

# **Impact of Electronic File Sharing System on Production and Profit of Mining and Mineral Processing Industry**

## **(A Case Study of Dangote Cement Industry, Obajana, Kogi State, Nigeria)**

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### **ABSTRACT**

The study examined the impact of electronic file sharing system on production and profit of mining and mineral processing industries. Dangote cement industry was chosen as a case study due to the company recent adoption of electronic file sharing system in the delivery of the company services. The primary data for the study were obtained through questionnaires and supported with participant observation which gave the researcher an opportunity to explore, watch and study the effects of electronic file sharing in daily activities of each of the sections/departments of the company. The result showed that electronic file sharing system has positive impacts on more than 75% of the staff of the company which enhance better delivery of company activities to their customers. The company uses customized applications in their distributed file sharing system which made the system more effective. Power failure, inadequate training, slow connectivity (local and internet), obsolete equipment and virus are the identified factors militating against the efficiency of files sharing system in service delivery of the company activities to their customers. The study concluded that the adoption of electronic file sharing system in Dangote cement industry has ensured good services delivery to their customers, files integrity and security. This has also improved staff and organization productivity with reasonable profit which place the company as one the world class cement industry in the world.

**Keywords:** *Electronic File, File Sharing, Internet, Communication, Staff*

### **1. INTRODUCTION**

File sharing has become one of the most common on-line activities of making available and distributing files via the internet. It occurs in networks which allow individuals to share, search for, and download files from one computer to another [1, 2]. Codrut [3, 4] stated that electronic file sharing is the practice of distributing or providing access to digitally stored information such as computer programs, multimedia (audio, images and videos), documents or electronic books. File sharing may be implemented through a variety of ways which include manual sharing using removable media, centralized servers on computer networks, World Wide Web (WWW)-based hyperlinked documents and the use of distributed peer-to peer (P2P) networking [1, 5].

Dangote cement industry is one of the leading cement industries in Africa today. The company adopted Electronic File Sharing system in order to replace the obsolete traditional file system in which file moves from hand to hand thereby allowing unauthorized view and access. In the modern file system, unlike the traditional system, files does not move physically from hand to hand before getting to the destination or authorized person rather, it moves electronically thereby allowing only the authorized person to access the file [6]. The smooth running of the day to day activities in both public and private parastatal is based on what is referred to as "FILE SYSTEM". There is no activity of government or any organization (i.e. recruiting,

purchase of commodity, payment of wages and salaries, etc.) that can be carried out properly without the appropriate file [7, 8]. One of the major reasons for establishing a filing system is to identify and protect vital records [9].

The company is striving to mobilize and utilize all its available resources through the use of electronic file sharing for the purpose of attaining prompt service delivery to their customers. As a result of this, the company put in place equipment such as hard and software which are the main drivers of electronic file sharing. The equipment includes: Computers, Routers, Internet connectivity, Local Area Connection (LAN), Wide Area Connection (WAN), Wireless Application Protocol (WAP), Servers, Teleconferencing and Radio conferencing gadgets, programme and installation software [10, 11]. However, in file sharing, when all the equipment have been assembled, the contribution of human resources is also very necessary and important as they are the tools that bring this equipment together to function as desired [12, 13]. This equipment cannot function on their own without being configured by human to suit the purpose it's needed for. As a result of this, there is need to use professional, reliable and honest individuals to put these systems together for use in other to achieve set up goals of electronic file sharing and for the enhancement of prompt and quality service delivery of the company to their customers.

## 2. RESEARCH QUESTIONS

The following sets of questions were asked to determine the effects of electronic file sharing in Dangote cement industry.

- (i) Does your section/department adopt distributed file sharing system?
- (ii) How effective is conventional (manual) or new (electronic) file sharing system?
- (iii) Were you trained before using distributed file sharing system?
- (iv) Does the distributed file sharing system improve company's service delivery to their customers and your productivity?
- (v) Do you think further training on distributed file sharing system can improve your performance?
- (vi) What do you think can hinder the efficiency of the distributed file sharing system in this industry?

## 3. MATERIALS AND METHODS

### 3.1. Description of the Study Area

Dangote's Obajana Cement Plant was established in 1992 and located at Obajana in Kogi State. It is currently the largest cement plant in Sub-Saharan Africa. It has new 5.25 million metric tonnes per annum production plant which is powered by a 135 MW gas –fired power plant, a natural gas pipeline and a limestone quarry with associated 7.5 km conveyor belt. With the addition of Line 3, Obajana Cement Plant now has a total production capacity of 10.25 million metric tonnes per annum. The plant is capable of generating 30,000 metric tonnes of cement per day and 5.25million metric tonnes of cement per annum [14]. Also present at the site location are crushers, storage dome for coal, grinder, silos, cement mills, coal mills, loading

lines and packers. Dangote Cement offers strong investment value. The key takeaways continue to be strong growth with market share gains driven by strategic expansion plans. With a market share of about 70%, Dangote Cement remains the power house of cement production in Nigeria. Dangote Cement is also the biggest quoted company in West Africa and the only Nigerian company on Forbes Global 2000 companies [15].

### 3.2 Data Collection

Questionnaire was the primary method adopted for this study. This enable the researcher to explore the workers mind regarding their duties, roles and ways of carrying out their daily jobs and also afford the employees in each of the sections/departments of the company the opportunity to put down their roles and their feelings on the use of electronic file sharing in their day to day activities. Participant observation is another method used in collecting data which gave the researcher an opportunity to explore, watch and study the effects of electronic file sharing in daily activities of each of the sections/departments of the company. The questionnaires contain both open and closed ended questions which were distributed by simple random sampling method. The data collected were tabulated in frequency tables and analyzed by using statistical graphs and charts.

## 4. RESULTS AND DISCUSSION

### 4.1. Results of the Analysis

Out of 55 questionnaires that were distributed to the staff of each of the sections/departments of the company only 51 were retrieved. The results of the analysis of the respondents are given in Table 1 to 11

**Table 1: Demography (Questions 1 – 3)**

Sex	F	%	Age	F	%	Marital status	F	%
M	32	63.0	20-45	34	67.0	Married	36	71.0
F	19	37.0	> 45	17	33.0	Single	15	29.0
Total	51	100.0	Total	51	100.0	Total	51	100.0

Source: Field data survey (2012)

**Table 2: Educational Qualification, Grade Level and Discipline (Questions 4 - 5)**

Educational Qualification	F	%	Grade Level	F	%	Discipline	F	%
First Sch. Leaving Cert.	4	8.0	GL01-GL04	20	39.0	Accountant/ Admin officer	9	18.0
WASC/GCE/SSCE	18	35.0	GL05-GL07	17	33.0	Engineer/ Geoscientist	18	35.0
AL/OND/NCE	20	39.0	GL08-GL12	10	20.0	Others	24	47.0
BSc./PGD/Masters, etc	9	18.0	> GL13	4	8.0	-	-	-
Total	51	100.0	Total	51	100.0	Total	51	100.0

Source: Field data survey (2012)

**Table 4: Work Relationship with Computer and Past Job Achievement (Questions 9 - 11)**

Is your work related with computer?	F	%	If yes what do you use it for?	F	%	How do you achieve past job?	F	%
Yes	44	86.0	Data Processing/Internet services	29	57.0	On a central server	25	49.0
No	7	14.0	Design	15	29.0	On your computer	19	37.0
	-	-	No response	7	14.0	No response	7	14.0
Total	51	100.0	Total	51	100.0	Total	51	100.0

Source: Field data survey (2012)

**Table 6: Knowledge of File Sharing System, Adoption and Type (Questions 15 - 17)**

Have you heard about distributed file sharing system?	F	%	If yes, are your sections / departments adopting it?	F	%	If yes, what type?	F	%
Yes	36	71.0	Yes	39	76.0	Conventional (manual)	18	35.0
No	15	29.0	No	12	24.0	New (electronic)	33	65.0
Total	51	100.0	Total	51	100.0	Total	51	100.0

Source: Field data survey (2012)

**Table 7: File Sharing Type Effectiveness and Application Used (Questions 18 - 20)**

Which is more effective	F	%	How effective is it?	F	%	Which application do you use?	F	%
Conventional (manual)	12	23.0	Very effective	29	57.0	Customize	35	69.0
New (electronic)	34	67.0	Moderately effective	18	35.0	Windows based	11	21.0
No response	5	10.0	Not effective	4	8.0	No response	5	10.0
Total	51	100.0	Total	51	100.0	Total	51	100.0

Source: Field data survey (2012)

**Table 8: File Sharing Effectiveness on Staff's Productivity & Company's Profit (Questions 21 - 22)**

Is there any difference in staff's productivity / company's profit before and after using file sharing system?	F	%	If yes, how can you rate the difference?	F	%
Yes	37	73.0	Very high	29	57.0
No	14	27.0	High	15	29.0
	-	-	Low	7	14.0
Total	51	100.0	Total	97	100.0

Source: Field data survey (2012)

**Table 9: Training (Questions 25 - 26)**

Did you attend any training before using file sharing system?	F	%	If yes, which type of training?	F	%
Yes	41	80.0	Workshop/Seminar/Conference	22	43.0
No	10	20.0	In-service training	29	57.0
Total	51	100.0	Total	51	100.0

Source: Field data survey (2012)

**Table 10: Effects of training (Questions 25 - 26)**

Is any of the above training affecting your productivity and company's profit?	F	%	Can more training improve your productivity and company's profit?	F	%
Yes	43	84.0	High	48	94.0
No	8	16.0	Low	3	6.0
Total	51	100.0	Total	51	100.0

Source: Field data survey (2012)

**Table 11: Problems of file sharing system and how to overcome it (Questions 27 and 28)**

What are the problems facing the efficiency of file sharing system here?	F	%	What can company do to overcome these problems	F	%
Electricity	20	39.0	Constant and uninterrupted power supply	19	37.0
Training	8	16.0	More training	9	18.0
Equipment	9	18.0	More reliable equipment	8	16.0
Connectivity	10	19.0	Improve connectivity	11	21.0
Virus	4	8.0	Purchase and installation of good Anti-virus program	4	8.0
Total	51	100.0	Total	51	100.0

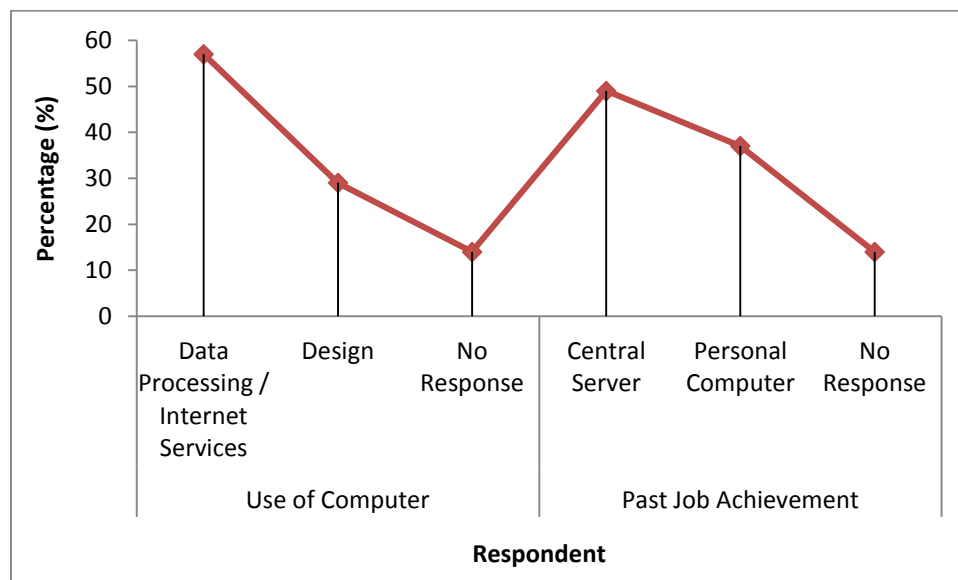
Source: Field data survey (2012)

**5. DISCUSSION OF THE FINDINGS**

The discussions of the findings were only based on the response to the questions related to the activities of electronic file sharing system in Dangote cement industry.

Fig. 1 shows that 86.0% of the respondents used computer in carrying out their works out of which 29% and 15% use the computer for data processing/internet services and design purposes. The figure also shows that 49% of the company past achievement was based on the central server while 37% was achieved through the use of personal computer. This has

improved dissemination and assessment of vital information within and outside the organization.



**Figure 1: Use of computer and past achievement**

Fig. 2 shows that 71% of the respondents were properly informed about newly introduced electronic file sharing system while 65% of them are currently making use of it and 35% is still making use of convectional (manual) type. This has really improved the staff productivity and reduced time and materials

wastage of the organization. The aftermath of this, is increment in company’s productivity and profit.

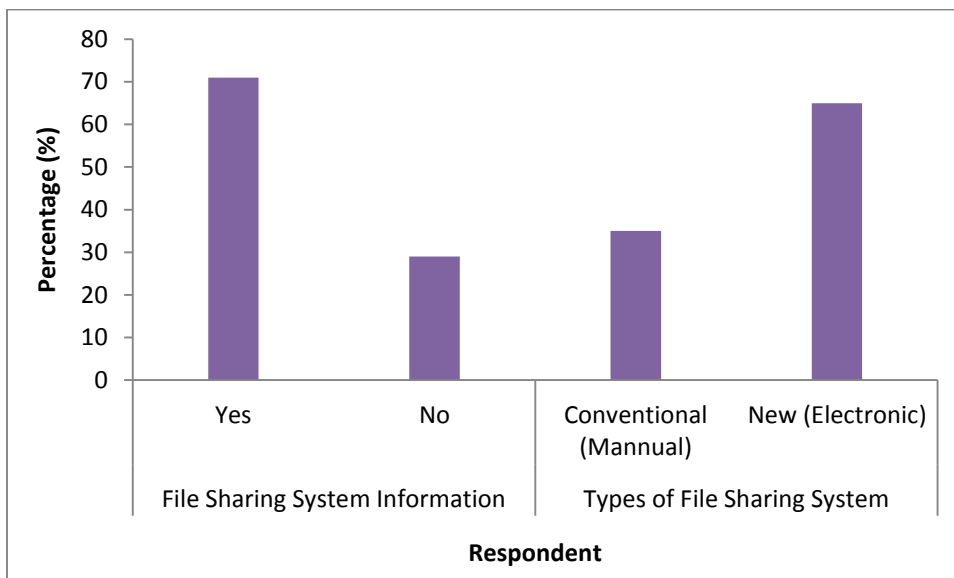


Figure 2: Knowledge and types of file sharing system

Fig. 3 shows that 67% of the respondents agreed that the use of new electronic file sharing system with customized application is more effective than the former convectional (manual) type with widow based application. They argued that with the use of

new electronic file sharing system less time were spent to disseminate their new products to their customers and to access new information and technology in cement industry across the world. According to them, this has made the company as one of the leading cement industries in the world.

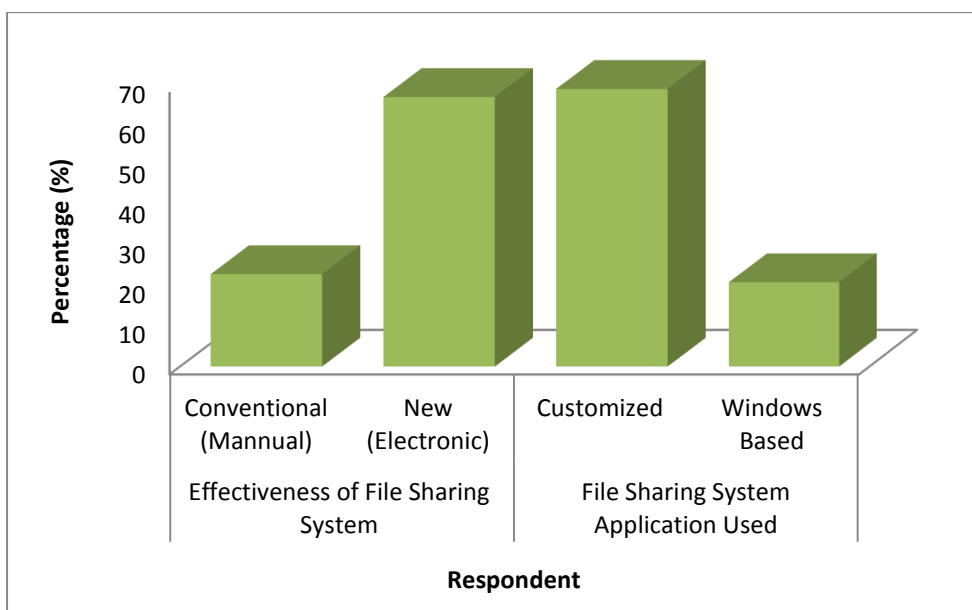


Figure 3: Effectiveness of types and application window of file sharing system

When the effectiveness of new electronic file sharing system is compared with the former convectional type on staff's productivity and company's profit, 86% of the respondents attested that the new electronic file sharing system is far better than convectional type and they rated it very high as shown in Fig 4. They stated further that the new electronic file sharing

system has reduced the labour suffering, improved production and salaries increment due to upsurge in company's profit.

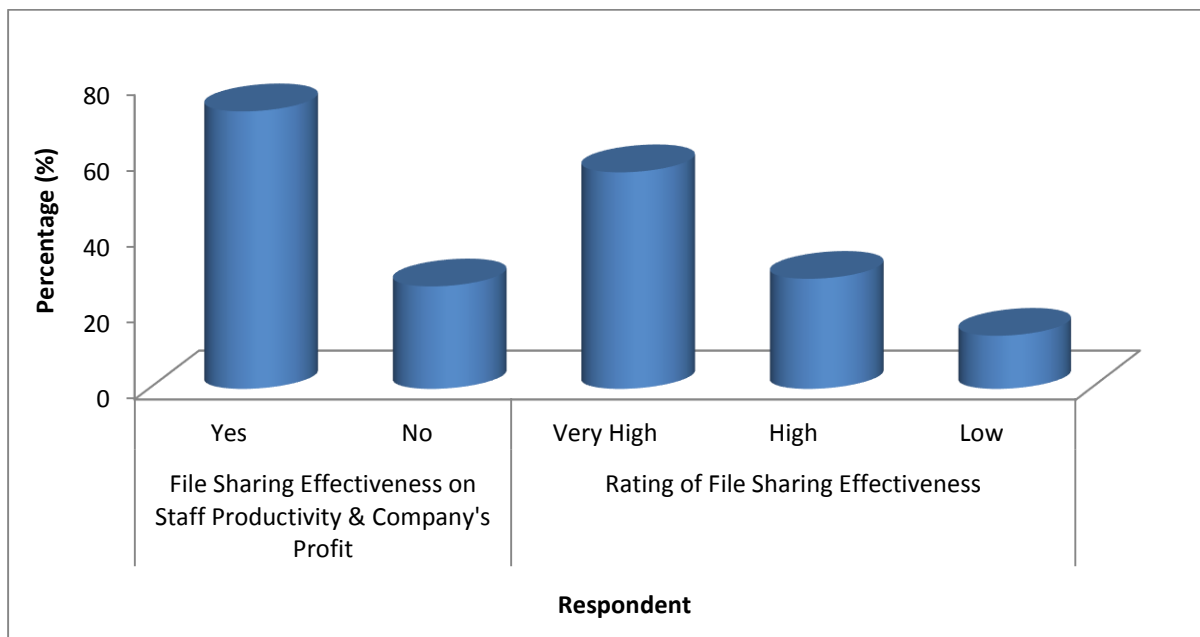


Figure 3: Effective and rating of electronic file sharing system

In order to achieve optimum benefit of electronic file sharing system, 43% and 57% of the respondents have been benefitted from workshop/seminar/conference and in-service training sponsored by the organization. 94% of the respondents agreed that the training has enhanced their performance and quick

delivery of organization activities to the public which ended up in increasing the company's profit as shown in Figure 4

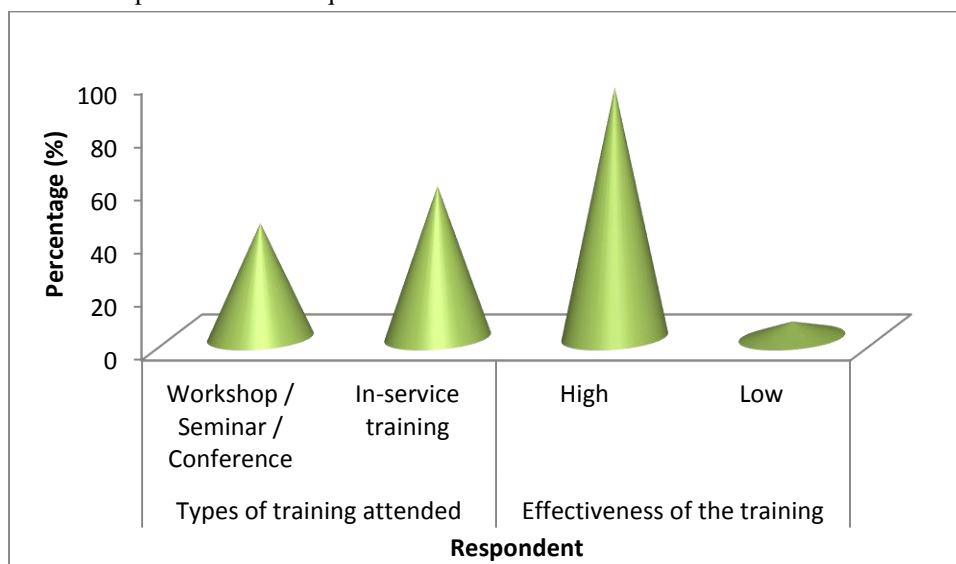


Figure 4: Electronic file sharing system training and its effectiveness

Figure 5 shows that epileptic supply of electricity has reduced the efficiency of electronic file sharing system by 39%, inadequate training reduced it by 16%, incapacitated equipment reduced it by 18%, connectivity and virus problems reduced it by 19% and 8% respectively as shown in Figure 5. At the same time, 37% of the respondents believed that electronic file sharing system will perform optimally with constant and uninterrupted power supply while 18%, 16%, 21% and 8% believed that organizing more relevant trainings on electronic file sharing

system, use of modern equipment, improvement of connectivity and installation of good ant-virus will lead to 100% efficiency of electronic file sharing system as shown in Figure 5.

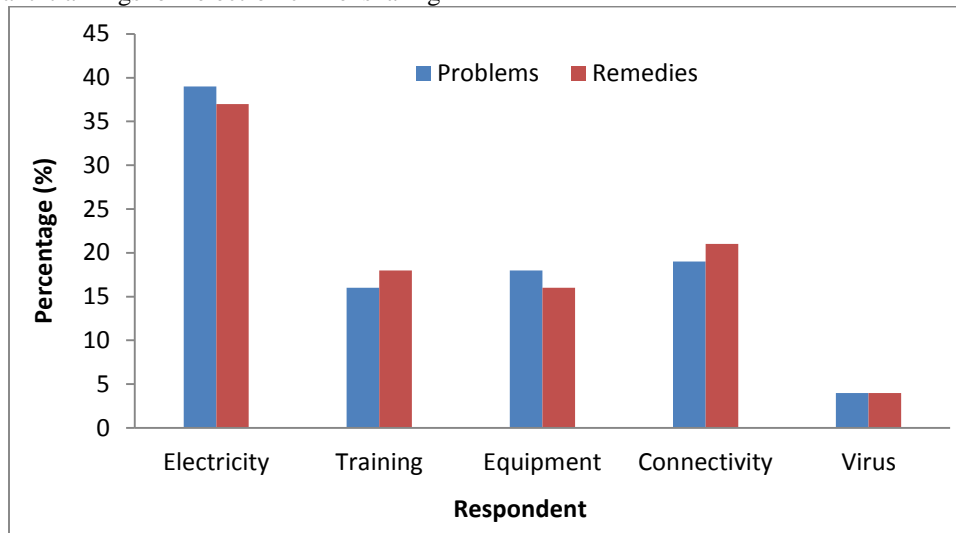


Figure 5: Problems and remedies of electronic file sharing system

## 6. CONCLUSION AND RECOMMENDATION

The study shows that electronic file sharing system has impacted positive on more than 75% of the staff’s productivity which improves their day to day discharge of company’s activities and profit making. It was also gathered that power failure, lack of continuous training, slow connectivity (local and internet), obsolete equipment and virus are the identified factors militating against the efficiency of file sharing system in the organization. As a result of these, the following recommendations are hereby suggested to the organization.

- (i) The organization should look inward to profile solutions to all the factors that reduced the efficiency of electronic file sharing system such power failure, slow connectivity, obsolete equipment and virus infection.
- (ii) The organization should intensify efforts on training and re-training of workers on electronic file sharing system in order to improve their performance and immediate delivery of organization’s activities to their customers.
- (iii) The workers should see electronic file sharing system as a programme that can make them useful in any part of the world rather than thinking that it will make them redundant and lose their job.
- (iv) Young and vibrant workers who are ready to learn should be trained in the use of electronic file sharing

system rather than those who are only interested in the allowances of the training.

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