INFORMATION COMMUNICATION TECHNOLOGY: A DRIVING FORCE FOR GLOBAL EDUCATION

Dr. Mehzbeen Sadriwala

Assistant Professor

Imam Abdulrehman bin Faisal University, Saudi Arabia.

Dr. Mohammad Akram Khan

Assistant Professor

Madhav University, Sirohi

─────────── **ABSTRACT** ───────────

Globalisation creates new challenges that universities must resolveand inventrenewed inputs for the formulation of globaleducation policies. In a global economy, the majority of nations want to increase their competitiveness abroad by providing new skill sets and labour profiles.Due to the digital revolution countries are prioritising and fostering effective learning more and more and this innovative social restructuring has increased the expectationsof economies for a highly educated workforce.

Information communication technology uses several tools to accelerate the learning process that makes use ofadvanced technology which is the driving forcefor creating a ICT-based learning platform. This is due to the fact that the growth of ICT has an impact on the evolution of the educational system at all levels, from higher education to basic education. Active learning, collaborative learning, creative learning, integrative learning, and evaluative learning are a few techniques that can be used in the multicultural-based PAI learning process through ICT development. The goal of media development with ICT is twofold: first, to give students choice in selecting when to study and to reduce stress brought on by physical location. Second, pupils are supposed to be able to investigate and learn about fresh concepts or inventions from professionals worldwide by utilising the existing ICT resources.Third, the integration of ICT into the educational system makes it possible to carry out various enforcement tasks, such giving lectures to students, completion ofassessments and keeping track of their progress.

In order to provide a balanced theoretical and research background on the opportunities and potential benefits of information and communication technologies (ICT) for raising educational standards globally, this article examines ICT as a driver for higher education from a global viewpoint. Education systems must adopt information and communication technology in order to meet the growing demand for a workforce with current skills and competencies that are in line with today's international industries and continue to drive growth into the next century.

Keywords: Information Communication Technologies, Global Education, Social Restructuring, GlobalWorkforce,Digital Revolution.

Introduction

The movement of people, ideas, values, technology, and economics beyond national boundaries is referred to as globalisation. Because every country has its own unique history, traditions, cultures, resources, and goals, globalisation has varying effects on each. The current global operating environment is driven by two main factors. First, there is a trend towards more mobility: there is an ongoing expansion in the movement of people, capital, goods, ideas, cultures, and values across national borders. The second is how interdependent the world's regions are becoming, interacting and working together more in the areas of production, social development, communications, human exchange, and education as well as the economics.

The authors Mellow and Woolisobserved that higher education was evolving into a powerful economic force.Within the next few decades, the field of higher education will undergo three major and seismic transformations, which they detailed. Among these changes are:

1) Higher education's globalisation. Technology's effect on how instructors, students, and knowledge are seen.

2) Market research utilising a higher education business model.

3) In a very short period of time, information and communication technology (ICT) has emerged as one of the fundamental components of contemporary global society and education. The world has become more globalised because of ICTs, and universities are now highly networked, interdependent, and international which is helping in social restructuring across the globe.

ICT: A Gizmofor Global Education

The influences of globalisation are causing ongoing changes in education. The effects of globalisation on education include quick advances in communications and technology, changes in ideas, values, and knowledge within global learning systems, altered roles for teachers and students, and a shift from industrialization to an information-based society. According to authors Shahidi and Seyedi, globalisation has always been a crucial aspect of college life. One of the most significant possibilities and problems that globalisation will bring to universities is the quality of education. Globalisation, according to Zondiros,requires mobility and adaptability, which makes it necessary to create more adaptable ICT-based learning strategies.

The latter suggests that expanding access to education is a challenge in terms of improving skills through flexible and distributed learning. New digital technologies have created a global civilization that has impacted education and brought new dimensions to the creation and exchange of knowledge. Through its eLearning Action Plan, which has as one of its goals "to enhance the efficacy of learning by improving availability of materials and services in addition to remote exchange and collaboration," the European Commission is encouraging the use of ICT in learning activities. Technology for information and communication (ICT) has been hailed as a potentially formidable enabler for reform and transformation in education.

Media use in education is one of the key elements in achieving the improvement of educational quality in the modern era. This is because education consists of various elements such as goals, strategies, resources, media, teacher roles, student positions, and environmental influences. Learning is the process by which pupils pick up knowledge through media and through communicating with teachers in both directions.Since learning is actually the process of educators sending messages and information to students, media plays an integral part in facilitating the transfer of messages and information to students in the modern educational environment. This is because

learning can be realised via collaborative endeavours and dialogue in which educators and students exchange messages or information. Today's schools are thought to use less effective conventional learning methods, and ideas about intellect, creativity, and brain capacity have changed quickly in tandem with developments in communication and technology. The people who seek to address the flaws and drawbacks of traditional educational systems are strengthened by these advancements.In traditional methods, the teacher remains the only informant envisaged in the field, the whiteboard serves as the primary tool for knowledge transfer, and the room is organised in a static manner (teacher centred).

Global patterns in higher education and ICT The everyday routine of universities has undergone a substantial transformation due to the latest advancements in information and communication technologies (ICTs). Ultimately, because ICTs can enable new forms of education in digital environments, incorporating them into teaching and learning presents new problems for educators as well as great opportunity for higher education institutions. Therefore, in order to meet the new needs, opportunities, processes, and potentials brought forth by digital media and computational tools, considerable modifications have been made to the curricula and educational programmes of various professions, including design, business, medical, and engineering. The constant development of ICT tools' functionality, robustness, ease of use, and worldwide accessibility has made them appealing and fascinating as adaptable teaching tools for usage in educational institutions. ICT research consistently yields positive results. ICT primarily focuses on improving the efficacy and efficiency of traditional teaching and learning methods, which results in changes in education.

Thousands of colleges have embraced contemporary ICT tools because they are convenient, often cost-free, engaging, and thrilling to use. For this reason, it is imperative that these tools be included into education, particularly to improve the teaching and learning process. The majority of researchers suggested that, in contrast to what has previously been observed in traditional educational settings, ICT tools support constructivist approaches in education and have the potential to enable ubiquitous learning. The majority of literary works have demonstrated the value of ICT technologies in the classroom. These also included taking customised subject content and using it to improve learners' dialogues for better learning stimuli and experiences. Furthermore, according to certain experts, ICT-based educational resources and activities are highly helpful in enhancing students' cooperative and collaborative learning abilities.Previous research demonstrates that the unique qualities of each school have a significant impact on the effectiveness of creative technology use practises in the classroom. The majority of countries' formal education delivery structures are projected to face challenges from these developments, which are predicted to persist. An exclusive segment focusing on "developing patterns and obstacles in online education:

a) **Teacher managers/mentors:** Rather than serving as a source of knowledge, teachers are now more like instructional managers who assist students in following their own learning pathways, find pertinent resources, facilitate collaborative learning, and offer advice and support both inside and outside of the allotted 45-minute instruction period.

b) **Gaming:** The extraordinary popularity of games that emphasise interaction, built-in rewards, and active involvement shows that educational games are a viable way to capture learners' interest and attention in addition to established methods of instruction.

c) To ensure that their students receive a customised copy that perfectly fits the speed and style of the course, many online texts give teachers the option to edit, add to, or

otherwise modify the content for their own needs. In many circumstances, these resources are used in addition to the official textbook. Through many modern ICT patterns, such as wireless connections, the web, search sites, databases, and web technologies, learners can access and spread electronic material, such as e-journals and e-resources, and can enhance their learning abilities.

d) **Redefining learning spaces:** More emphasis is being placed on ideas such smaller open learning spaces for project-based learning, personalised areas for students and teachers, circular tables, and more use of light and colour.

e) **Smart portfolio assessment:** Teachers will be better able to identify learning gaps and adapt their pedagogical approaches and content by organising, managing, organising, and retrieving learning-related data.

f) **Ubiquitous learning:** School systems all throughout the world are becoming capable of offering pupils learning opportunities "anytime, anywhere" as a result of the development of more resilient network infrastructure and more affordable computers.

g) **One-to-One computing:** Giving each student an information appliance and designing learning spaces that presuppose everyone has access to technology is a popular trend in classrooms across the globe.

h) **Cloud computing:** Programmes are increasingly being run on server farms that are accessible over the Internet rather than on standalone desktop computers. Providing ubiquitous connectivity to access information stored in the "cloud" will be a difficulty.

I) **Mobile Learning:** With the development of new hardware and software, mobile phones, or "smart phones," are becoming

indispensable tools. In the near future, computing capabilities will surpass personal computers as the preferred information appliance in classrooms. ICT includes all communication-related technologies, not simply computers. Personalised learning: Educational institutions are looking more closely at how to utilise technology to better assess a student's past knowledge and adjust instruction to meet both learning gaps and individual learning preferences.

Driving Forces

Foundational Framework Finding the essential components or motivating factors that underpin a learning process is essential for comprehending the function and potential of ICT for learning. Changes in a learning process's configuration are caused by driving forces. 95 International Handbook of Information Technology in Primary and Secondary Education, J. Voogt, G. Knezek, eds., 97–111. © Business Media, LLC and Springer Science in 2008. The teacher, the student as a learner, the learning content, and the learning materials are the four main components that define the learning process (Plomp et al., 1996; Voogt and Odenthal, 1997). The main components of the learning process and their affecting factors are shown in Fig. 1.

The relationship between the learner and the teacher, who are the players in the learning process, is represented by the horizontal dimension. The vertical dimension denotes the learning infrastructure, which is made up of learning resources, such as ICT infrastructure, and content related to what has to be learnt. The interaction of the four driving forces—teacher, learner, content, and materials—causes the learning process to occur at the intersection of these dimensions. The learning process's context or environment is provided by the degree of school administration and organisation, which is symbolised by the outer circles. The graphic demonstrates the idea that a learning process is

the outcome of both the individual traits of the actors and their interactions, as well as the structural conditions generated from the learning infrastructure and the school environment.
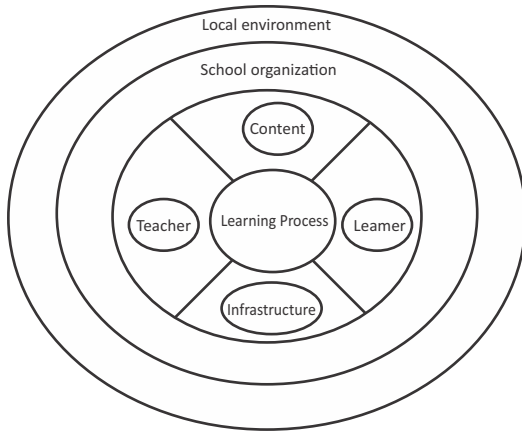

Fig.1: Driving forces of ICT in the learning process

There are various ways to approach how the learning processes are arranged. If learning content is the primary motivator, then learning infrastructure, learner characteristics, and the teacher's role must receive equal consideration. Conversely, the primary motivators could also be the learner's attributes, the teacher's function, or the selection of the learning infrastructure. We contend that the final configuration and outcomes of the learning process are not indifferent to the supremacy of one of the driving forces. One way to think of the supremacy of a driving force is as a learning instructional paradigm. According to the American Heritage Dictionary, an educational paradigm is a community's shared collection of presumptions, conceptions, attitudes, and practises that form their way of seeing the world. Other motivating factors may have an impact on the learning process when contradictions appear within a particular paradigm or when an instructional paradigm is no longer able to satisfy societal expectations.

Discussion

It is imperative to acknowledge that the entire world is moving towards the internet. While ICT is one of the technological forces driving globalisation, it is not the only one. Globalisation is being driven by rapid technology developments. Businesses and other countries need to be informed of the latest developments in biotechnology, new materials, and ICT and take proactive steps to foresee trends, ramifications, and implications, as well as devise suitable responses. A lot of us are aware that the world in which we live is changing quickly. However, the majority of us are still unaware of how quickly things are changing and how many technical advancements and other changes are connected to one another. These developments will have a significant impact on our daily lives and our future. And in the absence of this consciousness, it will be challenging to comprehend our current situation in its entirety and give workable answers that will guarantee that humans have a role in the future.

The 1980s saw the emergence of a severe economic crisis in the majority of African nations. In response, the West used international financial institutions, mainly the World Bank and the International Monetary Fund, to impose structural adjustment programmes, which tightened imperialist control over the continent. According to Ibrahim {2002}, globalisation has made the West no longer feel embarrassed to declare that imperialism is necessary. In light of the current global trends, it is concluded that specific actions must be made to maximise the benefits of globalisation while minimising the destabilisations, dislocations, inequities, disruptions, distortions, and even the notion of "digital slavery." Stated differently, countries and businesses possess the ability to choose how to address the dangers and difficulties they face.

African nations and businesses need to create institutional frameworks and procedures for raising knowledge and understanding of the type, speed, ramifications, and implications of the changes brought about by globalisation in order

to effectively manage the globalisation process. It is necessary to establish specialised teams including members from the public and private sectors to monitor, analyse, and share information about the structure, trends, and implications of globalisation. These teams should also suggest policy measures to all parties involved. In order to make sure that the youth and the younger generation do not miss the train of this worldwide trend, it is also imperative that they be educated through all available information sources, particularly the Internet. It is imperative to engage in proactive steps with the media to efficiently distribute information and perspectives regarding globalisation. Any country that wants to be ready for globalisation must place a strong emphasis on its youth and children, since they are the ones who will shape its future and have contributed significantly to the amazing technological advancements of the last half of the 20th century. Given that children make up a large portion of the population in Africa, attention to children and youth is especially necessary. A country that fails to embrace the massive growth of knowledge and online connectivity that awaits its youth is doomed. Attacks on ignorance must precede attacks on poverty, and the viability of a nation is only ensured when its youth are equipped with the knowledge and skills necessary to participate in the global future of today.

A major focus of the global preparedness agenda would be the advancement of the Internet and telecommunications infrastructure. Globalisation is largely driven by technology, so the core of preparedness needs to be centred on investments that increase Nigeria's technological capacity: research and development (R&D) spending, institutional development, venture capital for creative projects, and forward-thinking curricula that equip graduates for the challenges of globalisation. The public sector needs to change in order to be ready for globalisation and the difficulty of overseeing an economy driven by the private sector.

Government practices, service delivery, record keeping, and information dissemination must adapt to these new developments if the private sector is going online and using the Internet. The innovative networking of the nation's many efforts can serve as a catalyst for the government, business community, and civil society to get ready for globalisation. Additionally, in order to prevent the idea of "digital slavery," policies that are focused on computer literacy and internet connectivity must produce results quickly and sustainably. It is false to believe that nations should learn to adapt to or take full advantage of the effects and repercussions of globalisation rather than trying to control its speed or force. Countries can actively regulate its pace and effects by exercising smart cooperation and managerial practises. What is especially concerning is that the world's poorest countries—especially those in Africa—have not benefited from the surge in foreign direct investment (FDI) in recent decades.

Even while FDI has increased due to globalisation, less than 1% of it went to Sub-Saharan Africa. The utilisation of Trade-Related Intellectual Property Rights (TRIPs) and Trade-Related Investment Measures (TRIMs) to restrict developing nations of markets for the developed, while ensuring little to no transfer of technology to these countries, is another issue of concern. Another issue that should be addressed is the increasing amount of non-tarrif barriers that developed nations are putting on goods from developing countries while forcing them to open up their own markets to the developed countries. The industrialised nations freely use subsidies, but they punish others who do the same.

It must be acknowledged that industrialised nations are able to attain these fits because of the benefits of having ICTs available to them. Due to their incapacity to utilise ICT resources effectively like wealthy countries, developing countries may view all of the aforementioned

steps taken by affluent countries as "digital slavery." African nations need to embrace the challenges posed by globalisation and make every effort to eradicate slavery in the twenty-first century. The developing nations should work together to organise research and make use of available expertise in order to carry out actual information collection and evaluation that reveals the real effects of the situation in developing nations, as well as to seek sufficient participation at global gatherings where the concerns are discussed.

Furthermore, for IT to be used successfully, a few criteria must be met, including a steady power supply for the computers, a working phone network for data transmission, foreign cash for technology imports, and computer-literate staff. It is depressing to learn that many Sub-Saharan African nations still lack these kinds of infrastructure.

Conclusion

Information and communication technologies (ICT) have numerous opportunities and potential benefits for raising educational standards, as evidenced by a number of studies and reports published in recent years. In particular, ICT is seen as an instrument at the school education level that might offer a method to rethink and restructure the educational systems and procedures, resulting in high-quality education for everyone. It is also seen as a crucial tool for establishing knowledge societies. Universities must improve their foundation before integrating ICT into their operations.

Education systems in the twenty-first century are faced with the simultaneous problem of generating graduates who act as accountable adults and decent citizens of both their country and the world, while also providing students with the new information, skills, and attitudes necessary to be successful in a global economy. With the globalisation of higher education, ICT is a key trend. In the current climate, having ICT skills and a worldwide education increases one's chances of finding work, which in turn leads to a better lifestyle, power, and position. In order to achieve the greatest level, a school must update its technology resources while simultaneously changing its instructional models, including the role of the instructor, concerns about how classrooms are organised, the teaching and learning processes, and the methods for interaction.

References

- Al-rahmi, W.M., Alzahrani, A.I., Yahaya, N.B., Alalwan, N., &Kamin, Y.B. (2020). Digital Communication: Information and Communication Technology (ICT) Usage for Education Sustainability. Sustainability, 12, 5052.

- Alghamdi, J., & Holland, C. (2020). A comparative analysis of policies, strategies and programmes for information and communication technology integration in education in the Kingdom of Saudi Arabia and the republic of Ireland. Education and Information Technologies, 1-25.

- Antoninis, M., April, D., Barakat, B., Bella, N., d'Addio, A., Eck, M., Endrizzi, F., Joshi, P., Kubacka, K., McWilliam, A., Murakami, Y., Smith, W., Stipanovic, L., Vidarte, R., &Zekrya, L. (2020). All means all: An introduction to the 2020 Global Education Monitoring Report on inclusion. Prospects, 49, 103 - 109.

- Chahine, I.C. (2023). Advancing Innovation in Global Education: Reflective Experiences of Prospective Teachers as Difference Makers. Education as Change.

- Jalloul, M., Derbew, H.M., Miranda-Schaeubinger, M., De Leon Benedetti, L., Mekete, Y., Jr Carbajal, J.A., Doherty, M., Noor, A., Dako, F., & Otero, H.J. (2023). Case competition sessions: a global education and academic engagement tool. Pediatric radiology.

- Mellow, G.O., Woolis, D.D., Klages-Bombich, M., &Restler, S.G. (2019). Taking College Teaching Seriously: Pedagogy Matters.

- Osipova, N.V., &Puzatykh, A. (2023). New in training a foreign language teacher in the context of global education. E3S Web of Conferences.

- Ratheeswari, K. (2018). Information Communication Technology in Education.

- Rathod, K., &Nimodiya, A.R. (2023). Information and Communication Technology for Education in Rural Sector - A Review. International Journal for Research in Applied Science and Engineering Technology.

- Sobania, N.W., & Weinberg, A.S. (2023). Putting the Local in Global Education.

- Setati-Legodi, M.E., & Goosen, L. (2022). Policy and Practice Challenges for Equality in Information and Communication Technology Education. Advances in Educational Marketing, Administration, and Leadership..

- Shahidi, N., &Seyedi, S.M. (2012). The Impact of Globalization in Higher Education on the Universities' Educational Quality: A Regional Project on Shiraz Universities.

- Yousuf, F. (2023). Role of Information and Communication Technology (ICT) in Education. International Journal for Research in Applied Science and Engineering Technology.

- Voogt, J.M., &Knezek, G.A. (2008). International handbook of information technology in primary and secondary education.

- Yaccob, N.S., Yunus, M.M., & John, D.S. (2023). Global education movement: English as a second language teachers' perceptions of integrating volatility, uncertainty, complexity, and ambiguity elements in lessons. Frontiers in Psychology, 14.

- Zhang, C., Khan, I., Dagar, V., Saeed, A., & Zafar, M.W. (2022). Environmental impact of information and communication technology: Unveiling the role of education in developing countries. Technological Forecasting and Social Change.

- Zondiros, D. (2008). Online, distance education and globalisation: Its impact on educational access, inequality and exclusion. The European Journal of Open, Distance and E-Learning, 11.