers of (CMS), then a computer program has been built to assists and improved the (CMS).

REFERENCES

[17] Ruaber, 2005

### Appendix (A) Summary international studies

<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>Title</th>
<th>Country</th>
<th>Objective</th>
<th>Statistical Methods</th>
<th>Method Use</th>
</tr>
</thead>
<tbody>
<tr>
<td>Peltoniemi and Jokinen</td>
<td>2004</td>
<td>Communications good practices in High Technology Product Development Projects</td>
<td>Finland</td>
<td>Discusses the communication processes in high technology product enhancement projects</td>
<td>Descriptive Statistical (DS)</td>
<td>Non</td>
</tr>
<tr>
<td><strong>Conclusions</strong>:</td>
<td></td>
<td>There are two approaches to project communication , the interest in communication and information management system , and the interest in interaction between projects , project teams , and project member .</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adriaanse, et al</td>
<td>2004</td>
<td>Alignment between ICT and communication in construction projects</td>
<td>Netherland s</td>
<td>The link is between information (communication and technology) (ICT) and the processes of communication in construction projects.</td>
<td>Non</td>
<td>Critical Social Theory of Haberman</td>
</tr>
<tr>
<td><strong>Conclusions</strong>:</td>
<td></td>
<td>The use of ICT in construction is, however, relatively limited and ineffective compared to other sectors such as the automotive or the aerospace industry.</td>
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<tr>
<td>Authors</td>
<td>Year</td>
<td>Title</td>
<td>Country</td>
<td>Summary</td>
<td>Methodology</td>
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<tr>
<td>Yang and Shankar</td>
<td>2010</td>
<td>Managing Building Project Through Enhanced Communication An ICT Based Strategy for Small and Medium Enterprises</td>
<td>India</td>
<td>Introduces research that explores the technical, managerial and social issues of strategy for small and medium enterprises (SME) in order to formulate such a strategy.</td>
<td>D.S ISM</td>
<td></td>
</tr>
<tr>
<td>Saboni and Aouad</td>
<td>2008</td>
<td>Electronic Communication Systems Effects on the Success of Construction Projects in United Arab Emirates</td>
<td>U.A.E</td>
<td>The employment of modern electronic communication management systems and the effect of these system on the success of construction project in UAE.</td>
<td>D.S Non</td>
<td></td>
</tr>
<tr>
<td>Lee and Hohyo</td>
<td>2011</td>
<td>Assessment of ASP &amp; PMIS Quality in Korea.</td>
<td>Korea</td>
<td>The assessment of the effectiveness of web-based project management information system that are used extensively in Korean construction sector.</td>
<td>Importance-Satisfaction Analysis (ISA), Importance-Performance Analysis (IPA)</td>
<td></td>
</tr>
<tr>
<td>Onyegiri et al</td>
<td>2011</td>
<td>Information and Communication Technology in the Construction Industry</td>
<td>None</td>
<td>The objective is to document and analyze (ICT)</td>
<td>Non Building information model (BIM)</td>
<td></td>
</tr>
</tbody>
</table>

**Conclusions**: A framework was developed for information communication technology (ICT) enhanced communication protocols with potential for industry, organization and project level adoption during the management of building projects by SME.

**Conclusions**: Results are in agreement with pertinent published literature and research findings. However, the benefits for quality control during the design and construction phases of the project, in addition to potential improvements in the health safety and environment (HSE), remain debatable.

**Conclusions**: It introduces a simple and easy-to-use tool for assessing the quality of ASP-PMIS with a set of quality assessment factors that are selected from previous researches and empirically tested; it provides the quality assessment results of ASP-PMIS in Korea so that ASP-PMIS providers in Korea can understand the users’ opinion on their systems; it also identified that the urgent factors that require immediate attention to improvement.

**Conclusions**: The two most important areas of future research are the implementation of computer-integrated design and construction, and the development of new tools to support concurrent practice and to assist construction project managers in the conceptual stages.
Ean, L.C.  
2011  
Computer-Mediated Communication and Organizational Communication: The Use of New Communication Technology in the Workplace  
Malaysia  
Examines the employment of computer mediated communication (CMC) as a communication base in the workplace  
D.S  
Computer media communication (CMC)

**Conclusions:** The results obtained are manifold: the participants use CMC, face-to-face communication, electronic and print media in their workplace; email and instant messaging are frequently used for communication with superiors and among colleagues, and lastly, the participants perceive email as an effective and efficient communication tool in the organization.

Oppong, A. and Birikorang  
2014  
Communication in the Workplace: Guidelines for Improving Effectiveness  
Ghana  
Discusses the communication method, obstacles of communication, and presents instructions for managers to enhance communication efficiency  
Non  
Non

**Conclusions:** Effective communication skills in the workplace will improve an administrator’s ability to be a strong leader. Administrators should therefore create an environment wherein problems, plans, issues, opinions, thoughts and ideas pertaining to work, are discussed and handled in a professional, proficient manner through positive and effective communication.

Ceric, A.  
2014  
Communication Risk and Trust in Construction Projects.  
Croatia  
This paper offers a framework for interdisciplinary research into communication risk and trust spanning economics, sociology, and psychology.  
Non  
principal-agent theory

**Conclusions:** This study concluded that framework rests on firm theoretical foundations concerning inter-firm, intra-firm, and interpersonal relationships characteristic of construction projects, all of which depend on trust between project parties.
<table>
<thead>
<tr>
<th>Authors</th>
<th>Year</th>
<th>Title</th>
<th>Country</th>
<th>Aims</th>
<th>D.S</th>
<th>Proposed System/WPM S</th>
</tr>
</thead>
<tbody>
<tr>
<td>Al Saffar et al</td>
<td>2014</td>
<td>Improving the Performance of Construction Project Information and Communication Management Using Web-Based Project Management Systems.</td>
<td>Iraq</td>
<td>Aims to invest in information and communication technology (ICT) to improve the performance of information and communication management of construction projects. The study introduces a technological system to process different problems, challenges and inefficiencies.</td>
<td>D.S</td>
<td>Proposed system (WPM S)</td>
</tr>
<tr>
<td>Rimmington, A. et al</td>
<td>2015</td>
<td>Impact of Information and Communication Technology (ICT) on Construction Projects</td>
<td>U.K.</td>
<td>Aims to show information communication technology (ICT) impact on the social environment of construction projects team and the project results outcome.</td>
<td>D.S</td>
<td>Information and communication technology (ICT)</td>
</tr>
<tr>
<td>Yitemen</td>
<td>2015</td>
<td>The Influence of Cross-Cultural Communication on Stakeholder Management Process in International Construction Projects: Turkish Stakeholders’ Perspective.</td>
<td>Turkish</td>
<td>The purpose of this study is to investigate the influence of cross cultural communication (CC) on stockholders management process in international constructions projects from the Turkish stakeholders perspective.</td>
<td>D.S</td>
<td>Proposed the structural equation modeling (SEM)</td>
</tr>
</tbody>
</table>

**Conclusions:** The results show that the proposed system can improve the performance of the current state of project management through improving the processes of information and communication management.

**Conclusions:** There is limited theory exploring these issues that suggests the problems identified are not well understood and consequently indicates a gap in knowledge.

**Conclusions:** The results demonstrate that “Communication behaviors” and “Communication strategies” proved to be strongly significant and positively related to SMP, whereas “Communication barriers” have significantly negative effect on SMP.
<table>
<thead>
<tr>
<th>Author</th>
<th>Year</th>
<th>Title</th>
<th>Country</th>
<th>Aim</th>
<th>Degree</th>
<th>System</th>
</tr>
</thead>
<tbody>
<tr>
<td>Al Bidewi</td>
<td>2014</td>
<td>E-Leadership System: A Futuristic Vision.</td>
<td>Kingdom of Saudi Arabia</td>
<td>Aimed to define the principle of electronic management, and predict future development of the leadership at the higher management level by utilizing technology to perform management processes</td>
<td>D.S</td>
<td>E-Leadership System</td>
</tr>
<tr>
<td>Kazi, A. et al</td>
<td>2009</td>
<td>Futuristic Construction Communication Infrastructures: and Safe with no Wires.</td>
<td>U.K</td>
<td>Shows the importance that may be achieved from a wireless and secure IT infrastructure</td>
<td>Non</td>
<td>Wireless Technology</td>
</tr>
<tr>
<td>Ruaber</td>
<td>2005</td>
<td>Communicational Aspects of Project Management Using Web-Based Technologies</td>
<td>None</td>
<td>Aims to find out the role of the Internet and its applications in the efficiency of project management to improve performance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Saleh, N. M.</td>
<td>2013</td>
<td>Impact of Information Technology and Communication in Local Project Management</td>
<td>Iraq</td>
<td>Aims to identify the computer program and the level of information used in engineering consulting organizations communication technologies and its effect on performance.</td>
<td>D.S</td>
<td>Computer program, information and communication technology (ICT)</td>
</tr>
<tr>
<td>Tipili, et al.</td>
<td>2014</td>
<td>Evaluating the Effects of Communication in Construction Project Delivery in Nigeria.</td>
<td>Nigeria</td>
<td>Aims to evaluate the impact of communication in Nigeria construction project delivery</td>
<td>D.S</td>
<td>Appropriate communication method and communication medium</td>
</tr>
</tbody>
</table>

**Conclusions:**

- This paper shows the importance of electronic leadership and assists, as a scientific reference, researchers who develop electronic leadership systems.
- This paper has reviewed a range of wireless technologies and examined the security threats and preventative measures.
- Importance of use the communications and information technology
**Conclusions:** The study established that within the Nigeria construction industry, there is a strong appreciation of the importance of project communication and its effects within the industry. In spite of that, there have been many hindrances to effective communication on construction projects in Nigeria. These include: unclear communication objectives, unclear channels of communication, ineffective reporting system, ineffective communication between the parties on the project, stereotyping and language difficulties. Finally, the study established that poor communication had resulted in project delays, project cost overrun and project abandonment.

<table>
<thead>
<tr>
<th>Year</th>
<th>Title</th>
<th>Country</th>
<th>Summary</th>
<th>Methodology</th>
<th>Conclusions</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013</td>
<td>The Impact of Management Information System Adoption on Managerial Decision Making: A review</td>
<td>None</td>
<td>Provide the best and clearer understanding of technology adoption and data of system success in administration decision making by reviewing current study.</td>
<td>Non</td>
<td>Proposed theoretical model</td>
</tr>
<tr>
<td>2013</td>
<td>The Relationship Between Internet Usage and Decision Making: The Case of Information Technology (IT) Managers in China</td>
<td>China</td>
<td>Connects between the use of online technologies and making the decision among decision making within the People's Republic of China</td>
<td>Non</td>
<td>Non</td>
</tr>
<tr>
<td>2014</td>
<td>Organizational Decision Making: The Luhmannian Decision Communication Perspective</td>
<td>None</td>
<td>shows the organizational communication about decision-making and decision communication have mostly involved however selections ought to be created and promoted. This study also showed decision communication in an engineer-based organization 2008–2009</td>
<td>D.S</td>
<td>Non</td>
</tr>
</tbody>
</table>

**Conclusions:** The expected outcome of this study is propose integrated model for MIS and managerial decision making.

**Conclusions:** The results shows, (1) China's Internet population is growing explosively and will rank among the largest in the world in the next several years; (2) Few studies in this area are found using data samples from China; and (3) IT managers are faced with critical decision-making everyday during volatile economic conditions.

**Conclusions:** Organizations as systems need a rational type of order to follow the decision-making process. The public relations or communication management workers' (specifically internal relations management) role in organizations has traditionally been to communicate the goals and objectives of current decisions at hand.

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| Mailahari | 2014 | Assessment of Barriers to Communication in the Nigerian Construction Industry. | Nigeria | Aims to find out the factor that causes communication barriers in the construction industry. | D.S., Chi-Square | Non |

**Conclusions:** The study established that within the Nigerian construction industry there have been many barriers to communication on construction project in Nigeria and the inherent factors that influences the occurrence of this barriers. The relationship between communication barriers and the factors that influences its occurrence was established. Finally the study established that poor communication as a result of barriers to communication had resulted in project delayed, project cost overrun, poor project quality and affects workers safety on site.