



# Role of ICT in Commerce & Management Education: In the context of Viksit Bharat@2047

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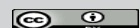
## ABSTRACT

Commerce and Management education has experienced a significant transformation in recent years, due to the rapid changes in technology. The traditional model of curriculum, pedagogy andragogy, has combined to revolutionize the classroom instruction model. Today's education system is driven by technology playing a pivotal role in redefining commerce and management education. This digital revolution is breaking down spatial or geographical boundaries, making learning models break barriers of temporal constraints, expanding access to high-quality business education almost on tap, and equipping students with the skills essential for success in a dynamic and global marketplace. There has been a challenging times for commerce and management education due to inclusion of ICT based education, innovation, creativity, adaptability, and impact of all. There is a scope of numerous opportunities as well as challenges associated with it. Due to changes in economy, peer-to-peer based, and incorporation of new education models, it is essential for students to understand about these new models and the ways by which they can become successful management professionals. This paper explores the envisioned transformation of India into a developed nation by 2047, termed "Viksit Bharat @ 2047," and the critical role that commerce and management education will play in achieving this goal. It highlights the current state of commerce and management education in India, identifies key areas for development, and proposes strategic initiatives to enhance the education system's effectiveness in driving economic growth and for social progress.

**Keywords:** Curriculum, Commerce Education, Pedagogy, Innovation, ICT

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Technology has become a transformational force in the continuously changing field of education, changing conventional teaching methods and improving the learning process. geographical boundaries have been eliminated by merging of virtual classrooms with e-commerce platforms, giving commerce students access to top-quality resources from anywhere in the globe. ICT has created new opportunities for commerce education. Through the use of technological simulations, students can apply their academic concepts in simulated real-world circumstances while gaining practical experience. Students will get the information's required to examine enormous set of data in order to obtain an understanding about consumer behavior, market trends, and financial markets. ICT creates an environment to develop the decision-making and problem-solving skills among students required to succeed in the commercial world. Due to massive open online courses, now education become more accessible to all students, the commerce and management students get the chance to attend classes of subject experts from prominent universities of India and around the world and corporate executives. The use of ICT in commerce education is much more than just digitizing the classroom instruction model. There is a paradigm shift in higher education system. ICT allows innovation in commerce and management education to create a dynamic, adaptive, and integrated teaching learning environment.

### **Viksit Bharat 2047**

In the Interim Budget 2024, Finance Minister Nirmala Sitharaman stated Prime Minister (PM) Narendra Modi's vision for Viksit Bharat by 2047. In her Budget 2024 speech, it mentioned that the government is working towards development that is all-pervasive, all-round and all-inclusive.

The term 'Viksit Bharat' means 'Developed India'. Viksit Bharat 2047 represents the government's vision to transform the country into a developed entity by its 100th independence in 2047. The four pillars of Viksit Bharat are Yuva (Youth), Garib (Poor), Mahila (Women) and Kisan (Farmers).

### **Viksit Bharat @2047: Vision, Purpose, and Significance**

The vision of Viksit Bharat is that of a prosperous Bharat in harmony with modern infrastructure and nature and giving opportunities for all citizens of all regions to reach their potential.

The Finance Minister, in her Interim Budget 2024 speech, stated that many development and growth-enabling reforms are needed in the states to realize Viksit Bharat's vision. Thus, a provision of Rs.75,000 crore as a 50-year interest-free loan is proposed to the state governments to support their milestone-linked reforms. Helping MSMEs grow and compete will also be a part of the Viksit Bharat roadmap.

On 11 December 2023, the PM launched 'Viksit Bharat @2047: Voice of Youth' via video conferencing. At the launch, it highlighted the role of educational institutions in an individual's personality development and stated that a nation becomes developed only when there is development of its people and it also emphasized the need to channel the energy of every university's students and youth towards achieving the common goal of Viksit Bharat.

The Viksit Bharat @2047: Voice of Youth was launched to realize the vision of Viksit Bharat, which demands a firm belief in India's destiny, unwavering dedication and a profound recognition of the people's vast potential capabilities and talent, particularly the youth.

The PM also extended an invitation to the youth to engage in the transformative agenda through the youth movement known as 'Ideas from Youth for Viksit Bharat@2047'. They urged everyone to go beyond their limits and contribute their ideas to the vision of Viksit Bharat@2047.

The PM suggested running special campaigns in every university and college in India to connect more youth with this campaign. Subsequently, the government launched the 'Ideas Portal' related to Viksit Bharat to provide suggestions on five different themes.

The government will form a high-powered committee to extensively consider the challenges arising from quick population growth and demographic changes. This committee will make recommendations to address these challenges comprehensively relating to the goal of Viksit Bharat.

The government is working to make India Viksit Bharat by 2047. To achieve the goal of Viksit Bharat, the government will focus on improving people's capabilities and empowering them.

### **Viksit Bharat in Different Aspects**

Viksit Bharat 2047 is the vision to transform India into a developed nation by 2047, the 100th year of independence. This vision encompasses various facets of development, such as economic growth, environmental sustainability, social progress and good governance, to make India a developed nation by 2047.

#### **Different Aspects of Viksit Bharat- 2047**

**Economic Growth:** A Viksit Bharat should have a resilient and strong economy that can provide opportunities and a high standard of living for all its citizens. The economy should be able to cope with the challenges of the 21<sup>st</sup> century based on entrepreneurship, innovation and competitiveness.

**Environmental Sustainability:** A Viksit Bharat should have a clean and green environment to preserve India's biodiversity and natural resources. The environment should be able to mitigate the impacts of climate change based on restoration, conservation and resilience.

**Social Progress:** A Viksit Bharat should have an inclusive and harmonious society that ensures the dignity and well-being of all its citizens. Society should be able to celebrate and respect India's cultural heritage based on justice, equality and diversity.

**Good Governance:** A Viksit Bharat should have an agile governance with sound policies and accountability. A good governance system is where there is provision to collect credible data, analyze areas for correction and act swiftly to improve the country based on teamwork, reflection, empathy and consultation.

### Online and blended learning

The ICT has change commerce and business education teaching instruction model through or by the use of online and blended learning approach to form and deliver lectures. A study by researchers at a Vietnamese university reveals that blended learning practices have had positive effects on learning and performance in multiple ways<sup>1</sup>. Online learning portals and websites have made education more accessible and flexible than ever before. According to Technavio, a market research and advisory company with global coverage, the online education market is expected to grow at a CAGR of 9.2 per cent from 2022 to 2027<sup>2</sup>. During that phase, the size of the market is expected to increase by \$3,461.93 million, indicating a significant and sustained growth of digital learning as a serious education model. This growth is driven by the convenience and accessibility that online courses offer. Students can now access high-quality business education from anywhere in the world, at any time, in bite sizes, and with digital resources literally at their fingertips.

### Personalized approach through technology

The incorporation of AI-ML, learner analytics driven by data science, and the emergence of platforms within business education, have ignited a transformative era of personalized learning <sup>3</sup>tailored adaptively to the unique needs and preferences of individual students. AI algorithms, coupled with data science and analytics, enable the dynamic adaptation of course materials and delivery standards that elicit a positive impact on the learners. Students, as a result, benefit from a personalized journey of professional transformation, receiving content that aligns with their specific learning pace and style. Real-time feedback mechanisms foster an interactive and responsive learning environment, enhancing student engagement and

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<sup>1</sup>Duong Huu Tong, Bui Phuong Uyen, Lu Kim Ngan, *The effectiveness of blended learning on students' academic achievement, self-study skills and learning attitudes: A quasi-experiment study in teaching the conventions for coordinates in the plane, Heliyon, Volume 8, Issue 12, 2022, e12657, ISSN 2405-8440,*

<sup>2</sup>*India Online Education Market Size 2024-2028 Technavio <https://www.technavio.com> › Education Services*

<sup>3</sup>Jian, Maher. (2023). *Personalized learning through AI, Journal of Advances in Engineering Innovation. Vol. No.5.*

comprehension. Adaptive assessments driven by AI algorithms further optimize the learning process, enabling students to focus on areas where improvement is needed.

This, when combined with on-ground face-to-face faculty-driven modular immersions on university campuses, options that some top universities in India offer, creates a powerful and career-defining learning impact on the participants.

### **Utilizing technology to enhance efficiency**

Technology has also revolutionized the way business school students engage with their course materials. Interactive learning tools, virtual business simulations, cross-continental collaborative projects, and business intelligence software allow students to apply theoretical knowledge to real-world scenarios. These immersive experiences enhance students' problem-solving skills, critical thinking abilities, and decision-making processes. Additionally, technological tools like virtual reality and augmented reality are increasingly being integrated into MBA programs, providing students with interactive learning experiences that simulate business environments and scenarios. These adaptations are by design, better in multi- and inter-disciplinary universities where there is depth of faculty resources in allied disciplines such as computer science, mathematics, statistics, natural and life sciences, humanities and social sciences, etc.

Data analytics has become integral to business education programs. Students are exposed to data structuring, statistical analysis, data mining, and predictive and prescriptive modelling techniques, equipping them with the skills to make informed business decisions. The ability to analyze vast amounts of data and extract actionable insights is a valuable skill in today's data-driven business landscape. Business education programs leverage cutting-edge analytics tools and case studies to teach students how to harness the power of data to drive strategic initiatives and innovation within organizations. Furthermore, the global reach facilitated by technology extends beyond the confines of physical classrooms and virtual interactions. It offers students opportunities to participate in international business projects and gain first-hand experience in global market dynamics. Through collaborative platforms and digital networking, students are not only exposed to diverse perspectives but also have the chance to build a robust global professional network. These connections open doors to international career prospects, enhancing their potential for success in the ever-expanding global business landscape.

### **The future of a tech-driven business education model**

The future of business education is intrinsically linked to technology, and it promises to bring about a profound transformation in the way we prepare the business leaders of tomorrow. Technology will continue to enhance the accessibility and flexibility of education, enabling

students from diverse backgrounds to access high-quality business programs. As business education programs continue to evolve, embracing the latest digital and technological advancements is essential to preparing graduates <sup>4</sup>for the challenges and opportunities of the modern and global business world. As a result, B-School graduates emerge not only with a deep understanding of business principles but also with the ability to leverage technology strategically and tactically, making them invaluable assets to the organizations they serve, whether large, medium, or new entrepreneurial startups.

## **TRENDS IN B-SCHOOL CURRICULUM**

### **Emphasis on Digital Transformation**

One of the most significant trends in B-school curricula <sup>5</sup>is the emphasis on digital transformation. As companies increasingly rely on technology to streamline operations, improve efficiency, and drive innovation, business schools are incorporating courses and modules focused on digital strategy, e-commerce, and digital marketing into their programs. Students learn how to leverage technology to create value for businesses and adapt to the ever-changing digital landscape.

### **Data Analytics and Business Intelligence**

Another major trend in B-school curricula is the integration of data analytics and business intelligence into coursework. With the proliferation of data in today's digital world, the ability to analyze and interpret data has become a critical skill for business professionals. Courses in data analytics, predictive modeling, and business intelligence empower students to make data-driven decisions and gain insights that drive business growth and success.

### **Entrepreneurship and Innovation**

Innovation and entrepreneurship have always been central to management education, but advancements in technology have sparked renewed interest in these areas. B-schools are incorporating courses and programs focused on entrepreneurship, innovation management, and design thinking to nurture the next generation of business leaders and innovators. Students learn how to identify opportunities, develop innovative solutions, and bring new products and services to market in today's fast-paced business environment.

### **Blended Learning and Online Education:**

With the rise of online education platforms and digital learning technologies, B-schools are increasingly adopting blended learning models that combine traditional classroom instruction

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<sup>4</sup>Banerjee Bibek (Oct, 2023), *Business education in the digital era, India Today*.

<sup>5</sup>Pinnacle (Jan, 2023), *The Role of Technology in Business Education: Trends in B-School Curriculum*.

with online coursework and virtual learning experiences. This flexible approach allows students to access course materials anytime, anywhere, and empowers them to personalize their learning experience to fit their individual needs and preferences.

## **Experiential Learning and Real-World Applications**

In addition to traditional coursework, B-schools are placing greater emphasis on experiential learning opportunities that allow students to apply their knowledge and skills in real-world settings. Internships, consulting projects, case competitions, and simulations provide students with hands-on experience and practical skills that are invaluable in today's competitive job market.

ICT or Information and Communications Technology offer latest learning mechanism and environment for the teaching of commerce. Traditional approach of teaching commerce education incorporate ICT based model of teaching in order to meets the needs of today's learners. New technologies provide feasibility to education and impact pedagogy, learning methodology and appropriating information. ICT as tools within the academic environment in commerce education involves application for business administration and management, teaching and learning of ICT related proficiency for strengthening the presentation of classroom task, teaching learning intellectual, problem solving aptitudes, instigating creativity for research and communication tool by teachers and students. Teaching and learning of commerce education courses outstrip the teacher standing in close proximity to pupil and communicating information to them without the students passable involvement. Commerce education has seen beeline refashioning its curriculum acceptable to the best universal approach

**Business Education Concept** Business education provides competencies required in managing business affairs and utilizing the services of the business world. Business education feeding in colleges is associated basically with the development of relevant expertise and knowledge capacitating an individual to function constructively in the world of work. Business education 'delivers the beneficiaries with aptitudes required in overseeing trade matters and utilizing the services of the business world. A student of business education easily cultivates potency for entrepreneurship pursuits especially in the era of economic depression.

**ICT-CONCEPT:** ICT refers to a technology that accumulates, evaluates, handles and provides communication of information in digital form. ICT contemplates more on communication including internet, wireless network and other communication forum over an extensive domain to enhance the efficiency of information. ICT is computer-based tools practiced by individuals to function with information and communication processing demands of an organization. ICT is a congregation of technologies for its functional usage in information access and impact

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<sup>6</sup>Das Pradip Kumar, *Implication of ICT in Business Education -A Study* THE American Journal of Humanities and Social Sciences Research (THE AJHSSR) 2021 E-ISSN: 2581-8868 Volume-04, Issue-05, pp-83-90.

of ICT on business education technology has had a dramatic effect on the global business environment. Application of technology in management provides opportunities to work outside the office and increases access to important information regardless of location. Modern technology has completely changed atmosphere creating entire business niches that never even existed before. Managers run their business from laptops, tablets and smartphones, never even considering opening a brick-and-mortar presence. For corporate meetings, there is no need to drive long distances due to teleconferencing medium. Digital technologies such as social media, artificial intelligence and e-commerce allow corporate to reach global audience and improve customer satisfaction in a more effective manner. Corporate sector also use complex software programs to track sales, manage customer relations, ensure data security and streamline their business operations. Global knowledge economy presents developing countries with both opportunities and challenges. Firm-level technological capabilities do not develop in vacuum. Such capabilities extend beyond the individual firm to the broader network in which the firm is embedded. Technology invariably brings changes on various aspects of business areas such as human resources, strategy planning, customer relationship management, business environment, service management and performance metrics. Decision-makers should understand the nature of changes, their potential impact, plan for them and manage the change process to ensure buy-in of all the relevant stakeholders. Technology plans must be devised as part of corporate strategy and must take into consideration the impact technology has on processes, governance and people. Implementing ebusiness applications require process redesign, organizational restructuring and alignment, new job descriptions and reviewed and revised policies. Communication. E-business is changing all the rules and models especially in the COVID-19 pandemic situation around the globe. An organization's ability to embrace new technology and business model is the key to increasing organization's productivity. True benefit of e-business is achieved through the digitization of the entire value chain. Decision to implement an e-business initiative should not be undertaken lightly and the benefits that can be achieved from such a venture must be investigated thoroughly before deciding to go ahead. In the essence of ICT, both teaching and learning thrivingly develop their own demeanor of dexterity and become expertise. Among others ICT should be incorporated into the pedagogy of study plan and other confederate academy in the growth of academic software and the maneuvering of internet on impressive educating of perception should be structured by the relevant bodies. Modern ICT base education is socioeconomic commodity. Impact of ICT on business education students depends much on how business education teachers exercise ICT within the teaching and learning practice. Teachers impact of ICT on teaching methodologies are mild. Recently, business education teachers have recognized its substance for learning through experience. ICT impact more in e-mature institutions (e-learning maturity level), e-confident teachers suggesting that once the structure is framed, the benefit will be substantial. The task is, therefore, to endow all teachers and students to

attain e-maturity. Reconnoitering this novel blooming is a healthy demonstration that the aeon of teaching without ICT dexterity is past ICT related complication for business education Learners former exposure: This has profound impression on learner's view of phenomena and their enthusiasm to welcome meticulous delineation. The need is, therefore, to examine the students view in learning and take into account their perspectives before refashioning their ideas. Teachers must substantiate coeval discernment with students prior discernment of meticulous materializations. Societal dissimilitude: Efficacious exercise of few strategies materializes to demonstrate not only age and societal apposite dissimilitude but also accredits students to associate latest information to early knowledge.<sup>7</sup> Learners misconception: At times, learners appear to have misconception towards developing new skills. This primal inclination balks its percipience producing impediment to their conceptualization.

## **Integration of Information and Communication Technologies (ICT) in Higher Education:**

### **ICT Initiatives**

Online learning: Production of course ware E-content for postgraduate subjects. e-PG Pathshala: The National Mission on Education through Information Communication Technology (NME-ICT) is defined as a Centrally Sponsored Scheme to leverage the potential of ICT in the teaching and learning process for the benefit of all the learners in Higher Education institutions at anytime, anywhere mode. The content developed under this initiative is of high quality, curriculum-based, and interactive in different subjects across all disciplines of social sciences, arts, fine arts and humanities, natural, mathematical sciences, linguistics and languages under this initiative named e-PG Pathshala. It is available in open access and hosted on the INFLIBNET server.

e-PGPathshala<sup>8</sup> provides high-quality e-content for PG programmes for the benefit of teachers and students. It addresses the issue of disparities of various kinds such as rich, poor, urban, rural, cast, religion-based disparities, geographical disparities, regional disparities, etc. e-PG Pathshala content is being used by universities for hybrid learning.

### **Massive Open Online Courses for SWAYAM Platform**

The Government has launched the SWAYAM portal that provides an integrated platform for online courses using information and communication technology (ICT). Through this, it would be possible for any student to join virtual courses offered by the best teachers in the

<sup>7</sup>Das, PK, *Implication of ICT in Business Education -A Study*, AJHSSR, Volume-04, Issue-05, pp-83-90

<sup>8</sup>Annual Report 2022-23, [www.ugc.ac.in](http://www.ugc.ac.in)

e-PGPathshala, INFLIBNET Centre, <https://epgp.inflibnet.ac.in>

Country, interact with the teacher, take tests, earn academic credits, and transfer them to their academic record.

**National Academic Depository (NAD)** National Academic Depository (NAD) is a permanent scheme of the Ministry of Education (MoE) implemented by the University Grants Commission (UGC) through a single depository DigiLocker. It is an online storehouse of academic awards (Degrees, Mark-Sheets, etc.) lodged by the Academic Institutions (Universities, INIs, School Boards, etc.) in a digital format. This facilitates students to get authentic documents/certificates in digital format directly from their original issuers anytime, anywhere without any physical interface.

### **Academic Bank of Credit (ABC)**

Academic Bank of Credit (ABC), <sup>9</sup>as envisaged in the NEP-2020, shall be a National-level facility to promote flexibility of curriculum framework and interdisciplinary/multidisciplinary and academic mobility of students across the Higher Education Institutions in the country with appropriate “Credit Transfer” mechanism. ABC shall provide to each of the students the facility to open a unique/individual Academic Bank Account in digital form. Each account holder would be provided with a unique id. The major functions of ABC are registration of HEIs under the ABC scheme and, opening, closure and validation of academic accounts of students, credit verification, and credit accumulation, credit transfer/redemption of students and also promotion of the ABC among the stake holders.

## **CONCLUDING REMARKS**

ICT significantly impact commerce and management education in India by making learning more accessible, interactive, and efficient for the learners. It helps bridge gaps between teacher and student, provides rich academic resources, and prepares students for the dynamic business environment. However, addressing challenges of the digital divide and cybersecurity is essential for augmenting ICT benefits. The higher educational Institutions and universities should focus on providing required skills and education to teachers about modern skills and technology and also introducing creative and innovative pedagogies by lessening the digital gap and quality of education. The *Quality of Content*, the effectiveness of ICT in education depends on the quality of digital content used by the educators to educate the students. Despite technological advancements, there are still disparities in access to ICT resources, especially in rural areas, there is a need to work on this aspect. ICT usage in academics is to cultivate self-concept and self-governing learning and developing sophisticated policy for academic progress and social equity. Education is universal in nature and needs surveillance and for the purpose of achieving it, concerted efforts must be organized. Opportunity remains trivial if

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<sup>9</sup>UGC(2021), *Draft ABC scheme in higher education regulations*, 2021.

the students lack the competencies to domesticate the opportunity. ICT facilitates collaborative projects with international organisations, giving students exposure to diverse business practices and cultures. Students have access to international academic rich resources, like global case studies, research, and best practices, providing a broader perspective and understanding of international business practices. ICT tools assist in developing soft skills like communication, teamwork, and problem-solving through collaborative projects and online interactions and meetings. ICT support personalized learning experiences by adapting content based on a student's progress and learning style. Educational Institutions may use data analytics to identify key areas where students may need additional support and customized educational content accordingly. Courses like digital marketing, data analytics, and financial technologies are becoming integral parts of commerce and management education and preparing students for the modern business landscape. **Students can access to** online journals, research papers, and e-books through digital library, ICT expands the resources available for students and faculty, facilitating better research and study. ICT provides access to online courses, webinars, and virtual classrooms, allowing students to learn from anywhere. Online platforms like Coursera, edX, and NPTEL offer courses from top academic institutions and university subject experts. In summing up, Information and Communication Technology (ICT) plays a very crucial role in transforming commerce and management education in India.

## Recommendations

Incorporating Information and Communication Technology (ICT) into commerce and management education in India may significantly enhance teaching learning outcomes and prepare students for the global business environment. Here are some recommendations to effectively integrate ICT into commerce and management education:

**Curriculum Integration:** Digital literacy should be fundamental part of the curriculum. Include courses on data analytics, digital marketing, and e-commerce.

**Smart Classrooms:** Implement smart classrooms equipped with interactive whiteboards, projectors, and high-speed internet to facilitate engaging and interactive teaching learning process.

**Online Learning Platforms:** Develop e-learning platforms that provide access to online lectures, tutorials, and study materials anytime, anywhere for the learners.

**Virtual Labs:** set up virtual labs for subjects that require practical experiments.

## Blended Learning Models

- ❖ **Hybrid Classes:** Combine traditional classroom model of teaching with online components to provide a flexible and comprehensive learning experience.

- ❖ **Flipped Classroom:** Encourage flipped classroom models where students may review lecture materials at home and engage in interactive activities in class.

**Artificial Intelligence & Block Chain:** Integrate Artificial Intelligence and Block Chain Technologies for personalized learning, predictive analytics, and administrative automation.

**Cybersecurity Awareness:** Educate students about cybersecurity practices and the importance of data protection. For protecting sensitive business information.

**Ethical Concern:** Provide practical training on ethical hacking and security practices to students and educators, emphasizing the importance of ethical behavior in protecting digital assets.

- ❖ ICT lab should be well provisioned for all ICT requirements to fabricate teaching learning process.
- ❖ A computer social reciprocity forum should be formed in educational institutions and universities.
- ❖ Government should provide support to educational programmes mainly with specific on ICT.
- ❖ Teachers should acquire adequate training and retraining in ICT programme systematically congruent with new technological in order to stimulate competencies.
- ❖ Majority of the institutions are not having sufficient ICT laboratory; it may impact in the process of learning ICT. ICT facilities with advanced ICT equipment should be arranged by the authorities in order to facilitate teaching.
- ❖ Qualified ICT staff should be employed by authorities for enhancing the teaching of ICT in commerce and management education department.
- ❖ Government should increase funding of educational programmes generally with particular interest in ICT.
- ❖ A part of Education Cess should be spent in acquiring computer.
- ❖ Efforts should be made to strengthen the knowledge of teachers through seminars, workshops, training, etc. on ICT programme.
- ❖ Administration must focus more on individual student to develop their ICT knowledge.
- ❖ Last but not least cooperation is required from all the stakeholders for the efficient and effective implementation of ICT.

## REFERENCES

Adeoye, Y.M., Oluwole, A.F. and Blessing, L.A. 2013. Appraising the role of information communication technology (ICT) as a change agent for higher education in Nigeria. *Int. J.*, **5**(8): 177-183.

- Ajayi, I.A. 2008. Towards effective use of information and communication technology for teaching in Nigerian colleges of education. *Asian J. Inf. Technol.*, 7(5): 210-214
- Ajisafe, O.E. 2014. Fostering utilization of information and communication technology skills among students of business education. Proceedings of the 22<sup>nd</sup> conference of the Association of Business Educators, Nigeria, pp. 171 – 174.
- Bolarinwa, K.O. 2014. Business education instructors' and students' perception of the benefits and media in the classroom, Proceedings of the 22<sup>nd</sup> conference of the Association of Business Educators, Nigeria, pp. 163 – 170.
- Desai, S. 2010. Role of information communication technology in education, 4th national conference: IndiaCom-2010, computing for nation development.
- Egboka, P.N. 2012. The status of information and communications technology (ICT) in empowering policy implementation in universities in south east zone of Nigeria. *Int. J. Edn. Res. Dev.*, 8(2): 231- 236.
- Ezeani, N.S. and Akpotohwo, F.C. 2014. Integrating Information and Communication Technology (ICT) in Accounting Education Instruction in Ekiti State Universities. *IJBSS*, 5: 195-204.
- Ezenwafor, J.I. 2012. Adequacy of exposure to information and communication technology by graduating business education students of tertiary institution in Anambra State. *Bus. Edn. J.*, 8(2): 45-60.
- Falobi, O.V. 2014. An investigation into the impact of ICT on commercial students' academic performance in public schools in Lagos State. *J. Ass. Bus. Edn. Nigeria*, 1(1): 48-154.
- Krubu, D.E. and Osawaru, K.E. 2015. "The impact of information and communication technology (ICT) in Nigeria University Libraries", *J. Lib. Ph. Pr.* www.unllib.unl.edu/1pp (accessed Mar. 28, 2015).
- Lillejord, S., Borte, K., Nesja, K. and Ruud, E. 2018. "Learning and teaching with Technology in Higher Education A Systematic Review". Oslo: Knowledge Centre for Education. www.kunnskapscenter.no.
- Major, N.B. 2013. The Role of Information Communication Technology (ICT) in Enhancing the Quality Assurance Procedures of Nigerian Universities. *IJEFM*, 1: 42-48.
- Nwaiwu, B.N. 2009. The imperatives of information and communication technology (ICT) in business teacher education in the 21 century. Association of Business Educators of Nigeria. Book of Readings, 1(9): 97-103.
- Ogunsola, L.A. and Aboyade, W.A. 2005. Information and communication technology in Nigeria: Revolution or evolution. *J. Soc. Sc.*, 11(1): 7 – 14.
- Okoli, B.E. 2010. A case for entrenchment of information and communication technology (ICT) literacy in the business education programme. *J. Voc. Adu. Edu.*, 7(1): 82-87.
- Onojetah, S.O. 2012. Challenges of implementing Business Education program through information and communication technology (ICT). *Association of Business Educators of Nigeria Book of Readings*, 2(1): 156-161.
- Oye, N.D., Shallsuku, Z.K. and Iahad, A.N. 2012. The Role of ICT in Education: Focus on University Undergraduates taking Mathematics as a course. *IJACSA*, 3: 136-143.
- O'Hara, S., Pritchard, R. and Bacon, P. 2015. "Teaching vocabulary with hypermedia". www.education.com.
- Pearson, C., Kinzer, G. and Leu, T. 2005. What is the Impact of Technology on Learning. Los Angeles: Prentice Hall.
- Spiegel, M.R. and Stephens, L.T. 2011. SCHAUM's Outline Series Statistics, (4<sup>th</sup> Ed.); McGraw Hill Companies Inc. Tony S (Tenth edition), New York (2001). Concise Oxford English Dictionary, Oxford, UK: Oxford University Press.

- Tariq Zafar, S.M., Hemdat, Waleed, Chaubey, D.S. and Rehman, A. 2019. An exploration of academic leadership dynamics: A literature review, *Int. J. Lead*, **7**(1): 28-36.
- Zhao, K. 2005. Exploring the synergy between entrepreneurship and innovation. *Int. J. Ent. Beh. & Res.*, **11**(1): 25 – 41.