

IMPACT OF TELECONFERENCING AND COLLABORATIVE LEARNING PLATFORMS ON JOB PERFORMANCE AT THE NIGERIAN AGIP OIL COMPANY (NAOC), PORT HARCOURT, RIVERS STATE, NIGERIA

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Abstract

Traditional face-to-face approaches to job training have long been the norm in industries especially in Nigeria until the outbreak of the global COVID-19 pandemic. This study challenges these conventional methods by exploring the impact of teleconferencing and collaborative learning on job performance in the context of the Nigerian Agip Oil Company (NAOC), Port Harcourt, Rivers State, Nigeria. Drawing from two discussions on the use of teleconferencing and collaborative learning as employee training platforms, this research investigates their effectiveness in enhancing training reach and improving employee job performance. The population of the study is 1,714. However, Taro Yamane formulation was used to determine a sample of 282 respondents. The sample size represents 16.45 % of the study population. The sample size was selected using the stratified and simple random sampling techniques. The questionnaire method was used to gather data for the study while the chi-square tool was applied to test the hypotheses. Firstly, the findings revealed a positive correlation between the use of teleconferencing as a training platform and an increase in the number of training beneficiaries at the NAOC. This underscores the efficacy, efficiency and cost-effectiveness of teleconferencing in reaching a large number of employees simultaneously, regardless of geographical constraints. Secondly, the study found a significant relationship between collaborative learning and improved job performance among employees in the organization. Collaborative learning fosters knowledge sharing, skill development, and active engagement, leading to enhanced problem-solving abilities and teamwork. Based on these conclusions, the study recommends the need to implement and expand teleconferencing training; promote collaborative learning and conduct regular training needs assessment for staff of the NAOC.

Keywords: Collaborative Learning; Face-to-Face Approaches; Job Performance; Staff Training; Teleconferencing.

Introduction

In recent times, countries worldwide, are increasingly realizing that economic growth is not solely dependent on new technology or factors of production. The development of human resources is equally crucial, as the human side of enterprise plays a significant role within organizations. Accessing the best human capital is essential for effective organizational performance. In Nigeria, having a job holds great importance, as individuals are often defined by their occupations. A person's job not only reflects their personality but also influences their interactions with others, social status, economic standing, and self-concept (Makinde, 2015).

Jobs offer numerous benefits to organizations, individuals, and society as a whole. However, keeping a job over time can be challenging due to the dynamic nature of our world, with technological innovations leading to constant changes. To stay competitive and ensure that their workers remain up-to-date with environmental changes, organizations must prioritize periodic training. Irrespective of the industry or sector, businesses globally operate within a competitive environment. To maintain a competitive edge, organizations must provide a progressive learning platform to keep employees' performance at an optimal level. Therefore, employee training becomes a necessary and continuous activity in every organization, as the human resources within the organization play a crucial role in driving its success (Robert, 2003).

Historically, Nigeria has faced challenges in providing sufficient employee training and development, with such failures being indicative of the country's organizational culture (Fajana, 2012). Additionally, the training system in Nigeria as a source of skilled labor for organizations has been a cause for concern (Ofobruku, 2012). Due to weak systems that discourages staff training, many organizations in Nigeria have experienced decreased productivity and innovation. Assessing employees' performance through training linkages presents difficulties, especially in terms of measurement (Grugulis & Stoyanova, 2006). However, various measures, such as productivity, product quality, financial performance, pay rates, turnover, efficiency, scrap rates, labor turnover, job creation, absenteeism, perceived organizational performance, and perceived market performance, are used to gauge the impact of training.

The world of work cannot be totally separated from happenings around the world. In other words, the changes occurring as a result of technological development and globalization as well as the new world order imposed by the COVID-19 pandemic, have significant implications for the work environment and workers at large in any country of the world. One of the reasons for the tremendous emphasis being placed on manpower or employee training is derived from the current realization that human resources available to any organization constitute the organization's building blocks (Akinyele, 2007).

In the literature on employee training, two primary forms of training are prominent within organizations: On-the-job and Off-the-job trainings (Adana, 2014). The debate over which form should take precedence has sparked considerable intellectual and empirical controversy among scholars, leading to an absence of consensus on the most effective approach to address an organization's training needs. However, most scholars agree that the employees themselves are better positioned to suggest the type of training they require (Jeffery & Bunce, 2015). It is noteworthy that research on employee training and job performance has largely focused on European firms, with scholars like Cohen (1990), Jeffery and Bunce (2015), and Espedal (2005) contributing to this field. However, Nigerian researchers, including Jibowo

(1997), and Akinyele (2007), have also made significant contributions to our understanding of the subject matter.

Despite these studies, there are contemporary concerns surrounding training and employees' performance in industries. One prominent issue is how effectively, organizations are utilizing collaborative learning platforms, such as teleconferences, for staff training instead of relying solely on conventional workshops. The worry here is that modern technology has provided ample opportunities for organizations to train their employees through teleconferencing and the academic gap lies in understanding how organizations are leveraging such platforms.

This study aims to bridge the above knowledge gap by exploring the relationship between employees' training and job performance, with a specific focus on teleconferencing and collaborative learning at the Nigerian Agip Oil Company Limited in Port Harcourt, Rivers State, Nigeria. The study assumes that employee training through teleconferencing and collaborative learning represents a contemporary and cost-effective means of enhancing job performance in organizations.

Hypotheses

H₁: The use of teleconferencing as an employee training platform would lead to an increase in the number of training beneficiaries at the NAOC.

H₂: Employees who undergo training through collaborative learning are more likely to exhibit improved job performance at the NAOC.

Literature Review

From the broad review of the literature on employee training, it is evident that very few empirical studies have been done on teleconferencing and collaborative learning as a way of building capacity of workers in organizations. What is even worse, the few extant literature are mostly foreign. The concept of teleconferencing is defined as the use of electronic mediums to convene meetings which can be done through six identifiable platforms such as audio, audio graphic, computer, video, business television (BTV), and distance education (Mazden, 2019). Studies show a high concentration of visual/video teleconferencing as a collaborative learning platform in organizations across Europe and the United States of America.

In his seminal work on the use of teleconferencing as a medium for knowledge exchange, Thomas (2020) using over 20 organizations with about 300 respondents came to the conclusion that video platforms have a share of about 85 per cent in teleconferencing across Europe. Similarly, Jenson (2020) using a larger sample of 450 respondents in the United States corroborated the study of Thomas when he discovered the high utilization of video teleconferencing platform as the most adopted in terms of knowledge dissemination and capacity building for staff.

It is important to note, that there is a consensus on the fact that education is the key to employee training. However, with the emergence of sophisticated technology that promotes distance learning, the conventional methods of face-to-face training is gradually meeting extinction. It is a known fact that in the past, several approaches have been used to get workers in the industry to be trained on their jobs. These approaches such as seminars, conferences and other related knowledge-based workshops (Fatoyi, 2013) gained momentum as tools and avenues for training and building the capacity of employees. However, the emergence of high

profiled internet-based technology has created a major revolution in businesses as seen in contemporary organizational culture, human resource management processes and channels of communication. These and many more explains the manner by which work and capacity building for workers are now carried out. Hence, teleconferences and collaborative learning have become a part of human resource management strategy especially in terms of building the capacity of workers in subject or discipline specific areas (Bentley, 2021).

In Nigeria, research on employee training has focused more on conventional models, with very little studies on teleconferencing and collaborative learning platforms. Available researches refer to conferences and seminars that are aimed at building human capital in specific discipline or subject area as professional development training (Faruk, 2013; Jenson, 2020). According to Faruk, modern industries use teleconferences under different names such as webinars, videoconferencing, virtual conferencing and webcast among others, to target specific areas that their employees require support in order for them to be more productive in their various roles in the company. In this case, it then becomes a full management strategy to carryout employee needs assessment or what has been referred to as training needs of workers to determine the areas where employees are lacking in skills and by extension provide adequate interventions through such avenues.

Raja, Furqan and Khan (2011), contend that employee training through teleconferencing has become the most important factor in the business world today, because these medium serves to increase the efficiency and the effectiveness of both employees and the organization on a large scale with less mobility and to some extent, with lesser cost. Teleconferencing and collaborative learning platforms provide a basis for a systematic restructuring of behaviour, attitude and skills through learning, education, instruction and planned experiences within an audio-visual environment that altogether influence learning. Teleconferences are designed to change or improve the behaviour and skills of employees in the work place so as to stimulate efficiency. The cardinal purpose is to assist the organization to achieve its short- and long-term objectives by adding value to its human capital. Hence, teleconferencing as part of employee training processes is not undertaken for no reason, but rather they are structured and designed to achieve some targeted needs of specific category of workers using sophisticated technologies. Therefore, teleconferencing packages come with standard training strategies that are based on needs in the sense that they are undertaken to fill some knowledge gap in human capacity within an organization.

According to Olajide (2013), sponsoring teleconferencing and collaborative learning as methods of staff training has become an accepted phenomenon in organizations. In the oil and gas industry for instance, the use of teleconferencing as a medium for capacity building programmes for workers is considered to be very critical and highly efficient in employees' training. It is a planned activity which focuses on increasing and enlarging the capabilities, improving the technical and conceptual skills of workers so that they can possess the necessary abilities to handle complex situations and better perform their jobs. Through these activities, management ensures that their employers avoid becoming rustic and underproductive.

In light of the above, employers and industry owners especially those within the engineering field like Moreal Engineering services need to keep abreast of the time and the trends of knowledge development in their discipline so as not to become obsolete and made redundant in this era of rapid growth in technological advancement. The ultimate goal of sponsoring employees to take part in teleconferences that are aimed at building their capacity

is to provide enabling conditions for workers to be more productive and viable in relation to the organization's objectives. This is in addition to the enhancement of individual's job satisfaction and the optimization of skills, talent and task accomplishment (Jones, 2014). In addition, Jones stressed that training of employees in any sector and industry should be geared towards acquiring or sharpening the capabilities of the staff required in performing various obligations, tasks, and functions associated with or related to their present or future expected roles in the organization.

Similarly, Thomas (2015) has identified the benefits of teleconferences and collaborative learning to include increase in knowledge, skills and the development of positive attitude to work, increased personal and organizational productivity, and quality services all in an environment of low cost. It can bring about improvement in morale, inculcate sense of belongingness, reduce absenteeism and turnover rate among workers, and importantly lead to better coordination of both human and material resources within organizations.

The best organizations are those that are dynamic enough to adapt to the changes in their environment. As a result, the progress in technology, especially the information and communications technology (ICT) has provided a platform where organizations can benefit significantly in terms of training needs without necessarily having to move their staff miles around the world. According to Olajide (2013), in the changing phase of the market, all organizations have a number of opportunities to grab and number of challenges to meet. Due to such environment, the dynamic organizations are smoothly surviving in the present competition. In other words, dynamic organizations see training as a tool that can help in gaining competitive advantage. As Fatoyi (2013) has observed, training proves to be a parameter for enhancing the ability of the workforce for achieving organizational objectives.

The above notwithstanding, training options for organizations are becoming more and more encapsulated within the philosophy of globalization especially with the notion of small village (Abayomi, 2012). Based on this, big organizations especially those within the oil and gas sector tend to take full advantage of the ICT platform to enrol their workers in online courses that are relevant to the immediate and long-term benefits of the organizations. Thus, organizations use teleconferencing platforms to sponsor their staff to undertake courses that are most times certified as a way of building the capacity of workers. Mbaku (2011) states that multinational companies have created an online platform where all full-time staff can have access to a list of professional courses with full sponsorship from the company. This he says provides the enabling conditions for human capital development in the company.

Nevertheless, Fatoyi (2013) though acknowledging the usefulness of teleconferencing or videoconferencing for human capital development, highlighted some barriers to the process. According to him, barriers to teleconference and collaborative learning trainings for employees as a platform for human capital development include the distance and substance involved in delivering such training needs. This is why Fatoyi found 'blended' models of online course in human capital development to be the most successful, combining the convenience of online platforms with the advantages that come from learning in groups with ready, interactive access to mentors, tutors and other learning support services, on either a face-to-face basis or through videoconferencing technologies.

A study conducted by Lee (2014) using case control method, revealed that collaborative learning is more potent in employee training than conventional teacher-to-student approaches. Lee used 150 respondents as a case group with collaborative learning test instruments and used

100 respondents as a control group with just teacher-student learning technique. Over a three-day period, he assessed the two groups in line with the teaching curriculum and came to the conclusion that employees that were trained under the collaborative learning environment showed high potentials and in-depth capacity improvements than those in conventional teacher-student environment. Based on this, Lee (2014) concluded that collaborative learning when effectively administered, brings the best out of beneficiaries or employees more than conventional teacher-to-student approach.

In a similar study only this time not using the case control method, Forsythe (2014) explored the impact of online collaborative learning on employee training and productivity. In this study, Forsythe relied on the Wiley online collaborative training programme which targeted over 1, 500 trainees across Europe on the production of computer chips. Respondents were asked to collaborate in the best ways possible. At the end of the collaborative learning sessions, over ten hybrid computer chips were developed over a one-week period. Following this study, Forsythe (2014) came to the conclusion that collaborative learning has one major edge over conventional teacher-student employee training method. This edge is what he called the “hybrid capacity”. What he meant was simply following the fact that participants collaborating in a way that they share knowledge and learn from each other could generate a marriage of knowledge that is as powerful as to be highly inventive.

As Chui (2008) puts it, collaborative learning creates conditions where methodologies and environments that stimulate situations in which learners engage in a common task where each individual depends on and is accountable to each other. These include both face-to-face conversations and computer discussions (online forums, chat rooms, etc.). Lee (2014) is of the opinion that the popularity of collaborative learning as a method for building capacity of workers has increased over the last decade. He argued that as new collaborative tools emerge with the cost benefit of being able to reinforce learning in workers and in trainees during collaborative learning situations, many work environments are now looking toward methods that involve collaborating with older employees and giving trainees more of a hands-on approach.

Based on the benefits associated with collaborative learning in terms of reduced cost and cognitive improvement for participants, most companies are moving away from traditional training programmes that include instructor-led training sessions to collaborative learning. The model has become extremely helpful because it uses past experiences from prior employees to help new trainees get over different challenges. According to Chylinski (2011), the use and deployment of collaborative learning is different when viewed from a global standpoint. In other words, its application differs from country to country. He agrees that while the traditional model for learning which is instructor based is still prevalent in most countries such as in developing societies, more countries and organizations are quickly changing to collaborative learning as countries and multinational organizations fight to be at the top of the economic ladder. Chylinski went on to point out that a country's history, culture, religious beliefs and politics are all aspects of their national identity and these characteristics influence citizen's view of collaboration in both a classroom and workplace setting (Chylinski, 2011).

One study on collaborative learning conducted by Lee and Bonk (2014) revealed that there are still many issues that are being resolved when dealing with collaborative learning in a workplace. The goal was to examine corporate personnel, including learning managers and instructors, plus the tools that they use for collaboration. The researchers conducted an online

survey to see what aspects of collaborative learning should be investigated, followed by an open discussion forum with 30 corporate personnel. The results showed that collaboration is becoming very necessary in workplaces and tools such as wikis are very commonly used. In this study, the researchers came to the conclusion that collaborative learning is an emerging way of ensuring knowledge sharing in such a way that none of the training participants feels undermined or belittled. In this sense, collaborative learning provides equal opportunity for employees to share whatever small knowledge they have with each other without necessarily feeling superior or inferior as often times is the case with conventional instructor led employees' training.

Other studies on collaborative learning have emphasized the important place of technology as a critical enabler of the process. Emphasis has been on the role that the Internet has played and is still playing in the collaborative learning model. For over a decade now, the Internet has allowed for a shared space for groups to communicate. This is because the internet supports virtual environments that have been proven to be critical in terms of allowing people to communicate long-distances but still feel like they are part of the group. Studies have been done especially focusing on how technology has enabled the growth and potential value of collaborative learning in organizations. On this note, a notable study conducted by Stacey (1999) comes to mind. In this study, Stacey examined the extent to which technology affected the communication of employees working in a university system especially with regard to the delivery of post-Graduate academic services. The study proved that many of the academic staff were able to still remotely teach even when they were not present on their university campuses. The results of the study helped build an online learning environment model but since this research was conducted the Internet has grown extensively and thus new software is changing these means of communication (Stacey, 1999).

There are new models of technological innovations supporting collaborative learning processes that have emerged in recent times. These models have been used on many occasions to enable collaborative learning processes in the workplace. These tools allow for a strong more powerful and engaging learning environment. One of such tools is the Collaborative Learning Application (CLP) developed by Freddie (2010), an American Information Technology specialist. The CLP which is a static as well as a mobile app, provides veritable opportunities that are amenable for a fit-for-purpose staff development across public and private sectors. It is static because as Modende (2021) puts it, organizations can rely on the application for staff engagement, training and capacity building in a collaborative manner but within a conventional training environment such as a conference hall. Its mobile dimension refers to the use of the CLP on mobile devices such as notepads and other related devices for collaborative training while participants are mobile. Modende (2021) opine that the use of this technology to train staff creates a flexible environment for people to share their ideas about work in such a manner that it makes collaboration easy.

Hence, this study hinges on the premise that the traditional method of face-face training and learning process in the bid to promote capacity building and enhance performance among employees is obsolete. This has therefore, given precedence to teleconferencing, collaborative and conventional learning models in the oil and gas sector of Nigeria.

Theoretical Framework

This study adopted the Human Capital theory proposed by Becker (1962) to provide theoretical direction for the paper. The human capital theory emphasizes the value of investing in people as a form of capital. This theory views individuals' performance and the outcomes they achieve as a return on investment, evaluated in terms of costs and benefits (Beardwell & Tim (2004)). It offers valuable perspectives on workplace learning, emphasizing the active role of individuals in utilizing their skills, knowledge, and efforts to enhance production possibilities. The theory offers evidence supporting the idea that training and learning enhance employees' productivity by imparting valuable knowledge and skills, ultimately increasing their lifetime earnings. Becker and Mincer (2010) elaborate on the link between investment in training and workers' productivity, distinguishing between general education and firm-specific training. They highlight the significance of training and human development in elevating workers' productivity.

In the context of this study, the human capital theory is relevant as employee work performance is expected to be influenced by training, which requires investment. Upgrading employee skills through systematic training can maintain their competence and productivity. Identifying training needs and evaluating outcomes is essential to ensure cost-effectiveness and goal achievement (Becker & Mincer, 2010). Addressing performance gaps through training can boost productivity and align it with organizational objectives.

Furthermore, Beardwell and Tim (2004) point out that technological advancements and organizational changes have highlighted the importance of employees' skills and abilities, leading to a growing realization of the need for continuous investment in training. This research adopted the human capital theory as a guiding framework and proposes that implementing technology-driven training, specifically teleconferencing and collaborative learning platforms, can enhance daily operations and improve job performance and efficiency at the NAOC.

Summarily, the human capital theory provides valuable insights into the significance of investing in employee training to enhance productivity and job performance. By embracing technology-driven training approaches, organizations like the NAOC can optimize their operations and elevate the efficiency and effectiveness of their workforce.

Methodology

For the purpose of this study, the descriptive research design was employed. The population of this study is the entire staff of the NAOC Limited. According to its yearly bulletin, the company is made up of 1,714 employees. Out of this figure, 436 are females, while 829 are males (NAOC, 2022). This figure constitutes the target population of this study. The overall occupational makeup of the population comprises of engineers, office clerks, account clerks, computer operators, secretaries, drivers, machine operators, security officers and messengers. The sample size for this study which was determined using the Taro Yamane is 282. The study adopted two types of random (probability) sampling techniques. These are the stratified and simple random sampling techniques. The questionnaire instrument was used to collect primary data for this study. For the purpose of analyses the Chi-Square (χ^2) statistical tool was employed.

Results and Discussion

H₁: The more teleconferencing is used as employees’ training platform, the more the number of training beneficiaries will increase at the NAOC.

Table 1: Teleconferencing use for staff training can increase number of beneficiaries

<i>Staff Category</i>	<i>SA</i>	<i>A</i>	<i>D</i>	<i>SD</i>	<i>Total</i>
<i>Managers/MDs</i>	11	6	2	3	22
<i>Heads/ Supervisors</i>	43	22	10	6	81
<i>Regular/ Casual</i>	100	48	20	11	179
<i>TOTAL</i>	154	76	32	20	282

Source: Field survey, 2022

Table 1 contains data on the whether or not, the effective use of teleconferencing as a training platform would lead to increase in number of training beneficiaries at the NAOC Limited. Data represented in the table show that 154 (55%) of the respondents strongly agree, 76 (27%) of the respondents agree, 32(11%) of them disagree, while 20 (7%) of the respondents strongly agree. The data presented in Table 1 is subjected to chi square statistical test as shown in Table 2:

Table 2: Chi Square Computation for Hypothesis 1

<i>Staff Category</i>	<i>O</i>	<i>E</i>	<i>O-E</i>	<i>(O-E)²</i>	<i>(o-e/e)²</i>
<i>Managers/ MDs</i>	11	12.01	-1.01	1.03	0.09
	6	5.93	0.07	0.01	0.00
	2	2.50	-0.50	0.25	0.10
	3	1.56	1.44	2.07	1.33
<i>Heads/ Supervisors</i>	43	44.23	-1.23	1.52	0.03
	22	21.83	0.17	0.03	0.00
	10	9.19	0.81	0.65	0.07
	6	5.74	0.26	0.07	0.01
<i>Regular/ Casual</i>	100	97.75	2.25	5.05	0.05
	48	48.24	-0.24	0.06	0.00
	20	9.19	10.81	116.82	12.71
	11	5.74	5.26	27.62	4.81
<i>Chi-Square</i>	$\chi^2 =$				19.20

Source: Field survey, 2022: Subjected to Chi Square Statistics in Microsoft Excel, 2010

From the table above, the chi-square χ^2 calculated value for hypothesis 1 is as follows:

$$\text{Chi-Square} = \chi^2 = \frac{(o-e)^2}{e}$$

Where o= observed frequency

e= expected frequency

Note that the expected value is calculated by multiplying the row total by the column total for each response and dividing by the total number of respondents. After this, the chi-square

calculated value is compared with the chi-square table value based on the calculated degree of freedom (df). Hence, to ascertain the degree of freedom the following formula applies:

$$\begin{aligned} DF &= (R-1) (C-1) \\ &= (3-1) (4-1) \\ &= 2 \times 3 \end{aligned}$$

Therefore, DF =6

At 6 DF, the table value of χ^2 at 0.05 level of significance is =12.59.

Decision rule:

The generally accepted decision rule for the application of the chi-square χ^2 test states that: Accept null hypothesis if the calculated value is less than the table value and reject hypothesis if the calculated value is greater than the table value. In this study, since the calculated value for χ^2 is 19.20 and the table value is 12.59, the hypothesis which states that “The more teleconferencing is used as employees’ training platform, the more the number of training beneficiaries will increase in NAOC”, is hereby accepted and upheld. This leads to the conclusion that effective use of teleconferencing has a significant relationship with an increase in the number of staff that can be trained at one time at the NAOC.

H₂: The more employees are trained through collaborative learning, the more they are likely to perform better on their jobs at the NAOC.

Table 3: Collaborative learning for staff would make them have better job performance

<i>Staff Category</i>	<i>SA</i>	<i>A</i>	<i>D</i>	<i>SD</i>	<i>Total</i>
<i>Managers/MDs</i>	10	5	4	3	22
<i>Heads/ Supervisors</i>	50	17	9	5	81
<i>Regular/ Casual</i>	98	46	25	10	179
<i>TOTAL</i>	158	68	38	18	282

Source: Field survey, 2022

Table 3 encompasses data on whether or not, training staff through collaborative learning method will likely increase staff job performance at the NAOC Limited. Data represented in the table shows that 158 (56%) of the respondents strongly agree, 68 (24%) of the respondents agree, 38(13%) of them disagree, while 18 (6%) of the respondents strongly agree. Data presented in Table 3 above is subjected to chi square statistical test as shown in Table 4 below:

Table 4: Chi Square Computation for Hypothesis 2

<i>Staff Category</i>	<i>O</i>	<i>E</i>	<i>O-E</i>	<i>(O-E)2</i>	<i>(o-e/e)2</i>
<i>Managers/ MDs</i>	10	12.33	-2.33	5.41	0.44
	5	5.30	-0.30	0.09	0.02
	4	2.96	1.04	1.07	0.36
	3	1.40	1.60	2.55	1.81
<i>Heads/ Supervisors</i>	50	45.38	4.62	21.32	0.47
	17	19.53	-2.53	6.41	0.33

<i>Regular/ Casual</i>	9	10.91	-1.91	3.67	0.34
	5	5.17	-0.17	0.03	0.01
	98	100.29	-2.29	5.25	0.05
	46	43.16	2.84	8.05	0.19
	25	10.91	14.09	198.39	18.18
	10	5.17	4.83	23.33	4.51
<i>Chi-Square</i>	$\chi^2=$				26.70

Source: Field survey, 2022: Subjected to Chi Square Statistics in Microsoft Excel, 2010

From the table above, the chi-square χ^2 calculated value for hypothesis 2 is as follows:
 Chi-Square= $\chi^2 = \frac{(o-e)^2}{e}$

Where o= observed frequency
 e= expected frequency

Note that the expected value is calculated by multiplying the row total by column total for each response and dividing by total number of respondents. After this, the chi-square calculated value is compared with the chi-square table value based on the calculated degree of freedom (df). Hence, to ascertain the degree of freedom the following formula applies:

$$\begin{aligned} DF &= (R-1) (C-1) \\ &= (3-1) (4-1) \\ &= 2 \times 3 \end{aligned}$$

Therefore, DF = 6

At 6 DF the table value of χ^2 at 0.05 level of significance is =12.59

Decision rule:

The generally accepted decision rule for the application of the chi-square χ^2 test states that: Accept null hypothesis if the calculated value is less than the table value and reject the hypothesis if the calculated value is greater than the table value. In this study, since the calculated value for χ^2 is 26.70 and the table value is 12.59, the hypothesis which states that “The more employees are trained through collaborative learning, the more they are likely to perform better on their jobs in NAOC”, is hereby accepted and upheld. This leads to the conclusion that the use of collaborative learning as a training method for employees is significantly linked to better job performance at the NAOC.

Conclusion

The conclusion reached based on the test result indicates that there is a significant relationship between the use of teleconferencing as an employee training platform and the increase in the number of training beneficiaries at the NAOC. Hence, there is valuable evidence supporting the positive impact of teleconferencing as an employee training platform at the NAOC. Additionally, the study concludes that there is a significant relationship between the use of collaborative learning as a training method for employees and better job performance at the NAOC.

Recommendations

Arising from the findings of this study, the following recommendations are put forward for policy guidance and implementation:

- (a) **Implement and Expand Teleconferencing Training:** Since the study found a significant relationship between the use of teleconferencing as an employee training platform and the increase in the number of training beneficiaries, the management of the NAOC should continue to utilize and expand teleconferencing as a mode of training. This approach allows the organization to reach a larger number of employees simultaneously, irrespective of their geographical locations. By leveraging teleconferencing, the company can enhance training efficiency, reduce costs, and provide training opportunities to remote or dispersed employees.
- (b) **Promote Collaborative Learning:** The study established a significant link between collaborative learning and improved job performance. Therefore, the NAOC management should actively promote and encourage collaborative learning among its employees. This could involve fostering a culture of knowledge sharing, team-based projects and interactive learning opportunities. Collaborative learning can lead to enhanced problem-solving skills, increased engagement, and better teamwork, all of which contribute to improved overall job performance.
- (c) **Conduct Regular Training Needs Assessments:** To ensure that the training methods, including teleconferencing and collaborative learning, align with the specific needs of the organization and its employees, regular training needs assessments should be conducted. These assessments will help identify skill gaps, training preferences, and areas where employees can benefit the most from different training approaches. By tailoring the training programs to address specific needs and interests, the NAOC can maximize the effectiveness of its training initiatives and achieve better outcomes in terms of job performance.

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