Preface

OVERVIEW

Technology has become a sociopolitical force around the world. There are many reasons for this; the most obvious one is that technological change is the main source of new areas of profitable accumulation of wealth. Educational institutions play a role in helping to facilitate the complex maneuvers by which the accumulation cycle works.

OBJECTIVE OF THE BOOK

The goals of this book include exploring issues concerning informational capitalism and globalization, the challenges and solutions for teaching and learning, and illustrating the different challenges faced when utilizing technology for teaching and learning in various cultural settings and how they were resolved. They also include how globalization affects learning and how educational organizations can find, create, or adapt technology for use in other cultures.

DESCRIPTION OF THE TARGET AUDIENCE

The target audience includes those with a professional interest in educational technology and information technology, whether they use such technology as a tool in teaching, use technology to develop learning materials, or administer a department or institution that uses or needs to use such technology. These people include legislators, educators, researchers, instructional material designers, and students. They also include higher education administrators and government officials with the responsibility of implementing the use of ever-improving technology into the school systems of the world.

OVERVIEW OF THE CONTENT

This book consists of 23 chapters.
Chapter 1: Effects of Information Capitalism and Globalization on Teaching and Learning in a Developed and in a Developing Country – A Cross-Cultural Study of Robert Morris University in the United States and University of Lagos in Nigeria

Using a descriptive survey, the author of this chapter explored informational capitalism, using a population of students and faculty from an American university and students and lecturers from an African university. The study explored how digital technologies have transformed the productive forces of capitalism and enabled a global economy.

Interestingly, neither students nor faculty felt that cultural inclination had a significant impact on their use of Web 2.0, but the majority of University of Lagos participants believed that adoption of Web 2.0 supports cultural promotion. This chapter is of particular value to instructional faculty who are designing coursework around Web 2.0 or its introduction, and to administrators who are dealing with funding challenges and rationalization for updating IT equipment and access on their campuses.

Chapter 2: Using Digital Technologies to Aid E-Learning – A Pilot Study

This chapter presents the results of a pilot study conducted in the summer of 2013 in which researchers sought to discover how students and instructors at two universities were using selected digital technologies in their coursework. To the extent that digital technologies were being used, did students find their use to be helpful in learning course material? Researchers surveyed undergraduate students at an African university and an American university. There were significant differences in how helpful to learning the uses of certain technologies were, as perceived by the students. Another significant difference occurred in how soon new digital technologies would be adopted, with the African university lagging behind its American counterpart.

This chapter is of particular value to those weighing the options of online course delivery, especially in this day of strained budgets and limited ability to offer as many courses as desired. Administrators, department heads, and instructional staff preparing online course material can profit from reading this information.

Chapter 3: The Era of Digital Technology in Teaching and Learning in African Universities

Especially in Africa, the increasing availability and use of technologies has amounted to a revolution that has brought immense change to teaching and learning at institutions of higher learning throughout the continent. This chapter surveys a wide range of technology devices and their application in different African universities, showing the level of information capitalism, access to technology, and quality of higher education in Africa. The conclusion is that, given access to the proper technology, teaching and learning can be made available to thousands of additional students in Africa when universities operate 24-7 online tutorials as a result of ICT and other technological developments.

This chapter is very useful not only to African educational policymakers but also to those in the West who are studying African systems of higher education or who are endeavoring to provide meaningful and effective support to higher education in Africa.
Chapter 4: Promoting Instructional Technology for Effective and Efficient Academic Performance in Nigerian Schools

This chapter focuses on the concept of Instructional Technology (IT) as a crucial element in education. Instructional technologies support curricula, promoting effectiveness and efficiency in academic performance at all levels of education in Nigerian schools. The chapter works toward a clearer definition of Instructional Technology (IT) as educational problem-solvers and focuses on emerging technologies for teaching and learning. The chapter also deals with some of the challenges of applying instructional technologies, the effective organization of instructional materials in schools, the usefulness of local instructional packages, and obstacles to using instructional technology in Nigerian schools.

The chapter is particularly helpful for educational policymakers from the national level down to the level of school administrators, and the content can provide guidance and encouragement for moving forward with the introduction of IT at every level of education.

Chapter 5: Cultural Factors Affecting Integration of Technology in Media Education in Nigeria

This chapter takes a look at the need for graduates in today’s information age to be competitive in the marketplace upon graduation. It emphasizes that classroom ICT use has the potential to improve not only the capacity of the facilitators but also the learning of students at all levels. Despite financial and other major challenges to integrating technology in learning, the chapter urges proactive steps to address the current, relatively low integration rate of ICT in African learning centers. It points out that graduates are competing with others with overseas qualifications and with professionals already in the workplace, who already possess the requisite technological skills required today. This chapter is useful to educators and administrators, both in the West and in Africa.

Chapter 6: Adoption and Use of Information and Communication Technologies (ICTs) in Library and Information Centres – Implications on Teaching and Learning Process

This chapter discusses the adoption and use of ICT in libraries and the implications of such adoption and use for the educational systems involved. It reports on a study to determine the present state of ICT in libraries throughout Nigeria and lists some of the challenges faced in the adoption of ICT by libraries. It also documents some effective remedies to those challenges. The study is of particular interest to administrators, librarians, and educators in Nigeria, but is also useful for Nigerian government officials, who might have the ability to increase library funding as the chapter recommends.

Chapter 7: Efficiency of Technology in Creating Social Networks for Mobilizing and Improving the Health of a Community

This chapter explores the effectiveness of using Facebook to create a social network to improve community health improvement. It discusses social networking group reach rates and the effectiveness of a social network in delivering health messages and improving community health knowledge. A two-year study showed overall positive outcomes in reach, response time, and group engagement. The chapter should be of particular interest to community health workers and social networking scholars in all parts of the world.
Chapter 8: Managing and Planning Technology Usage and Integration in Teacher Education Programs in an Emergent Nation

The chapter explores the impact of the changing context of Information Technology (IT) and Information Systems (ISs) on Teacher Education (TE). The chapter uncovers a serious problem, policy makers associated with educational programs look to market-based solutions without considering the challenges preventing effective integration and use of ITs and ISs in TE, particularly in developing economies. Using a theory-based method of analysis, the chapter gathers, reviews, and analyzes contemporary views and ideas about education and technology. The chapter is useful to higher education administrators and to government policymakers who often drive the financing of such new technologies in education.

Chapter 9: Utilization of Instructional Media and Academic Performance of Students in Basic Science – A Case Study of Education District V1 of Lagos State

The chapter discusses the use of instructional media in teaching and learning basic sciences in primary and secondary schools. It concludes that these media are effective in driving home the lesson point of the subject being taught, and that they reduce stress for both teacher and student. The imaginative use of well-planned visual aids during classroom lessons are shown to boost student academic performance for physics, chemistry, biology, and mathematics. The chapter demonstrated that the use of instructional media had a positive impact on student learning outcomes. The chapter is of particular interest to classroom instructors and to administrators considering the use of IT in their schools’ classrooms.

Chapter 10: Using Andragogy and Bloom’s Digital Taxonomy to Guide E-Portfolio and Web Portfolio Development in Undergraduate Courses

This chapter covers e-portfolio teaching approaches and how andragogy and Bloom’s Digital Taxonomy can be integrated into teaching and learning to provoke active learning through e-portfolio development. The chapter connects andragogy (the method and practice of teaching adult students) and integrates educational objectives into Bloom’s cognitive domain as updated by Anderson and Krathwohl and aligned to the digital realm by Churches to serve as a model for teaching Web portfolio development in undergraduate courses. The chapter is useful for those teaching adult learners who wish to encourage their students to develop e-portfolios.

Chapter 11: Finding Common Ground – Uses of Technology in Higher Education

As technology’s presence in higher education rises, so does its cultural impact. Scholars have widely differing perspectives on the proper role of technology in higher education. This chapter works to reconcile such scholarly differences, using a constructive hermeneutic in our postmodern age to understand the limited and biased ground of one’s own perspective. The chapter also presents a decision model for educators to evaluate uses of technology in higher education. The chapter is of interest for those dealing with technology in higher education.
Chapter 12: Effective Virtual Learning Environment through the Use of Web 2.0 Tools

As the use of social networking sites and Web 2.0 tools are increases, research shows that education via Web 2.0 tools can increase student motivation and interest for learning. The chapter suggests that a positive teaching environment can be created using social networking sites in which Web 2.0 tools allow effective learning. It discusses a number of Web 2.0 tools available for creating an effective virtual learning environment and their positive effect on students. Anyone with interest in using Web 2.0 tools in the classroom can benefit from reading this chapter.

Chapter 13: Technology Integration in the Classroom – Report of an Asynchronous Online Discussion among a Group of Nigerian Graduate Students

The chapter reviews data showing that increased access to ICT tools and resources provides opportunities for learning technologies. The chapter focuses on classroom integration of social media among a group of Nigerian graduate students using asynchronous online discussion. The 33 participants engaged in a threaded discussion for 14 weeks at the College of Medicine, University of Ibadan. A major barrier to participation in AOD is limited access to computer and Internet facilities. The chapter recommends improvement of ICT infrastructure in on-campus residential environments for cheaper, unrestricted technology access. Those teaching students in African universities and university administrators should read this chapter.

Chapter 14: Information and Communication Technology in Teaching and Learning – Effects and Challenges in China

Although China has the most Internet users of any nation (591 million users as of 2013), a lower percentage of the Chinese population (44%) has used the Internet than is the case in the United States (78%). The chapter discusses the effects ICT has on Chinese elementary and secondary education, and some continuing challenges in ICT applications. It also examines the use of ICT in Chinese higher education, particularly in distance learning, and issues that must still be resolved. The chapter ends with practical recommendations for improving Chinese education using ICT.

Chapter 15: Adopting Digital Technologies in the Classroom – The Impact of Use of Clickers on Cognitive Loads and Learning in China

Although clickers have gained popularity in the West, they are less commonly used in the East. This chapter reviews studies on the impact of the use of clickers on learning and cognitive loads. It points out the effectiveness and possible positive influence clickers can have on cognitive loads, suggesting that clickers might be more appropriate for use in large-enrollment classes, where they can permit quiet and anonymous student polling. Students have demonstrated feeling less nervous when answering questions anonymously. Professors of large classes can benefit from reading this chapter, and Chinese school administrators in particular will find it of current interest.
Chapter 16: Adopting Digital Technologies in the Administration of Technical and Engineering Education

This chapter explores the infant state of studies about the adoption of digital technologies in educational administration, especially in the administration and management of technical and engineering education facilities. It examines opportunities to adopt digital technologies to the administration of general education and its implications on technical and engineering education. Facilities and laboratory managers, university administrators, and university security and administrative personnel can benefit from the information in this chapter.

Chapter 17: Knowledge Management and Reverse Mentoring in the Nigerian Tertiary Institutions

This chapter explores knowledge management as a discipline that makes maximum use of the knowledge available to an organization and, at the same time, creates new knowledge. Knowledge management is about understanding, appreciating, and making use of the knowledge of individuals, developing an organizational culture where knowledge sharing can flourish. This process permits the organization to create value from its intellectual and knowledge-based assets, with the goal of continual knowledge development, drawing on the knowledge base of employees (thus the concept of reverse mentoring). Leaders of any type of organization will benefit from reading this chapter, as will students of management.

Chapter 18: The Global School in the Local Classroom – ICT for Cross-Cultural Communication

This chapter champions the value of cross-cultural communication practices in schools with innovative Information and Communication Technology (ICT) support. A detailed theoretical foundation justifies the inclusion of global perspectives in the classroom through cross-cultural communication, made possible by ICT. This chapter details the perceptions of 80 pre-K to 12 teachers via a survey study, which shaped the author’s suggestions for practical ICT cross-cultural communication opportunities in the classroom. Implementation strategies include classroom-to-classroom and classroom-to-world cross-cultural communication opportunities. This chapter suggests practical solutions supported by solid theoretical justifications for utilizing ICT to facilitate cross-cultural communication and to improve student global awareness. Primary and secondary teachers, school administrators, and legislators concerned with funding education can benefit from reading this chapter.

Chapter 19: Globalization and its Challenges for Teacher Education in Nigeria

The chapter reviews several definitions of globalization, uses the working definition of the establishment of global markets for goods and capital, leading to multiple linkages and interconnections among places, events, ideas, issues, and things. A major limiting factor for globalization in a given nation is an educational system is not geared toward fostering meaningful and desirable change for that society. To achieve such an education system orientation, teacher education must be predicated on producing globalization-friendly teachers. The chapter compares the concept of globalization with the goals of current teacher education in Nigeria.
Chapter 20: Challenges and Prospects of Information Communication Technology (ICT) in Teaching Technical Education towards Globalisation

This chapter emphasizes the relevance of Information and Communication Technologies (ICTs) in the field of Technical Vocational Education and Training (TVET). It points out that the workaday world is continuously changing, even as ICT itself is developing. These changes pose challenges to 21st century workers and the institutions responsible for preparing the next generation of workers. The chapter develops definitions, philosophy, and objectives for TVET, concepts and types of ICT, and the need for effective use of ICT in TVET. Those involved in the administration of or teaching in TVET departments will profit from reading this chapter.

Chapter 21: M-Health Technology as a Transforming Force for Population Health

This chapter discusses mobile health (m-Health), the use of portable electronic devices to communicate health information via a wireless, electronic network of base stations. The chapter suggests that m-Health technology has the potential to provide long-term patient support via wireless networks, without requiring patients to sacrifice their autonomy, but sees the chief obstacle to a more rational development of such a network as the resistance of medical professionals. Healthcare providers and administrators can benefit from this chapter.

Chapter 22: Influence of Globalisation on Teaching and Learning – What is the Stance of Information Literacy in Nigerian Tertiary Institutions?

This chapter takes a look at the influence of globalization on teaching and learning. It finds a very low level of information literacy among students because of what the authors see as the neglect of information literacy programs in Nigerian primary schools. It goes on to provide practical suggestions for incorporating information literacy programs in institutions of higher learning in Nigeria, and it discusses some of the challenges of doing that. It suggests that primary school administrators begin seeing information literacy as an academic issue, rather than just a “library thing.” Those in higher education and (particularly) Nigerian primary school administrators can profit from reading this chapter.

Chapter 23: Re-Branding Community Organizations for the Actualization of Development Goals in the Rural Communities in Nigeria

This chapter reviews various definitions of the concept of community and goes on to explore the raison d’etre of especially rural community organizations, which have the specific goal of improving living conditions for those concerned. It examines input from various scholars and from the United Nations about the organization and constitution of such organizations, emphasizing that they must be of the people (grassroots organizations) and for the good of the people. Community organizers everywhere can benefit from reading this chapter.
CONCLUSION

Technology tools are becoming widely available in schools and classrooms. They can be used in many different ways, and how they are integrated into educational settings depends largely on teachers’ instructional goals and strategies. Computer networks are also the technological foundation that has allowed the emergence of global network capitalism, that is, regimes of accumulation, regulation, and discipline that are increasingly helping to base the accumulation of economic, political, and cultural capital on transnational network organizations that make use of cyberspace and other new technologies for global coordination and communication.

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