### **Preface**

#### INTRODUCTION

The global academic landscape is changing direction, from traditional face-to-face (f2f) teaching and learning methods to more sophisticated and technologically assisted methods. Blended Learning (BL) has resulted in more proactive and higher quality methods of educating students. Thus, building a dynamic and proactive approach towards ensuring that there is uniformity in the way students are taught can be a complex operation. The purpose of this book is to discuss a model for teaching and learning that utilizes BL initiatives, adaptations, and barriers. This book describes how BL approach can benefit students, faculty, universities, and countries as a whole. Transforming learning contexts to reflect the increasingly technological world and to support the global community is critical to ensuring success in students' academic achievement.

Recent studies (e.g., Alonso, Lopez, Manrique, & Viñes, 2005; Moore & Kearsley, 2005; Ololube, 2011) indicate the opportunities of using BL to transform the teaching and learning processes, and there are reasons to believe that using BL approaches (technologically assisted and face-to-face learning) can help in the development of better learning outcomes. However, some possible obstacles to BL in developing countries are the lack of trained faculty, student readiness to learn, very little to no technological facilities, finances, and other factors. One way to overcome these obstacles is to establish BL environments that involve stakeholders being proactive in their effort towards guaranteeing quality education. BL can be of benefit to developing countries because the costs are relatively low, making BL initiatives accessible to a greater number of students. A specific advantage of BL is the opportunity to quickly establish a sense of community amongst student learners. Within the BL classroom, students generally meet in f2f instruction and then have opportunities to communicate with faculty after lectures. This opportunity can facilitate greater reflection on course content and broaden students' learning experiences (Mathur & Oliver, 2007).

#### UNIQUENESS OF THE BOOK

This book aims to fill the intellectual gap that exists in BL studies for educational improvement in emerging economies. Therefore, understanding the technologies that underlie BL is important, and understanding how to move BL forward with a focus on quality, accessibility, design, and implementation, as well as support, would potentially enhance the field of learning.

#### **TARGET AUDIENCE**

The target audience for this book includes researchers, academics, professionals, students, and blended learning developers in various disciplines (e.g. information and communication sciences, administrative sciences and management, education, adult education, sociology, computer science, information technology, etc.). The book provides insight on BL and support institutions concerned with the management of education, knowledge, information, and organizational development using BL as a tool in teaching and learning. Topics covered in the book include:

- Blended learning (digital resources and information) creation.
- Blended learning resources for higher education.
- Information creation and distribution through blended learning.
- Necessary knowledge, skill, and ability sets for developing blended learning contents.
- Pedagogical methods for integrating blended learning in higher education.
- The adoption of blended learning technologies.
- The evolution of blended learning in higher education.
- The various types of blended learning resources and information.
- The future of blended learning, its use and constraints.

Here is the summary of the structure of the book and its thirteen chapters.

#### **BLENDED LEARNING INITIATIVE**

### Chapter One-Virtual Learning Communities: Interaction in Blended Learning Using Web 2.0 Tools

The book opens with a chapter that presents a reflection on the use of social software tools to enhance the interaction between students, allowing the development of virtual learning communities in blended learning settings. The discussion about education in Web 2.0, learning through communities, personal learning environments, and social software tools are the basic concepts of this reflection. The results show the importance of five strategies to promote blended learning based on virtual learning communities. They are: the use of a pedagogical approach based on cooperation; the focus on the selection of learning spaces that promote the interaction between students; the mixing of oriented collaborative activities in the VLE and the promotion of the use of social software, articulating prescriptive learning systems and emergent learning networks; the use of Web 2.0 tools in a PLE perspective; and the use of folksonomies to follow up the contents students produce on the Web.

### Chapter Two-Introducing a Teaching Innovation to Enhance Students' Analytical and Research Skills: A Blended Learning Initiative

The second chapter considers the term "blended learning," which the authors feel has gained considerable interest in recent years as a description of particular forms of teaching combined with technology. This chapter reports in some detail the experiences of a small group of undergraduate learners as they

progress through their Bachelor course at University of Wollongong in Dubai (UOWD) in the United Arab Emirates. In particular, this study looks at discussion forum approach as a blended learning initiative and what that entails to the learners in terms of making the subject more interactive and enhancing students' analytical and research skills. From the findings, a conclusion has been drawn regarding the role of the Blackboard tool in learning by helping students to obtain a deep sense of understanding of how to operate in a virtual team despite the challenges.

#### **Chapter Three–Blended Learning for Learners in SMEs**

While blended learning seems to be quite suitable for Small and Medium Sized Enterprises (SMEs), take-up of this learning method is not implemented at the level it could be. This chapter investigates aspects that encourage learners in European SMEs to choose blended learning for professional development. The results indicate how the take-up of blended learning by SME learners can be improved. Research has explored the field further and blended learning has become a more mainstream form of learning. A revisit of case studies with stakeholders of Blended Learning in SMEs looks at changes indicated by research and explores Blended Learning in progress. A comparison between European and African SMEs looks at differences and commonalities that might affect blended learning. The final section outlines a vision of how blended learning is feasible under challenging conditions, including inadequate funding, limited computer or Internet access, poor infrastructure, diversity of learner groups, and differences in learning culture.

### Chapter Four–Shifting a Face-to-Face (F2F) Course to the Blended Environment: A Framework for Transference

Many educational experts predict that in the future blended learning will become far more common than traditional Face-to-Face (F2F) or online learning. With this in mind, instructors are being asked or required to move F2F courses to a blended environment. When doing so, there are a variety of issues to consider. Thus, a framework for transference is necessary. This framework includes the seven principles for good practice for undergraduate education. This chapter covers the essential topics to help educators conduct a successful transference and uphold the quality of their courses.

## Chapter Five-Computer Literacy and Candidate Performance on Computer-Based Tests

This chapter investigates the influence of computer literacy through blended learning methods on the computer-based aptitude test performance of prospective students at the University of Port Harcourt. An ex-post facto research design was used, and simple random sampling was adopted in drawing a sample of 1,720 candidates from a total population of 38,988 who wrote the examinations. A Computer Literacy Scale was developed to ascertain the computer literacy level of participants and a Results Collection Form was developed to gather test results. This study was based around nine research questions, which were answered using descriptive statistics, and nine corresponding hypotheses, which were tested using inferential statistics. Results show that computer literacy through blended leaning methods has a significant effect on performances on the computer-based test while gender has no effect. There was also a significant difference in the performance of candidates on paper and computer examinations.

#### ADOPTING BLENDED LEARNING

# Chapter Six-Blended Learning Methods in Introduction to Teaching and Sociology of Education Courses at a University of Education

In recent years, the use of the Blended Learning (BL) methods has experienced worldwide uptake and is responsible for enormous changes, not only in developed country education, but in developing country education, particularly sub-Saharan Africa. Given the role that blended learning can play in educational development, educational institutions, students, employers, and governments are increasingly urged to examine the economic, demographic, and technological environments of the present so as to ensure comprehensive preparedness for the future. This study employs a questionnaire for data gathering and results are analysed quantitatively. The findings reveal a significant improvement in the use of blended learning methods to achieve effective academic performance in students. The impact of blended learning in the educational sector is thus evidenced in the changing instructional pedagogies that lead to more interactive learning processes.

## Chapter Seven–Blended Learning Implementation in Accounting Discipline: A Study in a Malaysian Public University

This chapter examines the successful implementation of blended learning in an intermediate financial reporting course in a public university. The results of this study show that there is a significant difference between students completing the course through conventional learning and those completing the course via blended learning, with the later showing unfavourable results. The results in this study provide indication that for the students to perform well there is the need for them to be independent learners when studying using blended learning. However, the students believe that they could complete the course successfully regardless of whether they study the course through conventional learning or blended learning. Finally, the results show that academics are of the opinion that students should change their attitude to succeed. The academics further opined that the course and facilities need to be reviewed and upgraded to assist students in completing the course. The findings in this study provide some understanding of the implementation of blended learning in an intermediate financial reporting course.

# Chapter Eight–21<sup>st</sup> Century Distance Learning in Sub-Saharan Africa: Distance and Blended Learning in Ghana

Distance education in Ghana is rapidly gaining recognition as a result of the increasing demand for higher education by qualified applicants, most of whom are denied admission due to the limited space and resources. Distance education promotes cross-national, multi-disciplinary perspectives in educational practice and equips students, faculty, and administrators with resources to compete in the academic world of the 21st century. Universities in Ghana have opted for distance learning as an alternative measure to reduce congestion and help remedy student admissions to the few universities available (Dzisah, 2006). However, little is known about the trend of distance and blended learning education in Ghana. This chapter addresses the trend of distance learning and university education; distance and blended learning in Ghana; information on African Virtual University and distance education, benefits, challenges, recommended strategies of distance and blended learning programs in Ghana; and a conclusion.

# Chapter Nine-Adoption of Blended Learning Technologies in Selected Secondary Schools in Cameroon and Nigeria: Challenges in Disability Inclusion

Blended learning could be seen as the solution to learning resource accessibility, especially when the indicators of measure are limited to distance and time. Distance and time could be said to be the generic indicators for the measure of blended learning. However, these do not solve the problem for everyone in society. For Inclusive Blended Learning (IBL), different types of users in society should be considered in its design. This is exactly what has provoked the focus of this chapter, to investigate the position of blended learning with respect to people with disabilities. The chapter's investigation is centered on selected secondary schools in Cameroon and Nigeria.

# Chapter Ten-Corpus Linguistics: An Exploration of the Possibility of Improving ELS Learning and Teaching in the Zimbabwean High School

This chapter is an attempt to investigate the possibility of integrating computer-assisted ESL (English as a Second Language) learning and teaching in the Zimbabwean high school. With the ever-growing number of schools acquiring computers, even in the rural areas, quite a significant number of high schools in Zimbabwe are now ready to implement language programmes like corpus-based studies. The research attempts to show how concordancing technology could be integrated in ESL learning and teaching by including some practical activities using a computer. Findings after the study have indicated that computer-aided language programmes do help in ESL, and incorporating Corpus Linguistics would bring a major boost to students' (and teachers') ESL levels at a much faster rate than conventional methods. If such programmes were to be integrated in the high school, then the computer would become an indispensable teaching and learning tool.

## Chapter Eleven–Globalisation, Blended Learning, and Mathematics Education: Implications for Pedagogy in Tertiary Institutions

The issue about globalisation is now commonplace. However, there has not been enough literature concerning its link with ICT and mathematics education and how the three put together have impacted tertiary education pedagogy. In light of this, this chapter involves a local context of tertiary institutions operating in an environment exposed to the processes of globalisation. The chapter explores the meaning of globalisation, information communication technology, and mathematics education. It discusses how ICT and globalisation in relation to blended learning have influenced mathematics education, considers the relation between globalisation and mathematics education, and finally, draws the implications of globalisation and ICT on pedagogy in tertiary education.

#### BARRIERS TO BLENDED LEARNING

## Chapter Twelve–Blended Learning and Technological Development in Teaching and Learning

This chapter examines blended learning and technological development in teaching and learning. This study is based around the suggestion that technological development can emerge in Nigeria when an enabling environment and other necessary facilities for blended learning are made available in different institutions for teaching and learning. This chapter addresses the following topics: net generation and use of technology outside of schools, the digital environment, computer use and blended learning in schools, well-constructed digital environments, teaching and blended learning, the shift from teaching to learning, student-centered methods, theories supporting the new view of the learning process, play way method, group instructional methods, Vygotsky's socio-cultural theory, Skinner's theory of learning, Jean Piaget, Jerome Bruner, problem-based learning, anchored instruction, distributed cognition, cognition flexibility theory, cognitive apprenticeship, situated learning, self-regulated learning, and entry behaviour/residual knowledge.

### Chapter Thirteen–Barriers to Blended Teaching and Learning in Sub-Saharan Africa: Challenges for the Next Decade and Beyond

This chapter explains the need to better design blended teaching and learning curricula, the need to address infrastructural problems, and the need to organise programmes so that faculty and students can better plan for unanticipated and unintended situations that confront them in the teaching and learning processes. Improving the quality of education through the diversification of content and methods and promoting experimentation, innovation, the diffusion and sharing of information, and best practices are among UNESCO's recent strategic objectives in education. Discussions in this chapter centre on (a) the contexts of blended teaching and learning, (b) the barriers to blended learning usage, integration, and diffusion, and (c) the need to consider policy outcomes when evaluating blended teaching and learning resources. This study uses a qualitative research method, as both document materials and observation were an essential part of this chapter. This study concludes that the great enthusiasm around blended teaching and learning in sub-Saharan Africa has been dampened by inadequacies in essential services and infrastructures, such as electricity and telecommunication services, and institutional, socio-cultural, and economic barriers. Nonetheless, the development of blended teaching and learning resources continues.

#### CONCLUSION

I was deeply honored when IGI Global invited me to edit a book on BL, and I rose to the challenge of eliciting chapters from international scholars. This tome has become an excellent resource from 22 academicians. This book, *Advancing Technology and Educational Development through Blended Learning in Emerging Economies*, is a coherent piece of work. The approaches presented here derive primarily from the contributors' backgrounds and experiences in BL. Consequently, they write to inform educa-

tion planners, policy makers, curriculum developers, researchers, students (undergraduate, graduate, and postgraduate) of the relationships and the advantages of taking an interactive approach to BL. This book conceptualizes the challenges and obstacles currently facing BL approaches and implementation in developing economies and offers suggestions for overcoming or addressing these challenges.

In editing this book, I attempted to select multiple distinct perspectives on BL and its interactive approaches. Given that multiple audiences exist for any text, I trust that the academic community will find this book a useful addition to existing literature on BL and the need for improvements in BL to ensure broader educational and societal development.

Nwachukwu Prince Ololube University of Education Port Harcourt, Nigeria

#### **REFERENCES**

Alonso, F., Lopez, G., Manrique, D., & Viñes, J. M. (2005). An instructional model for web-based elearning education with a blended learning process approach. *British Journal of Educational Technology*, *36*(2), 217–235. doi:10.1111/j.1467-8535.2005.00454.x.

Dzisah, J. (2006). Information and communication technologies and development in Ghana. *Science, Technology & Society*, *11*, 379–396. doi:10.1177/097172180601100205.

Mathur, R., & Oliver, L. (2007). Developing an international distance education program: A blended learning approach. Online Journal of Distance Learning Administration, 10(4), Moore, M. G., & Kearsley, G. (2005). Distance education: A systems view (2nd ed.). Belmont, CA: Wadsworth.

Ololube, N. P. (2011). Blended learning in Nigeria: Determining students' readiness and faculty role in advancing technology in a globalized educational development. In Kitchenham, A. (Ed.), *Blended learning across disciplines: Models for implementation* (pp. 190–207). Hershey, PA: IGI Global. doi:10.4018/978-1-60960-479-0.ch011.