

## **E-GENERATED REPORT SYSTEM AND EMPLOYEE WORK PERFORMANCE IN OIL AND GAS SECTOR IN RIVERS STATE**

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### **ABSTRACT**

*This research work is aimed at examining the correlation between e-generated report system and employee work performance of oil and gas sector in Rivers State. Oil and gas sector managers are looking for a strong and reliable means for checking access to their yards by both employees and visitors. Many oil and gas firms still make use of manual attendance collection to register the names of persons that have gained entrance into their on a daily-bases. Hence, this research work proposes face recognition system for its attendance capturing process to avoid or minimize surface contact. This study adopted the explanatory cross-sectional research survey design with data collected at the micro level; data for analysis was gathered from employees of oil and Gas sector in Rivers State, Nigeria. Creating a good biometric attendance system with adequate investment from the government would be of benefit to oil and gas companies in remedying security threats and also in ensuring efficiency and accountability in production processes.*

**Keywords: E-Generated Report System, Employee Work Performance, Employee Engagement**

### **INTRODUCTION**

Human resources management vested with the responsibility to ensure the employees in an organisation are efficiently and effectively utilized to achieve organizational goals, in this modern age of information system would require the use of automated information systems with artificial intelligence. Villaromanetal, (2018), in their work titled "the use of Biometric attendance recording system (BARS) and its impact on the work performance of Cabanathan City government employees", posits that, to observe and facilitate the strict observance of the prescribed working hours and intensively implement existing procedures on attendance recording systems (BARS) is deemed necessary as the new system of recording attendance of employees.

Reports can be time consuming for some managers especially when they have a huge load of task on their desk. Hence, an electronically generated report becomes easy and fast to generate. This cuts down waste time and can be put into more efficient job in the office. An automated report is a management tool used by professionals to create and share business reports at a specific time interval without the need to update the information each time. These updates are usually made in real-time with the help of automated reporting tools. Report automation is the process through which digital marketing reports are created and automatically updated using software. The gathered data can then be delivered to specific email addresses on a regular basis with automatic email dispatches. An automated reporting software generally goes through APIs to automatically fetch data from each platform and integrate it into the software system. Thanks to this automated data collection, marketers have access to updated digital marketing reports that they can then send regularly to all parties concerned (Lemonde, 2021).

According to Tanko (2021), Nigeria is faced with an unprecedented wave of different but overlapping security crises. Oil and gas sector managers are looking for a strong and reliable means for checking access to their yards by both employees and visitors. Many oil and gas firms still make use of manual attendance collection to register the names of persons that have gained entrance into their on a daily bases. This manual practice can be manipulated by both employees and visitors who want to play fast by taking advantage of the possible loop holes they can explore when they find a reason

to. This does not only pose a security threat to such work environment it also gives employees room to be absent from work without management notice. This negatively affects work attitudes of the employees and would also reflect in their performance. Hence a more reliable and efficient remedy is needed to keep a more trustworthy recording for employee attendance.

Also, not enough research has been done in this topic as it concerns e-generated report system and employee performance in the oil and gas sector in Nigeria. This work tends to add to the body of knowledge in this area.

### **RESEARCH HYPOTHESES**

- Ho<sub>1</sub> There is no significant correlation between e-generated report system and employee engagement of oil and gas sector in Rivers State
- Ho<sub>2</sub> There is no significant correlation between e-generated report and workforce planning of oil and gas sector in Rivers State
- Ho<sub>3</sub> There is no significant correlation between e-generated report and time utilization of oil and gas sector in Rivers State

### **CONCEPT E-GENERATED REPORT**

Data, information, and insights are all around us. Before we even realize our business potentials and want to act in our competitive market, there is always a new business plan to make, a new strategy to develop, a new report to generate and they all take time. Since massive amounts of data are generated by every second, businesses are always on the lookout for the best possible [online data analysis tools](#) that will make their processes easier, faster, and more effective. Productivity has become the epitome of successful business processes. While every manager seeks how to increase productivity and decrease business costs, some invaluable processes can push towards sustainable business development - automated reporting and systems are the answer you've been looking for (Calzon, 2021).

According to processmaker (2020), automated report system consists of both hardware and software solutions that enable the transfer of data between systems absent human contributions or interventions. Office automation eases organizational workloads by simplifying and automating processes like accounting, data management, training, facility management, and various administrative tasks. An automated report system doesn't consist of just going paperless. For example, maintaining all work product and client correspondence in a document management system. Yet, the automation system offers organizations much more than going green by cutting down on paper. It is a powerful tool that can be used to eliminate manual processes, identify inefficient workflows, and facilitate informed decision-making.

### **CONCEPT OF EMPLOYEE WORK PERFORMANCE**

Individual performance is of high relevance for organizations and individuals alike. Showing high performance when accomplishing tasks results in satisfaction, feelings of self efficacy and mastery. Performance is an output of using the right procedures and following the best practices in doing a particular job.

Employers in different industries have consistently sourced for ways to get the best out of an employee as it has always been a major challenge an employer face in today's competitive environment. These, can be linked to the constantly changing work environment where new methods, skills and policies are necessary to be introduced to the employees. According to Inuwa, Mashi and Salisu (2017), an employee is most dynamic and unpredictable aspect of business resources. It has therefore become imperative for organizations to realize the significance of an employee and also the device strategic means through which an employee can be influenced in order to develop positive job attitudes that can lead to higher performance. Performance level of an employed individual has constantly been a tasking challenge in management of an organization, devising operational methods to motivate an individual employee to succeed and deliver qualitative

employee work performance as well as surge the organizational competency level is the central objective of the organization (Inuwa, et al, *ibid*).

Taking a view at the research work of Madukoma and Opeke (2013), it can be deduced that use of information/communication had positive relationship with employee work performance. There is need for a systematic use of information to perform the work and evaluate the performance of an organization by employees including the staff of an institution (Madukoma and Opeke, *ibid*).

Employee work performance linked to individual grounds has strong relationship with cognitive abilities of the individual. Individuals need to have the required mental capacity to carry out certain tasks effectively with the use of the communication resources available and following specified procedures. Cognitive ability refers to qualifications or capacity with respect to mental tasks. In an organizational level, job procedures for task performance can be learned and improved upon. Over time, this explicit knowledge become experience and the employee becomes highly effective and efficient in the job. However, the external environment of the job which can be associated with technology, social and cultural factors, government regulations etc. can influence a need for a change of the conventional procedures. Employees then have to be open, to accept changes in order to perform their specific tasks considering present trends and with a competitive mindset. There are three core performance dimensions, namely proficiency, adaptivity, and proactivity which they classified at three levels (individual, team and organization). Proficiency covers the fulfillment of role requirements that can be formalized, adaptivity refers to the extent of adaptation to changes at the workplace and proactivity describes the extent of self-directed action necessary to adapt to changes (Sonnentag, Volmer and Spychala, 2008).

#### **RELATIONSHIP BETWEEN E-GENERATED REPORT AND EMPLOYEE WORK PERFORMANCE OF LECTURERS**

An electronically generated report becomes easy and fast to generate. This cuts down waste time and can be put into more efficient job in the office. An automated report is a management tool used by professionals to create and share business reports at a specific time interval without the need to update the information each time. These updates are usually made in real-time with the help of automated reporting tools. Report automation is the process through which digital marketing reports are created and automatically updated using software. The gathered data can then be delivered to specific email addresses on a regular basis with automatic email dispatches. Electronic reporting software generally goes through APIs to automatically fetch data from each platform and integrate it into the software system. Thanks to this automated data collection, marketers have access to updated digital marketing reports that they can then send regularly to all parties concerned (Lemonde, 2021). When waste time is reduced to the barest employees would be efficient to meet work plan schedule as such increasing productivity.

Diferent scholars have in their studies discussed the concept of employee engagement as an important factor that cannot be overemphasized in a work environment. This has immensely lead to a record of increase that is gotten in areas of effectiveness like higher productivity, grossly increased patriotic behaviours, as well as the overall performance in an organization (Bakker & Albrecht, 2018). The overall employee satisfaction and increased productivity that arises from employee commitment is a product of satisfaction. Moreover, Othman et al., (2018) views that, at individual level, studies suggest that employee engagement will not just lead to satisfaction but also increase happiness and joy experienced by an employee as it has an effect in the state of mind of an individual positively. Studies shows that there is ample amount of clear explanation using literature for the utility of employee engagement in increasing organizational performance and positive employee outcome, making it an accepted truth (Reijseger et al., 2017). It is important to point out that it negatively affects an organization to have employees that are disengaged. Employee engagement creates a general sense of belonging in the mind of an employee.

Time is of the essence. And every good business would want to make good use of working hours efficiently. Before a company even realizes its business potentials and wants to act in its competitive market, there is always a new business plan to make, a new strategy to develop, a new report to generate and they all take time. Since massive amounts of data are generated by every second, businesses are always on the lookout for the best possible [online data analysis tools](#) that will make their processes easier, faster, and more effective. Productivity has become the epitome of successful business processes. While every manager seeks how to increase productivity and decrease business costs, some invaluable processes can push towards sustainable business development - automated reporting and systems are the answer you've been looking for (Calzon, 2021). It is a juggling act of various things that help you increase efficiency and [strike a better work-life balance](#). Improving your time management at work allows you to enhance your performance and achieve your desired goals with less effort and more effective strategies. However, failing to manage time or poor [time management skills at work](#) can grossly affect work quality (Kashyap, 2017).

According to Naidoo, Abarantyne, & Rugimbana (2019), Changing organisational dynamics have caused a need for organisations to understand the employment relationship processes and outcomes in order to improve organisational effectiveness, increase productivity and retain talented employees. Industries around the world experience changes in the environment that are influenced by different factors including technology as a major factor. It is imperative any organization that must succeed in its operations would have to intentionally align its workforce to follow best practices through proper training of managers and other production staff in the organization.

Workforce planning thus solves staffing problems for today and for the future. According to Vulpen (2019), strategic workforce planning is becoming increasingly important for a number of reasons. Which includes; Demographic changes, Cost reduction, Talent management and flexibility in job roles. Brueckar et al (2014) posits that, many managerial studies give an extensive description of the human implications of certain management decisions in particular cases, but fail to provide useful mathematical models to solve workforce planning problems.

In light of the increasing number of organizations and the complexity of businesses, the twenty-first century is witnessing fierce global competition, as well as interconnected, complicated, and dynamic environmental forces and influences that make it inevitable to avoid threats and seize opportunities. It is imperative for business organizations to move from traditional thinking and traditional management to strategic thinking and strategic management to manage their internal resources and, concurrently, their external environment. Strategic planning is the core of the strategic management process and a managerial tool that enables organizations to deal with future events efficiently and effectively, providing them with greater control over their resources and environmental change response (Al-Qudah et al, 2020). The concept of workforce planning is a serious issue in human resource management. This is because planning is one of the functions of management. Planning is the first process that human resource personnel executes before recruitment, selection, placement, training, promotion, performance appraisal, and compensation. Workforce planning is therefore a process carried by the human resource experts or personnel to ascertain the accurate number of workforce needed in the organization. It is also a process of allocating resources to the various departments in the workplace.

### **TECHNOLOGY ACCEPTANCE MODEL**

Technology Acceptance Model (TAM) is theory majorly in the information system. It focuses on modeling computer users and showing them on how they can accept and adopt a new technology. It was designed to predict the technology adoption decisions of users. Technology Acceptance Model is usually used to predict. It indicates that there are only two components that determine the users' acceptance of a computer system. The two components that determine computer acceptance are the perceived usefulness and the perceived ease of use of the system. The main aim of this model is that it emphasizes the potential of the users. In other words, it underscores, for example, when

a developer of a given technology believes that his or her system is friendly to the users. Inversely, the system is not be accepted by the users not unless the developers share the benefits and advantages of the technology system, as stated by

TAM models how users come to accept and use a technology. It distinguishes two concepts. First, the perceived usefulness reflects the expected benefits from using a certain technology. Second, the perceived ease of use reflects pretty much the same thing as the perceived behavioral control in the theory of planned behavior.

Technology acceptance model (TAM) is one of the popular models, which helps to model how peoples come to admit and utilize new technologies. The model focuses on factors determining behavioral intention to use new technologies from the end user’s perspective. TAM comprises core variables of user motivation: perceived ease of use, perceived usefulness, and attitudes toward technology. Of these elements, perceived usefulness (PU) and perceived ease of use (PEU) are considered as a principal determinant that directly or indirectly explains the behavioral intention to use (“acceptance”) new technology. In this study, we hypothesized that the constructs and associations described in the modified TAM model are valid to measure the behavioral intention to use eHealth technology by health professionals in low-resource settings (Wikipedia, 2021).

Perceived usefulness refers to “the extent to which an individual believes that applying certain technology will advance job performance”. Studies conducted on technology acceptance in different domains have suggested that PU as the main determinant factor for new technology acceptance and use. Users perception on the usefulness of a technology could be affected by external factors. Perceived ease of use is the extent to which a person believes that a particular technology will be effortless and easy to use. PEU is considered as one of the most important constructs of TAM that helps to predict user’s acceptance or rejection of technologies.

**METHODOLOGY**

This study adopted the explanatory cross-sectional research survey design. This research is at the micro level; data for analysis will be gathered from employees of oil and Gas sector in Rivers State, Nigeria. The target population will be the employees of oil and gas sector in Rivers State Nigeria. The total population of the study will be 9,837 employees of oil and gas companies in Rivers State, Nigeria. In this research work, a non probability sampling technique will be adopted, using the convenience sampling method. This study adopted the Taro Yamane method for sample size calculation. For the purpose of this study, the primary source of data to be used is a structured questionnaire that would be developed in the course of the research. The presentation and analysis of data/results will be done using Statistical Package for Social Science (SPSS) Version 25.0. The analysis of data will be done in two sections: descriptive analysis (univariate analysis) and the test of hypotheses (bivariate analysis). The univariate analysis will be done using mean and standard deviation while the bivariate analysis will be done using Spearman Rank Order Correlation.

**RESULTS**

Ho<sub>1</sub> There is no significant correlation between e-generated report and employee engagement of oil and gas sector in Rivers State

Correlations

----			E_Report	Employee_Eng agement
Spearman's rho	E_Report	Correlation Coefficient	1.000	.926**
		Sig. (2-tailed)	.	.015
		N	375	375
	Employee_Engagement	Correlation Coefficient	.926**	1.000

	Sig. (2-tailed)	.015	.
	N	375	375

From the table, the P value of .015 is less than the standard alpha value of 0.05 ( $p < \alpha$ ). There was a significant positive relationship between E-report and Employee Engagement.  $r_s(375) = .015$ ,  $p < .05$ .

Ho<sub>2</sub> There is no significant correlation between e-generated report and workforce planning of oil and gas sector in Rivers State

Correlations

		E_Report	Workforce Planning
Spearman's rho E_Report	Correlation Coefficient	1.000	.240**
	Sig. (2-tailed)	.	.032
	N	375	375
Workforce Planning	Correlation Coefficient	.240**	1.000
	Sig. (2-tailed)	.032	.
	N	375	375

From the table, the P value of .032 is less than the standard alpha value of 0.05 ( $p < \alpha$ ). There was a significant positive relationship between E-report and Workforce Planning.  $r_s(375) = .032$ ,  $p < .05$ .

Ho<sub>3</sub> There is no significant correlation between e-generated report and time utilization of oil and gas sector in Rivers State

Correlations

		E-Report	Time Utilization
Spearman's rho E-Report	Correlation Coefficient	1.000	.850**
	Sig. (2-tailed)	.	.001
	N	375	375
Time Utilization	Correlation Coefficient	.850**	1.000
	Sig. (2-tailed)	.001	.
	N	375	375

\*\* . Correlation is significant at the 0.01 level (2-tailed).

From the table, the P value of .001 is less than the standard alpha value of 0.05 ( $p < \alpha$ ). There was a significant positive relationship between e-generated report and time utilization.  $r_s(375) = .001$ ,  $p < .05$ .

**DISCUSSION OF FINDINGS**

There was a significant positive relationship between E-report and Employee Engagement.  $r_s(375) = .015$ ,  $p < .05$ . There was a significant positive relationship between E-report and Workforce Planning.  $r_s(375) = .032$ ,  $p < .05$ . There was a significant positive relationship between e-generated report and time utilization.  $r_s(375) = .001$ ,  $p < .05$ . There was a significant positive relationship between Payroll Management and employee engagement.  $r_s(375) = .025$ ,  $p < .05$ . Electronically

generated report could cut down spending on salaries for staffs absent during work hours also records a mean of 2.76. Even though the four scale likert scale rating shows this mean shows majority of the respondents agree to this statement, some of the workers expressed disagreement that reflected in the lowest mean recorded.

### **CONCLUSION**

The government vested with the responsibility of protecting lives and properties could be more proactive in their approach by ensuring that the oil and gas sector which is a very sensitive part of Nigeria economy is paid reasonable attention so as not to risk shutdown in production activities. Creating a good biometric attendance system with adequate investment from the government would be of benefit to the Nigerian economy. The findings of this research could draw the attention of the Nigerian government to do the needful by inviting very competent and smart information technology experts that can build sophisticated Biometric attendance system for oil and gas companies especially government owned and managed companies.

### **RECOMMENDATIONS**

This research work views the use of biometric attendance system from the perspective of motivating employees to be aware of the transparency in remunerations as well as giving bonuses and incentives. Also the sense of management recognizing and taking into account their presence, absence and also the extra hours they sacrifice or stay back at their duty post or jobs delivered. This research study particularly recommends;

1. E-generated report for a timely decision-making process: this study recommends that the biometric attendance system is enabled to put in gathered data, logically organized to make meaning to users especially human resource managers, accounting department and other top managers in a document format. This makes it possible to have a quick decision-making process. Programming the system to develop an automated report will help the biometric system managing team save time of printing and delivering long list of check in and check outs.
2. The use of face recognition biometrics system. Face recognition is a very safe form of biometric attendance system because it avoids contacts. This becomes important to oil and gas worker with the present trend of the dreaded corona virus disease that is ravaging the world. Every employee would be safer using a biometric system where they would not have to touch or constantly come in contact with the surface of a biometric machine that would leave strains of their body fluids and other bacteria that can lead to disease outbreak. Facial recognition is also easy to use and has been scientifically proven to be very effective. Workers can simply walk through the entry door and simply be captured without any input or effort on the part of the employee.
3. Making use of Biometric attendance system to reduce resource wastage: This study recommends the use Biometric attendance system to calculate salaries of oil and gas workers. This will bring about transparency in the calculation of salaries. Especially when it concerns the payment of overtime allowances. In another way, workers who are absent on certain work days would not be paid for days absent. But more importantly, the researcher recommends that biometric attendance system is used for payroll administration to eliminate possibility of fraud from corrupt accountants and workers who will want to manipulate figures to their benefit.
4. Finally, the system recommends that biometrics of visitors be sent to internal security within the company that would enable them easily track down criminal elements that would find their way into the company premises.

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