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EDITORIAL DESK

Volume 3 of the West African Journal of Educational Administration and Planning (WAJEAP) has a total of ten articles that were the products of well researched papers presented at the international conference held in May 2024 at the Presbyterian University of East Africa in Kikuyu, Nairobi, Kenya. The conference had well over 100 participants that gathered at the ambiance of PUEA environment, which was well attended by over 25 universities across the globe including Nigeria, Serra Leone, Kenya, South Africa, Australia and University of South Alabama in United States of America. All the articles have been peer reviewed and plagiarism checks conducted on them before publication.

I, therefore, want to deeply appreciate the management team of the Presbyterian University of East Africa for making this publication a reality. All the writers and authors are congratulated for passing the stringent measures set by the guild of editors.

Congratulations to everyone, and I wish you a prosperous Christmas celebration in advance.

Prof. M. O. B. Mohammed FNAEAP,
Head, Editorial Team

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DIGITALISATION IN HUMAN RESOURCE PRACTICES IN EDUCATION IN THE 21ST CENTURY

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ABSTRACT

This paper examined digitalisation in Human Resource (HR) practices in education in the 21st Century. The advancement in technology in the 21st century offers various opportunities for digitalised HR practices such as staff procurement/recruitment, performance appraisal, training and development, and compensation/reward in education. Despite this opportunity for digital technology in the 21st century, digitalizing HR practices has remained a major challenge in some educational institutions in Nigeria. This article therefore addresses the role of digitalisation in HR practices in education in the 21st century and the barriers to the adoption of digitalisation for HR practices. Two objectives and two research questions guided the study. A qualitative research method involving semi-structured interviews and secondary sources of data was used to ascertain digitalisation in HR practices in education. Fifty lecturers were randomly sampled from Emmanuel Alayande University of Education, Oyo. The collected data was analysed using content analysis to answer the research questions. The Results revealed that digitalisation has impacts on for various HR practices such as staff training, recruitment, compensation, planning and communication in education. It was concluded that digitalisation can be utilized in all manner of HR practices in education. It was recommended based on the findings that digitalisation should be given adequate consideration for HR practices in education in Nigeria, Government and educational stakeholders should ensure that facilities and infrastructures for digitalisation are provided for HR practices in educational institutions.

Keywords: Human Resource (HR) Practices, Digitalisation, Education, 21st Century.

INTRODUCTION

The 21st century which began on 1st January 2001 and will continue through to 31st December 2100 is referred to as the information, digital or new media age and is the period from the 1970s onwards, which started with the introduction of the first personal computer that allows free and quick transfer of information. It is characterized by the rapid shift from traditional industry to an economy that is based on information, communication and digital technologies (Adio, 2023; Adeyinka, Quardri, Bamidele, & Ajiboye, 2020). The technological advancement in the 21st century thus provides the opportunity for organizations such as educational institutions to carry out various practices including human resource practices in a digitalised way (Al Qalhati et al., 2020).

Human resource (HR) practices in education comprise a system that attracts, develops, motivates, and retains workers in an educational institution to ensure the effective implementation and the survival of the institution and its members (Muralidhar & Gopal, 2022). These practices include staff procurement/recruitment, assessment and performance appraisal, training and development, compensation/reward, teamwork, relation and maintenance in the educational institution (Gupta & Singh, 2019). Before the 21st century and the emergence of digital technologies, many of these HR practices were carried out manually or traditionally which posed a lot of limitations to the effectiveness and efficiency of these

practices. However, in the current era of the 21st century, HR practices in educational institutions are now being digitalised.

It was noted that digitalisation of HR practices in education is the process of leveraging digital technologies and tools to transform a model, create new systems or ways of doing human resource activities and value-producing opportunities from management and communication to production and service. In today's competitive world, digitalisation has become crucial for human resource professionals and departments in educational institutions to thrive and stay relevant as it enables them to adapt to rapidly changing market conditions, meet expectations, and optimise their processes for greater efficiency and productivity (Walkme, 2023). However, the role of digitalisation in each HR practice in education and the barrier to adopting digitalisation has not been given adequate attention in the literature.

Objectives of the Study

The study objectives were to:

- examine the impact of digitalisation in HR Practices in education in the 21st Century and
- ascertain the barriers to the adoption of digitalisation in HR Practices in education in the 21st Century.

Research Questions

This paper sought to answer the following questions:

1. What is the impact of digitalisation on HR Practices in education in the 21st Century?
2. What are the barriers to the adoption of digitalisation in HR Practices in education in the 21st Century?

LITERATURE REVIEW

Concept of Education

Education is defined as a purposeful, conscious or unconscious, psychological, sociological, scientific, and philosophical method, which brings about the progress of a person to the utmost extent and the ultimate development of society in such a way that both enjoy maximum happiness and prosperity (Kumar & Ahmad in Wani, Dhami&Sidana, 2022). Education is derived from two Latin words "educere" which means "to lead out" and "Educare" which means 'to bring up'. This means that education brings out skills in someone and builds them up (Birabil, &Ogeh, 2020). Education is essentially the development of the individual according to the needs and demands of the society of which he or she is an integral part (Wani, Dhami&Sidana, 2022). Nzewu in Birabil and Ogeh (2020) believe education plays a role in preparing or nurturing individuals to live in society and thus being able to perform specific functions for society.

Adelowo in Birabil and Ogeh (2020) conceptualized education as an enterprise which sets out to instil values, attitudes and skills in members of society. Nwala in Birabil and Ogeh (2020) define education whether formal or informal, as the recognised method whereby a person acquires most of his or her ideas, beliefs attitudes, knowledge, skills and manners necessary, not only to combat the hazards and problems of life and to secure his or her needs but also to fit into the company of his fellow human being. Okorosaye-Orubite (2019) defined education as a social creation, designed to meet the specific needs of the society at any particular point in time. Its form, content, methodology and clientele are determined by the society. Pauley and Buseri (2019) define education as a socializing agent that equips all its beneficiaries with

the necessary tools such as knowledge, skills, attitude, cultural values, language and social skills to enable them to conform to the desires/demands of their society.

Concept of HR Practices

HR practices are a collection of human resource practices and concepts that help a company achieve its business goals, regardless of the organisational type or industry. (Indeed Editorial Team, 2022). Human resource practices are the processes or the functions that are used to manage the employees and they direct the firm toward development. These practices include staff procurement/recruitment, assessment and performance appraisal, training and development, compensation/reward, teamwork, relations and maintenance (Lado& Wilson in Gupta & Singh, 2019).HR practices comprise a system that attracts, develops, motivates, and retains employees to ensure the effective implementation and the survival of the organization and its members (Muralidhar&Gopal, 2022).

HR practice is any practice devised to increase competence, commitment and culture building in the form of a rule, norm, system, or some practices. They differ from organisation to organisation. Common examples of HR practices include – providing or granting special allowance for employees who attend office on birthdays, highlighting employees' achievements and performance and updating them on the organization's policies and decisions through the house bulletins to ensure transparency, rotating employees' jobs to remove the monotonous feeling or boredom, providing health care, regular medical check-up, reimbursement of any hospitalization expenses and even those of employees' family members and so on and forth (Ashok, 2020).

HR Practices in Education

Human resource practices in education include the following:

- i. **Human Resource Planning** – This is an HR practice that involves determining the number, quality, qualification, and experiences of members of staff (such as teachers) needed to work in an educational institution. This practice examines an educational institution's needs in terms of recruitment, selection, placement, training, promotion, transfer and discharge of staff at the right place and time(HR Trends (2020).
- ii. **Staff Maintenance** – This involves making the educational work environment conducive for members of staff. It includes motivation, promotion and transfer, security, staff safety, and health services (HR Trends (2020).
- iii. **Staff Relations** – This is a practice that involves building a good communication network in an educational institution to enable members of staff to be constantly informed on the progress being made. This practice involves fairness and respect as it considers the feelings, needs, interests, and emotions of members of staff (HR Trends (2020).
- iv. **Staff Development** – This is a practice that involves the constant need to change members of staff's way of working through proper training such as workshops, conferences, and seminars to improve and grow their competence (knowledge and skills), following the ever-changing world (HR Trends (2020). Nzewi in Okafor (2018) stated that the training offered to tutors during their professional teacher education puts in them the basic teaching skills required to become a professional. However, these basic teaching skills may not be enough to meet the challenges of advancing educational curricula and expanding syllabuses
- v. **Procurement of Staff** – This is a practice that involves recruiting individuals with the right and necessary competence (qualifications, abilities, skills, mastery of subject knowledge and experience) to fill the vacant teaching and administrative positions in educational institutions (HR Trends (2020). This involves recruitment, selection and

placement. Recruitment is done to produce a shortlist of individuals worthy of the interview. Next selection is done to employ those qualified and meet the satisfactory requirements of the job. Selection tests include - aptitude, intelligence, attainment and all forms of personality tests and traits (Fasuyi in Okafor, 2018). Placement which is the final stage in the employment process involves individuals meeting other conditions tied to the job including a successful medical examination (Okafor, 2018).

- vi. **Human Resource Compensation/Reward** - This is a practice that involves designing and administering rewards for work performed by members of staff in an educational institution (HR Trends (2020). It also involves ensuring that teachers and other members of staff in the educational institution are motivated with fair salaries, rewards, welfare services and benefits (Okafor, 2018). According to Nzewi in Okafor (2018), positive rewards include promotion, conversion and advancement which encourages performance and motivate teachers and other members of staff. Nwakwo in Okafor (2018) posits that benefits for teachers and other members of staff in the educational institution include meal and utility subsidies, rent and transport subsidies, paid leave and paid time off such as vacations, maternity leave and so on and forth, repayable loans for housing, motor vehicles and others. Welfare services are teachers and other members of staff benefits which have no monetary value such as recreational benefits or services.
- vii. **Employees' Assessment/Performance Appraisal** - This is a practice that involves assessing whether teachers and other members of staff who are trained and developed benefit from what they do. It involves evaluating teachers and other members of staff work achievements. Assessment is useful as feedback on teachers and other members of staff, such as their fatigue, ability, lack, and potential is in turn useful for determining paths, goals, plans, and career development. The results of performance appraisal of teachers and other members of staff are very important in making various decisions, such as identification of school program needs, acceptance, and selection (Tanjung, 2020).

Concept of Digitalisation

Stolterman and Fors in Parviainen, Tihinen, Kääriäinen and Teppola (2017) defined digitalisation as changes associated with the utilization or application of digital technology in every aspect of society such as personal life, economic, social, and political activities. Digitalisation is the use of digital technologies to change a business model and deliver new revenue and value-producing opportunities; it is the process of moving to a digital business" (Gartner, 2022). Digitalisation is the ability to turn existing products or services into digital variants, and thus offer advantages over tangible products (Gassmann, Frankenberger&Csik, 2014). Digitalisation is also viewed as the adoption or increase in the use of digital or computer technology by an institution, industry, nation, etc (Brennen and Kreiss, 2014). It refers to a socio-technical phenomenon, the use of digital technologies and their influence on societies, businesses, and personal lives (Frenzel et al., 2021).

Digitalisation refers to enabling or improving processes by leveraging digital technologies and digitized data. Therefore, digitalisation presumes digitisation. Examples of this could be as simple as PLC logic or PID control in a microprocessor-based system, sequenced logic for a batch process, automated shutdown logic, etc. It could also be something more complex like an error in a transmitter generating a work order in the ERP maintenance system for a maintenance tech. Digitalisation increases productivity and efficiency while reducing costs. Digitalisation improves an existing business process or processes but doesn't change or transform them. That is to say, it takes a process from a human-driven event or series of events to software-driven (Gupta, 2020). Digitalisation is the use of technological innovations

with a significant influence on business processes, services, products, sales and supply channels which results in benefits such as an increase in productivity or sales, innovations in creating value, and new methods of interacting with customers (Urbach & Ahlemann, 2019).

Digitisation differs from digitalisation. However, digitisation is a framework or bedrock for digitalisation. Digitisation involves converting hard/paper files and documents into digital files and documents and storing them on a computer. Examples include - scanning a document or picture, uploading paper documents or even converting a report into PDF format. With digitization, the data and information remain the same, that is, nothing is altered on the document except that the method of accessing and storing them changes. However, digitalisation is a process or strategy of using digital technologies to create changes that can alter the very core of business models which results to opportunities for increased efficiency and revenue (Walkme, 2023).

Concept of 21st Century

The 21st century is the current century in the Anno Domini (AD) or Common Era, in line with the Gregorian calendar. It began on the 1st of January 2001 and will end on 31st of December, 2100. It is the first century of the 3rd millennium (Wikipedia, 2024). The years of the Gregorian calendar, which is currently in use, are counted from AD 1. Thus, the 1st century consists of the years AD 1 through to AD 100. The second century began with AD 101 and continued through to AD 200. The 20th century consists of the years AD 1901-2000. Therefore, the 21st century began on 1st January 2001 and will continue through to 31st December 2100. Similarly, the 1st millennium consists of the years AD 1-1000. The 2nd millennium consists of the years AD 1001-2000. The 3rd millennium began with AD 2001 and will continue through to AD 3000. Therefore, the 21st century which began in AD 2001 is the beginning century of the third millennium (Hong Kong Observatory, 2019).

The 21st century is referred to as the information, digital or new media age and is the period from the 1970s onwards, which started with the introduction of the first personal computer that allowed the free and quick transfer of information. It is characterized by the rapid shift from traditional industry to an economy that is based on information, communication and digital technologies (Adio, 2023; Adeyinka, Quardri, Bamidele, & Ajiboye, 2020). In the 21st century, the former ways of communicating ideas and with each other have become obsolete as cyberculture takes over. Also, the use of new technologies and social media sites has changed the way of life of many (Bartleby Research, 2023). In the twenty-first century, the world has become a global village with ubiquitous connectivity which is a result of the capabilities and coverage of the Internet and new digital systems such as 5G. This era is almost regarded as the new seventh age of globalization, and everyone has to go digital to keep up in the 21st century (Sachs, 2019).

METHODOLOGY

A qualitative research method involving secondary sources of data such as past research trends and themes in the field of digitalisation in education and a comprehensive analysis of literature published in journals over the last two decades were mainly used for the study. Expert opinions from the Emmanuel Alayande University of Education, Oyo, Oyo State were also sought via interview method. Fifty lecturers were randomly interviewed using Digitalisation in Human Resources Practices in Education in the 21st Century Scale (DHRPE2CS). The original scale with ten items was validated to five items to collect data on the opinions of experts on the topic of the research. The collected data was analysed using content analysis to answer the research question.

FINDINGS AND DISCUSSION

Research Question One: What is the Impact of Digitalisation on HR Practices in Education in the 21st Century?

Digitalisation in Human Resource Planning in Education in the 21st Century

Planning is needed for effective decision-making in an educational institution. Planning as an HR practice involves determining the number, quality, qualification, and experiences of those who work and those needed to work in an educational institution (HR Trends, 2020). For planning to be effective, it involves efficient handling of large amounts of data. Experts who were interviewed noted that digitalisation in the 21st century now changes the way human resource departments handle large data of workers in education. Using digitalised analysis software such as Python, SPSS, SQL, tableau etc., human resource practices such as handling of large data for planning becomes more efficient. This opinion agrees with Gunasekaran, Papadopoulos, Dubey, Wamba, Childe... Akter et al. (2017) noted that the use of digitalised technology prevents the incidence of data loss regardless of how large they are or beyond what HR specialists can handle.

The use of digitalised Human Resources Information Systems (HRIS) such as PeopleSoft, My Time, SAP, Timeco and Jobs Navigator has made it possible for educational institutions to store and retrieve large files in an electronic format for easy access when needed. This not only eliminates huge amounts of files which frees up space within the office but also allows timely or quick access to the information across multiple locations because the information is in a centralized location (Neeraj, 2018).

It was added that through digitalisation, HR departments in educational institutions can secure vital information of workers. The manual and traditional means of handling workers' information are susceptible to leaks and losses. However, with digitalised platforms such as Firefox, the details of educational workers are not only safe from hackers but free from losses. This agrees with research which revealed that confidentiality of data in HR departments cannot be performed without including digitalised technology such as cloud computing, web-centred content management systems, and so on and forth. These technologies support data decentralization and storage thereby eliminating the traditional physical server storage systems, which are considered as ineffective (Al Qalhatai, Karim, Al Mughairi, Al Hilali, & Hossain, 2020).

Digitalisation in Staff Relations in Education in the 21st Century

Staff relationship and communication is an HR practice that is very crucial for the survival of the educational institution. Communication is the lifeblood of any educational institution and must therefore be effective if such an institution is to attain its aim, goals and objectives. Respondents noted that through the use of social media and various online communication platforms, teachers and other members of staff can communicate with each other, their administrators, school heads and important educational stakeholders without the need for to and fro movement. This removes the stress and effort it would have taken to gather all members of staff at a meeting ground. Through digitalised platforms, there is ease in relationships, knowledge sharing and transparency among members of staff of an educational institution in the 21st century.

The above responses agree with Mao, Liu, Zhang, and Deng (2016) who believed that with the emergence of digitalised mobile texts, emails and other messaging applications, human resources practices such as staff relations and communication have become much more effective. Academic and non-academic staff in the educational sector are now capable of

linking with others within the institution. The human resource manager can now share vital information and attachments with a broad number of workers at the same time without necessarily linking with each of them individually. Furthermore, it was put forth that communicating a scheduled meeting with a large number of staff within an educational institution or several institutions can be done with just a single e-mail. Digitalisation thus allows HR departments within educational institutions to communicate, share and relate crucial information to the institution (Johnson, Lukaszewski and Stone, 2016).

Digitalisation in Staff Training and Development in Education in the 21st Century

Respondents opined that staff development and training is an HR practice that is done to ensure that teachers (lecturers), administrators and principals are equipped with the right tools to make them keep pace with the developed world in the area of education. The manual means of training and development pose a lot of limitations in that it is usually generic not specific in the sense that it is not tailored to the specific needs or requirements of each member of staff. However, through digitalisation such as information and communication technology (ICT) and e-learning, teachers and other members of staff (human resources) in educational institutions can receive training based on their needs. As workers differ in their personalities so also is their training needs.

The above response is in line with the position of researchers who noted that digital technology, such as e-learning, has positively impacted training and development in educational organisations in that it facilitates the planning of learning practices and tools specific to a worker's needs and teamwork (Jooss, & Burbach, 2017). Samson and Rathee (2018) believe that digitalisation such as e-learning technology furnishes educational institutions with a variety of alternatives to human resource development. For instance, an option such as a technology-based learning (TBL) procedure could offer ICT, web, PC-based, and multi-media training for teachers. These various options offered by digital technology would allow educational institutions and members of staff to manage their abilities and expertise profiles, pursue and register courses and ultimately reduce training costs.

Experts felt that traditional means of training teachers and principals in principal-ship or training academic and non-academic staff not only wastes time that would have been put to good use in the semester, term or session but also has cost implications. However, with the use of digital technologies such as ICT (e-learning, teleconferencing, video-conferencing, audio-conferencing, and etcetera), time and costs of training are saved for the educational institution. This response agrees with Khashman and Alryalat (2015) who reported that the use of digital technology in HR practices such as training and development activities has brought about huge advantages, such as regulatory costs, diminished desk work, timeframes, whereby time saved can be used for an institutions' other crucial activities.

Research revealed that digitalised training practice such as the use of Skype, virtual chat rooms and interactive training sites gives educational workers the ability to access onboarding and training programs from anywhere which eliminates the need for trainers to meet with new hires face to face. Training in virtual classrooms makes it possible for HR professionals to train many workers quickly and also assess their progress through computerized testing programs. Workers can take control of their learning and development by engaging in training at a time and place of their choice which helps them to manage their work-life balance. HR managers can track the training through the Internet as well, which reduces redundancy in training and costs (Neeja, 2018).

Digitalisation in Procurement of Staff in Education in the 21st Century

The technological advancement in the 21st century has enabled organizations to advertise prospective job opportunities online (Al Qalhati et al., 2020). Experts posited that in today's 21st century, many educational institutions be it basic, secondary, or tertiary (colleges of education, polytechnics, universities, and etcetera) and even the Ministry of Education no longer use the traditional way of advertising vacant positions teachers, lecturers and other form of workers but now used digital technologies such as online platforms which reaches a vast variety of individuals. Through these digital and online platforms, potential candidates are also enlightened or educated about the educational institution and the details of the posts available.

The experts further opined that using the manual way of advertising for vacant posts, especially through bulletin boards, newspapers, magazines, posters, word of mouth, etc may only reach a few particular set of people within that reach. These set of persons may be passively not actively in need of the job. Those who actively need the job may be far away beyond the reach of the manual method of recruitment. However, with digitalisation, human resource practice such as procurement (recruitment, selection and placement) of staff for educational purposes now has a wider reach to all sundry. For example, the needed and required expert for a particular department in a university in Kano State maybe somewhere in Delta State but with the use of manual means of staff procurement, such expert may never be reached. The university may end up employing sub-standard personnel for the job hence the positive impact of digitalisation.

The above position is supported by researchers who established that with the widespread adoption of digital technology, the manual or traditional recruitment and selection HR practices have largely been supplanted by electronic equivalents that increasingly rely on social networking sites and other web-based platforms, such as Facebook, LinkedIn (L'ecuyer, & Pelletier, 2019; Bissola, & Imperatori, 2014). This allows access to a wide pool of potential people with various abilities and skills, speed and proficiency and also those candidates that are in dire need of the job (Mochi, Bissola, & Imperatori, 2017).

Furthermore, it was put forth that the use of digital technology for e-recruitment and e-selection not only provides cost benefits for the educational institution but also captures candidates who are digitalised. Manual means may get candidates who are not current with the digital world. These candidates may not be able to keep pace with digitalised education but continue to teach traditional syllabithat could limit development in the educational system. However, digitalised means of recruitment as an HR practice could get candidates who are current with the digitalised world of education.

It was added that through cloud-based recruitment software, Application Tracking Systems (ATS), etc, and other digitalised means of communication such as telephone, emails and the Internet, the long-lasting face-to-face interviews and assessment of paper resumes is eliminated which saves a lot of time in the recruitment process for educational institutions in the 21st century. With social media platforms such as Facebook, Twitter, LinkedIn and Snapchat, the identification of potential candidates, recruitment and retention of employees has been completed online (Al Qalhati et al., 2020).

Digitalisation in Human Resource Compensation/Reward in Education in the 21st Century

Respondents posited that in the past, many educational institutions could not track the payment and remuneration of their teachers (lecturers) and members of staff through the use of manual methods of salary payment and rewarding staff. Also, there were lots of ghost

workers and some workers received salaries more than once a month. Those workers who were deserving of rewards were neither compensated nor rewarded because the manual or traditional method of such HR practice could not track workers' productivity. However, with digitalised technology, such limitations have been done away with. Rao and Vaidya (2018) in a research carried out in India revealed that updating to an electronic payroll helped an educational institution to simplify how it remunerated its employees. Furthermore, digitalisation such as human resources information system solution software (HRISSS) has helped many educational institutions carry out their personnel administrative matters, calculate payrolls for staff, and produce various reports, including statutory and non-statutory reports in the 21st century of digital and information age (HRMS solutions in Jayabalan, Makhbul, Nair, Subramaniam&Ramly, 2021).

Payroll digitalisation has helped educational institutions move toward innovative, simplified and easier HR practices that reduce time, and staffing costs and help in staff maintenance in the 21st century (Johnson &Gueutal in Jayabalan et al., 2021). It was added that digitalised payroll helps in tracking members of staff productivity, which ensures that rewards and recognition are given to the right workers to boost their performance (Onuorah, Okeke&Ikechukwu, 2019). With the use of digitalised technologies, there is secure access to compensation or payroll information by senior managers, HR personnel, and workers in general which removes contradiction and brings about straightforwardness in educational institution contributions in the 21st century (Hartwell, 2018).

Digitalisation in Performance Appraisal of Staff in Education in the 21st Century

Performance appraisal which is done to evaluate teachers and other members of staff work achievements and whether those trained benefit from it is an HR practice that is very important for proper decision-making in the educational institution. In the 21st century which is the age of information and digitalisation, the use of digital software for e-performance appraisals results in a paperless method which allows effective data sharing, evaluation and feedback. This is in line with the work of Jayabalan, Zafir, Selvanathan, Ng, Subramaniam, Nair, and Perumal (2020) who established that performance appraisals were improved when the HR department in the Pakistan educational system worked in paperless synergy with the assistance of data innovation.

The above responses are also supported by those of Bissola and Imperatori (2019), who established that the adoption of digitalisation technology such as e-performance appraisals that use software programming will have a significant influence on general human resource practices because sharing performance appraisal procedures and rules across education institutional boundaries can permit straightforwardness and an impression of reasonable outcomes, which affects the decision-making of those involved. This also diminishes biased evaluation practices because of the transparency of the digitalised form of performance appraisal (Klett, 2018).

Research Question Two: What are the Barriers to the Adoption of Digitalisation in HR Practices in Education in 21st Century?

According to a few participants, one of the barriers experienced in the adoption of digitalisation in HR practices in educational institutions is 'cost'. This is because the use of digital technologies in schools for enhancing HR practices could be costly to run. The purchase of digital technologies to the adoption of digitalised software may be costly for some educational institutions. It was also noted that poorly equipped infrastructures is a major barrier to the adoption of digitalisation in Nigeria. Some educational institutions do not have

enough or sufficient facilities for digitalised HR practices. Experts noted that some digitalised software utilized by educational institutions may be prone to risks and security issues. Some of these software can be hacked by fraudsters who will then have access to vital and sensitive information of workers in the educational system.

It was also opined that a lack of knowledge on the part of some HR professionals may pose a barrier to the adoption of digitalisation for HR practices. Furthermore, getting skilled personnel who have proper knowledge of the utilization of digital technologies for HR practices may not be easy to get or come by. It was added that not many human resource personnel are willing to adapt to the changes that digitalisation brings. These responses are in line with a survey carried out in 2020 which revealed forty-six percent of human resource managers lack the needed skills to take digitalisation forward and thirty-five percent of them lack the talents to drive digitalisation projects. Furthermore, the survey revealed that an average worker experiences more than twelve major and minor changes in a year and many of these changes face resistance from the workers' mindset or unwillingness to change and adapt to digitalisation (Al Hazihi, Muthuraman, Al Yahyaei, & Al Balushi, 2022).

Respondents posited that another barrier to the adoption of digitalisation for HR practices in education especially in Nigeria is the erratic nature of electricity supply in the nation. Digitalisation of HR practices need constant light and electricity to run but the epileptic power supply in the nation poses a huge limitation. Researchers revealed that the digitalisation of human resource practices in many educational institutions lacks a clear long-term strategy which impacts workers' security and loyalty. It was added that a lack of specific budgets to enable the implementation of these short- and long-term goals poses a major barrier to the adoption of digitalisation in educational institutions. In some educational institutions, the process implementation of digitalisation may vary according to their agility level and resistance towards change. A lack of democracy and agility may pose a barrier to the adoption of digitalisation in that a longer period is taken when applying upgrades to digital systems. There could also be resistance from top-level management to adopt or invest in digitalisation (Al Hazihi et al., 2022).

CONCLUSION

It can be concluded based on the findings that digitalisation can be utilized in all HR practices in education. This implies that the use of digital technology and applications such as ICT, e-learning, e-procurement, e-recruitment, human resource information system (HRIS), social media, and so on and forth can be utilized for various HR practices such as staff training, recruitment, compensation, planning and communication in education. It was also added that regardless of the importance and utilization of digitalisation for HR practices, there are barriers to its adoption in educational institutions.

RECOMMENDATIONS

It was therefore recommended based on the findings that:

1. Government and educational stakeholders should ensure that facilities and infrastructures for digitalisation are provided for HR practices in educational institutions;
2. Personnel who are skilled to handle digitalised technologies and applications should not only be employed but made to train others;
3. Staff in HR departments should be allowed to undergo sponsored training and development programmes such as conferences, seminars and workshops to sharpen their skills and knowledge in digitalisation; and

4. Staff in HR departments should ensure they have a positive attitude towards the adoption of digitalisation so they do not resist the change that comes with it.

REFERENCES

- Adeyinka, T., Quardri, F., Bamidele, S.S., & Ajiboye, O.O. (2020). Resource sharing: Vehicle for effective library information dissemination and services in the digital age. In Handbook of Research on Digital Devices for Inclusivity and Engagement in Libraries. DOI: 10.4018/978-1-5225-9034-7.ch004
- Adio, E. (2023). 21st century children: Should they feel fearful or free? Available at <https://www.ebizradio.com/21st-century-children-should-they-feel-fearful-or-free-insight-technology-digitalage-the-love-trust/> April 19, 2023
- Al Haziazi, M., Muthuraman, S., Al Yahyaei, N., & Al Balushi, A. (2022). Opportunities and challenges in digitalizing the HRM in Middle East. *Webology*, 19(2), 6611-6617. ISSN: 1735-188
- Al Qalhati, N., Karim, A. M., Al Mughairi, B., Al Hilali, K., & Hossain, M. I. (2020). Technology and HR Practices in Educational Sector in SharqiyaGovernate of Oman. *International Journal of Academic Research in Business and Social Sciences*, 10(10), 435-443. DOI:10.6007/IJARBS/v10-i10/7956
- Ashok, S.N. (2020). A study of best HR practices and their impact on employee satisfaction with special reference to select large scale companies in Pimpri - Chinchwad during 2007-2012. Unpublished PhD Thesis in Management, Tilak Maharashtra Vidyapeeth University, Pune. <http://210.212.169.38>
- Bartleby Research (2023). The 21st century is often referred to as the digital age. Available at <https://www.bartleby.com/essay/The-21St-Century-Is-Often-Referred-To-F3SVZJV39D4HW2023>
- Birabil, S.T. & Ogeh, O.W.M. (2020). Education in Nigeria: Challenges and way forward. *International Journal of Academic Research and Reflection*, 8(1), 42-48. ISSN 2309-0405
- Bissola, R., & Imperatori, B. (2014). Recruiting Gen Yers through social media: Insights from the Italian labor market. In: Bondarouk, T. and Olivás-luján, M.R. (eds.) *Social Media in Human Resources Management (Advanced Series in Management, Vol. 12)*. Bingley: Emerald Group Publishing Limited, pp. 59-81.
- Bissola, R., & Imperatori, B. (2019). HRM 4.0 for human-centered organizations. *Advanced Series in Management*, 23, 1-8. DOI: 10.1108/S1877-636120190000023001
- Brennen, S., & Kreiss, D. (2014). Digitalisation and digitization [Online]. Available: <http://culturedigitally.org/2014/09/digitalisation-and-digitization/>
- Frenzel, A., Muench, J.C., Bruckner, M.T., & Veit, D. (2021). Digitization or digitalisation? – Toward an understanding of definitions, use and application in IS research” (2021). AMCIS 2021 Proceedings. 18. https://aisel.aisnet.org/amcis2021/adv_info_systems_general_track/adv_info_systems_general_track/18.8.
- Gartner. (2022). Definition of digitalisation - Gartner Information Technology Glossary. Gartner. Retrieved 15 September 2022, from <https://www.gartner.com/en/informationtechnology/glossary/digitalisation>
- Gassmann, O., Frankenberger, K., & Csik, M. (2014). The St. Gallen business model navigator [Online]. Available: http://www.im.ethz.ch/education/HS13/MIS13/Business_Model_Navigator.pdf
- Gunasekaran, A., Papadopoulos, T., Dubey, R., Wamba, S. F., Childe, S. J., Hazen, B., and Akter, S. (2017). Big data and predictive analytics for supply chain and organizational performance. *Journal of Business Research*, 70(3), 308-317. DOI:10.1016/j.jbusres.2016.08.004

- Gupta, A., & Singh, V. (2019). Relationship of HR practices and job performance of academicians. *Journal of Emerging Technologies and Innovative Research (JETIR)*, 6(1), 241-253. ISSN-2349-5162
- Gupta, M.S. (2020). What is digitization, digitalisation, and digital transformation? Available at <https://www.arcweb.com/blog/what-digitization-digitalisation-digital-transformation> March 24, 2020
- Hartwell, C. (2018). Social media and e-HRM. In: THITE, M. (ed.) e-HRM: Digital Approaches, Directions & Applications. London: Routledge, pp. 143- 159.
- Hong Kong Observatory (2019). <https://www.hko.gov.hk/en/gts/time/centy-21-e.htm> updated 5 December, 2019
- HR Trends (2020). Roles and functions of HR in the education sector. Available at <https://www.hrinasia.com/general/hr-in-the-education-sector> June 9, 2020
- Indeed Editorial Team (2022). Common HR best practices: Definition and examples. Available at <https://in.indeed.com/career-advice/career-development/hr-best-practices>
- Jayabalan, N., Makhbul, Z.K.M., Nair, S., Subramaniam, M., & Ramly, N.A.B. (2021). The impact of digitalisation on human resource management practices in the automotive manufacturing industry. *Journal of Southwest Jiaotong University*, 56(5), 524-537. DOI: 10.35741/issn.0258-2724.56.5.48
- Jayabalan, N., Zafir, M.M., Selvanathan, M., Ng, Y.H., Subramaniam, M., Nair, S., & Perumal, I. (2020). HRIS contributions and impact on strategic employee engagement and participation in private education industry. *International Journal of Management*, 11(11), 309-319.
- Johnson, R. D., Lukaszewski, K. M., and Stone, D. L. (2016). The evolution of the field of human resource information systems: Co-evolution of technology and HR processes. *Communications of the Association for Information Systems*, 38(1), 533-553. DOI:10.17705/1CAIS.03828
- Jooss, S., & Burbach, R. (2017). Assessing the degree of human resource innovation: an exploratory analysis of Irish hotel corporations. In *Electronic HRM in the Smart Era* (pp.33-57): US: Emerald Publishing Limited. DOI:10.1108/978-1-78714-315-920161002
- Khashman, A.M., & Alryalat, H.A. (2015). The impact of electronic human resource management (EHRM) practices on business performance in Jordanian Telecommunications Sector: The employees' perspective. *Journal of Management Research*, 7(3), 115-129
- Kim, S., Choi, B., & Lew, Y.K. (2021). Where is the age of digitalisation heading? The meaning, characteristics, and implications of contemporary digital transformation. *Sustainability*, 13(16), 1-20. <https://doi.org/10.3390/su13168909>
- Klett, E. (2018). Theory, regulation and practice in Swedish digital records appraisal. *Records Management Journal*, 29(1/2), 86-102
- L'ecuyer, F., & Pelletier, C. (2019). Exploration of social media capabilities for recruitment in smes: A multiple case study. *HRM 4.0 for HumanCentered Organizations*, 23, 221-239.
- Liu, G., Bin, Z.F., Muhammad, F., & Apine, H. (2020). Effects of digitalisation on managerial practices as experienced by managers. Unpublished Bachelor Thesis in Business Administration, School of Business, Society & Engineering, Mälardalen University. <https://www.diva-portal.org/>
- Mao, H., Liu, S., Zhang, J., & Deng, Z. (2016). Information technology resource, knowledge management capability, and competitive advantage: The moderating role of resource commitment. *International Journal of Information Management*, 36(6), 1062-1074.
- Mochi, F., Bissola, R., & Imperatori, B. (2017). Professional and non-professional social media as recruitment tools: The impact on job seekers' attraction and intention to apply. In: Bondarouk, T., Ruël, H.J.M., and Parry, E. (eds.) *Electronic HRM in the Smart Era* (The

- Changing Context of Managing People). Bingley: Emerald Publishing Limited, pp. 109-135
- Muralidhar, S., &Gopal, R. K. (2022). HR practices in the education sector (with special reference to b-schools in bangalore). *Adarsh Journal of Management Research*, 9(2), 1-12. ISSN 0974-7028
- Neeraj(2018). Role of digitalisation in human resource management. *Journal of Emerging Technologies and Innovative Research*, 5(1), 284-288. ISSN-2349-5162
- Okafor, C.E. (2018). Human resources in education: Development and utilization. *International Journal of Novel Research in Humanity and Social Sciences*, 5(5), 238-242. ISSN 2394-9694
- Okorosaye-Orubite, A. K. (2019). *Education in Nigeria*. In Y.M Abdulrahman& F.G Paulley. Education and development in Nigeria. Port Harcourt: PI African Press. P5.
- Onuorah, A.N., Okeke, M.N., &Ikechukwu, I.A. (2019). Compensation management and employee performance in Nigeria. *International Journal of Academic Research in Business and Social Sciences*, 9(2), 384-398.
- Parviainen, P., Tihinen, M., Kääriäinen, J., &Teppola, S. (2017). Tackling the digitalisation challenge: How to benefit from digitalisation in practice. *International Journal of Information Systems and Project Management*, 5(1), 63-77. DOI: 10.12821/ijispm050104
- Pauley, F.G., &Buseri, J.C. (2019). *The Teacher and Nation Building in Contemporary Nigeria Society*. In Y.M. Abudulrahman& F.G Paulley. Education and development in Nigeria. Port Harcourt: Pearl Publishers International Ltd. P7
- Rao, M.M., & Vaidya, R. (2018). A study of digitalisation in HRM and its effectiveness in execution of HR strategies and policies. *Helix The Scientific Explorer*, 8(6), 4220-4222.
- Sachs, J.D (2019). The digital age (twenty-first century). The ages of globalization: geography, technology, and institutions. New York Chichester, West Sussex: Columbia University Press, 169-194. <https://doi.org/10.7312/sach19374-009>
- Samson, H., &Rathee, R.S. (2018). Digitalisation of human resource management: A key towards organization's success. *International Journal of Research in Management & Social Science*, 6(1), 78-81
- Tanjung, B.N., (2020). Human resources (HR) in education management. *Budapest International Research and Critics in Linguistics and Education (BirLE) Journal*, 3(2), 1240-1249. e-ISSN: 2655-1470 (Online), p-ISSN: 2655-2647 (Print)
- Walkme (2023). What is digitalisation? <https://www.walkme.com/glossary/digitalisation/> Updated September, 12, 2023
- Wani, N.H., Dhami, J.K., &Sidana, N. (2022), Impact of education on poverty alleviation in Afghanistan: An empirical evaluation. *Kardan Journal of Social Sciences and Humanities*, 5(1), 1-14. DOI: 10.31841/KJSSH.2022.47
- Wikipedia, the free encyclopedia, 21st Century. Available at https://en.wikipedia.org/wiki/21st_centuryupdated 1 February, 2024