

# The advancement of technology and the concept of distance learning in the global context: Reaching out the unreachable

**Joshua M. Kuboja\***

Department of Curriculum and Teaching- University of Arusha, Tanzania

**Upendo Mwakobela**

Department of Curriculum and Teaching- University of Arusha, Tanzania

**\*Corresponding Author:** [joshuakuboja4@gmail.com](mailto:joshuakuboja4@gmail.com)

## Keywords

Technology  
Distance learning ICT  
Education  
Unreachable

## Article History

Received 2024-04-10

Accepted 2024-06-08

**Copyright** © 2024 by Author(s).  
This is an open access article under  
the [CC BY-SA](https://creativecommons.org/licenses/by-sa/4.0/) license.

## Abstract

The field of education has changed significantly due to the rapid progress of technology, especially in the area of online learning. This paper examines how technology has enabled education to reach new populations worldwide, expanding access to learning opportunities. By examining present trends and advancements in distance learning technologies, this paper explains how technology has connected geographical, socio-economic, and cultural obstacles to education. It explores how digital platforms, virtual classrooms, online resources, and interactive learning tools can increase access to quality education and empower people regardless of where they are from or their background. Moreover, this study explores the difficulties and advantages linked with the worldwide adoption of remote learning projects. It explores topics like the digital divide, limitations in infrastructure, adjustments in teaching methods, and understanding different cultures, while also showcasing creative solutions and successful strategies used to tackle these obstacles. Using information from academic sources, real-life examples, and research studies, this paper enhances our comprehension of how technology-based remote learning is changing the global educational scenery. It highlights how using technology can help connect with those who are typically out of reach, promoting equal access to education for everyone.

## INTRODUCTION

The introduction of ICTs is reinforcing another significant trend in education as it necessitates the re-invention of the basic concept of education seen as an event that takes place in a single geographic location. Contrasted to the idea of education as a single process within such a closed and contained environment, under the new concept education is now seen as an "open" system (Jung, 2019). Distance education has developed in parallel with the evolution of technology. However, there is a far more important driving force that has directed the evolution of distance education specifically the vision that access to all levels of education should be widened and that distance education is a significant force in achieving that vision (Kuboja, 2019).

It is the explosion of information and increased access to it through the new ICTs that is accelerating the trend toward the deconstruction of the educational processes, the "unbundling" of the

functions performed by traditional educational institutions. Ucar, & Kumtepe, (2021) insist that "In the past, people came to the information, and the information was at the University. In the future, the information will come to the people, wherever they may be". To this should be added, in the past people came to the teaching while in the future the teaching will also come to the people wherever they may be.

Distance education implies that the majority of educational communication between/among teacher(s) and student(s) occurs non-contiguously (at different times and in separate places – separating the instructor-tutor from the learner). It must involve two-way communication between/among teacher and student(s) to facilitate and support the educational process. It uses technology to mediate the necessary two-way communication" De Loreto, De Loreto, & Aveno, (2020). The term distance education also refers to teaching and learning situations in which the instructor and the learner or learners are geographically separated, and therefore, rely on electronic devices and print materials for instructional delivery (Kuboja, 2019).

Globalization, with its increasing consciousness of the globe as 'one world', is a logical consequence of the developments in information technology resulting from the development of science and technology in the world. The information revolution of the present modern era has a tremendous influence on all walks of our social life including the pursuit of education (kuboja, 2019). Communication technologies have made it possible to compress the space-time dimension and help in breaking the barriers of national and regional boundaries. This has resulted in the emergence of a set of new learning environments particularly in distance education which is mostly mediated by new technologies. With the use of satellite communication and computer technologies, it is increasingly becoming possible for distance education and institutions around the world to reach any individual or location situated anywhere in the world. This facility has resulted in greater opportunities for international cooperation and competition.

The globalization process resulting from the development of science and technology specifically the information technological development has opened up alternative possibilities to grow or perish since educators and learners today face many new instructional and learning environments through Distance Education which provides both opportunities and New Challenges.

Therefore this paper focuses on exploring the opportunities for educational development and the new challenges faced by distance education learners and instructors in the context of globalization.

## **HISTORY OF DISTANCE LEARNING**

The concept of distance learning has been changing as time passes by. It began with the idea of the American visionary, Charles Wedemeyer who promoted a simple but powerful belief that communication technologies make it possible to meet every individual's fundamental right to learn, in other words, access to education should be and could be "open." Scheng, (2014) realized that conventional face-to-face instruction would not be able to attain this vision because everybody could not attend classes at specific places and at specific times. For example, adults who had to leave school and begin working, would not be able to attend conventional universities that taught at specific places at specific times.

In the early days, the concept "distance education" was not widely used, it was referred to as "independent study," which according to Cifuentes, (2021), independent study encompasses several teaching-learning arrangements in which teachers and learners carry out their essential tasks and responsibilities apart from one another, communicating in a variety of ways" .

Distance learning evolved in different stages each with its unique characteristics. During the First Generation of Distance learning, information and communications technology was written and printed material distributed through the postal system which developed in every country from the end of the nineteenth century onwards: known as correspondence courses, students generally were provided with study guides and textbooks and sometimes with supplemental reading lists. In these courses, students were expected to respond to questions that distant teachers then read and assessed. Though correspondence study did not disappear, it continued to grow in most countries, after the radio was invented in the 1920s and the TV in the 1950s. These “new” information and communication technologies were applied to distance education in the form of radio-based study talks and TV-led video-based courses. Sometimes print and local study groups were included (Clark, & Barbour, 2023).

Simonson et al (2019) insist that the Second Generation of Distance Education came with the setting up of the Open University in Great Britain in 1969. Though the dominant technology remained print and the medium text, this was the first time an integrated multiple-media approach was applied on a large scale. The Open University was known for developing large quantities of high-quality materials designed especially for distance education. Both one-way (from university to students in the form of print, broadcasts, and audiotapes) and two-way communications (between tutors and students through correspondence tutoring, face-to-face tutorials, and short residential courses and in more recent years by telephone, video, and computer conferencing) were applied.

The Third Generation of Distance Education uses ICTs that are interactive, electronic, and computer-based as their basis for distributing information and facilitating communication between learners and teachers, learners and learners. Here ICTs provide for two-way communications that are either synchronous (at the same time as in video conferencing or audio-conferencing) or asynchronous (‘not at the same time’ as in electronic mail or most computer-based discussion forums). These technologies are sometimes added to courses characteristic of earlier generations, but they can also be used by themselves. Although computer-aided instruction was already in place in some institutions by the 1980s, only after the introduction of the World Wide Web (WWW) did computers and telecommunication systems have “The Evolution of Distance Education” (Bates, 2014).

As time goes it is expected that the World Wide Web (WWW) becomes the dominant delivery vehicle in distance education in conjunction with other multimedia such as print materials, CD-ROMS containing varied media, telecommunicated audio and video clips, and the Web’s own hypertext/hypermedia capabilities.

The awareness of the strengths and limitations of distance learning will enhance the understanding of the opportunities, challenges, and desirable responses to the globalization of distance education.

### ***The Opportunities***

Globalization of distance education provides many opportunities for both learners and instructors. There are more responses to the market demands to meet the educational and training needs in technical and professional areas like management, computer applications, education, and multimedia.

#### ***More Access***

Through technological advancement people can now access education and acquire skills through online training, this certainly results in widening access to both local and foreign education to people of different areas. Learners in developing countries have access to education and training programs offered by many developed countries. The ‘foreign degrees’, can be acquired now without the learners going to foreign countries. Many developing countries with limited educational resources

can have wider access to the world's educational and training resources to supplement and complement their efforts to provide education to large numbers.

#### *Learning From Others Experience*

The instant connectivity of resource persons and the easy accessibility of resource materials in distance education made possible by communication technologies, help in learning from others' expertise and experience. The different methods adopted by distance education institutions in the development, production, and delivery of materials are easily available to others through database systems. Information technology has made the distance education processes and the products more open enabling others to use and build on the existing knowledge and practices.

#### *Partnerships for Enrichment*

The educational needs of small developing countries can be met effectively by partnership arrangements, particularly in the development of learning materials which is a very capital-intensive activity in distance education.

#### *Competitive Environment*

The wider access also may result in heightening the competitive environment. For example, The breaking up of borders by technology may threaten the survival of mediocre institutions/programs. The exposure to the best may motivate others to improve their performance. The free market may reject the non-performers. The globalized distance education programs of institutions with a spirit of performance may bring competitiveness to the working of local distance education institutions. This process may result in better institutional performance and better education for learners.

### **The Challenges**

#### *Globalization and Neo-Colonialism*

In situation of uneven development the information superhighways may be used more for 'invasion' than for access. More access may result in the danger of certain sets of countries dominating the educational scene of countries with fewer resources. Terry Evans rightly observes that "globalization presents nations with a dilemma: they access the world, but the world invades them" (Ucar, & Kumtepe. (2021). The access is also driven by market demands, which need not necessarily reflect the national needs of countries at the receiving end. Added to this access to global programs, is mostly restricted to more affluent sections of society given the costs involved. This may further accentuate the educational inequalities in developing countries. In the highly differentiated world, the virtual world has not shrunk uniformly. So the access also is not uniform within a country and among the countries. To some of the countries in the developed world, globalization may only mean liberal access to the markets of developing nations. The unequal competition may result in small fish being swallowed by big fish. Those of us who feel excited about information superhighways should also be aware of the limitations of the use of superhighways in developing countries since so far it has been mostly a one-way traffic highway—from developed countries to developing countries. The partnership arrangements may result in assigning a secondary role to institutions for the developing countries losing [sic] their initiative and self-identity. These fears persuade many to consider globalization as another form of neo-colonialism.

#### *Globalisation Versus Localisation*

The paradox of globalization is that it is also accompanied by a strong urge for localization. The development of distance education materials programs for the world may be an impossible task. At present the materials developed in one context are mostly used in a wider context. Developing a

relevant curriculum for the international context is a difficult task. More difficult is getting the educational materials developed in a particular cultural context to suit a different cultural context. The generic materials in distance education which may be global in nature may have to be supplemented by national/region-specific materials to make the global distance education programs more relevant. Localization also emphasizes the importance of bringing cultural sensitivities into global materials. Learning is a cultural activity, after all. The globalized learning materials and delivery systems should take into account the diversity of the world's cultural context. The learners' needs may also vary accordingly even though it is said that a global distance educator should "think globally and act locally", we can also observe a contradictory trend operating here "thinking locally and acting globally". Developing the materials/programs while keeping in view one's context, and offering the programs internationally more to cash in on the market demands is what we mean by "thinking locally and acting globally".

#### *Infrastructural Deficiencies*

Even though the information superhighways provide opportunities for the global transfer of knowledge, developing countries are not yet properly equipped with the necessary exportable goods (knowledge) and vehicles (technology) to use the superhighways. The outdated telecom facilities, high costs of connection, low levels of technological awareness, and bureaucratic interference in using the technology may inhibit developing countries from actively participate in the global provision of distance education programs.

#### **Concluding Remarks**

It is not enough if we merely log on to world trends; we must also build the capacities to do so on our terms. This is the common and basic challenge faced by developing countries in the globalization of distance education particularly in the context of uneven world development. Globalisation as in other fields, in the field of distance education is also not an unmixed blessing. There are opportunities to pursue and limitations to overcome.

#### **REFERENCES**

- Bates, A. W. (2014). *The Role of Technology in Distance Education*. Routledge: New York. ISBN 9781138828056
- Cifuentes, L. (2021). *A Guide to Administering Distance Learning*. Brill: USA. ISBN 9789004471382
- Clark, T. & Barbour, M. (2023). *Online, Blended and Distance Education in Schools: Building Successful Programs*. Routledge: New York. ISBN 9781620361641
- De Loreto, J. M., De Loreto, C. M. & Aveno, M. A. (2020). Distance Education: Exploring Trends and Issues in the Global Context. *Journal of Education and Practice*. ISSN 2222-1735 (Paper) ISSN 2222-288X (Online) Vol.11, No.4, 2020
- Jung, I. (2019). *Open and Distance Education Theory: Revisited Implication for the Digital Era*. Springer Nature: Singapore. ISBN 9789811377396
- Kuboja, J. M. (2019). Revamping students' academic performance through the use of information and communication technology in teaching and learning activities: Correlating variables. *International Journal of Educational Policy Research and Review* Vol.6 (3), pp. 46-53 May, 2019
- Scheng, A. G. (2014). *Critical Examination of Distance Education Transformation across Disciplines*. IGL Global: USA. ISBN 978146666552

- Simonson, M., Zvacek, S. M. & Smaldino, S. (2019). *Teaching and Learning at a Distance: Foundation of Distance Education*. Information Age Publishing: USA. ISBN 9781641136266
- Ucar, H. & Kumtepe, A. T. (2021). *Motivation, Volition, and Engagement in Online Distance Learning*. IGL Global: USA. ISBN9781799876830