

# The 2nd Dubai International Conference in Higher Education : Sustaining Success through Innovation



January 19-20, 2014

The Conference Centre,  
Block 1, Knowledge Village  
Dubai, United Arab Emirates

**MICHIGAN STATE**  
UNIVERSITY | Dubai

*The 2<sup>nd</sup> Dubai International Conference in Higher Education: Sustaining Success through Innovation*

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# AGENDA

## DAY ONE: 19 January 2014



08:00 - 09:30	Registration
09:30 - 09:40	Introduction: Dr Tessa Dunseath Executive Director, Michigan State University in Dubai, U.A.E.
09:40 - 10:00	Opening Address: Dr Ayoub Kazim Managing Director, Education Cluster, TECOM Investments, Dubai, U.A.E.
10:00 - 10:20	Keynote: Dr Kevin Dunseath Founding Partner & CEO of Corcordi International
10:20 - 10:30	Q & A with Dr Kevin Dunseath
10:30 - 11:00	COFFEE BREAK
11:00 - 12:30	Parallel presentation of papers and workshops
12:30 - 13:30	LUNCH BREAK
13:30 - 15:00	Parallel presentation of papers and workshops
15:00 - 15:30	COFFEE BREAK   Judging and presentation of posters
15:30 - 17:00	Parallel presentation of papers and workshops

# AGENDA

## DAY TWO: 20 January 2014



08:00 - 09:30	Registration
09:30 - 09:40	Introduction: Professor Raashid Luqmani, University of Oxford, United Kingdom
09:40 - 10:00	Keynote: Professor Trevor Spedding President, University of Wollongong in Dubai, U.A.E.
10:00 - 10:20	Keynote: Professor Eesa Mohammed Bastaki President, University of Dubai, U.A.E.
10:20 - 10:45	Q & A with Professor Trevor Spedding and Professor Eesa Mohammed Bastaki
10:45 - 11:15	COFFEE BREAK
11:15 - 13:45	Parallel presentation of papers
13:45 - 14:30	LUNCH BREAK
14:30 - 15:15	Panel discussion with:  <b>Dr Narayanan Ramachandran</b> , Pro Vice Chancellor of Amity University, Dubai, U.A.E.  <b>Professor Anuar Zaini Md Zain</b> , Professor of Internal Medicine, Jeffrey Cheah School of Medicine and Health Sciences, Monash University Malaysia  <b>Dr Kevin Dunseath</b> , Founding Partner & CEO of Corcordi International  <b>Professor Raashid Luqmani</b> , Professor of Rheumatology, University of Oxford, United Kingdom
15:15 - 15:30	Presentation of Awards
15:30 - 15:45	Closing Ceremony: Professor Reza Nassiri, Director, Institute of International Health, Michigan State University, U.S.A.

# WELCOME NOTE

## from the Organising Chair



A year has passed and, once again, on behalf of Michigan State University and the Conference Organising Committee, I am delighted to welcome you to this, the second Dubai International Conference in Higher Education here in Knowledge Village.

Last year's theme focused on the pursuit of quality. We recognized the unprecedented challenges facing higher education in the 21<sup>st</sup> century and discussed in depth how universities could succeed in that pursuit.

This year, we ask how universities, in a world in which the expectations of the learner are becoming ever more demanding, can sustain excellence through innovation. Indeed, there are those who would say that unless traditional universities innovate rapidly and significantly, they face the possibility of slow decline into extinction in the face of the new threats posed by MOOCs and other alternative modes of learning.

With over 10,000 universities across the globe today, and that number increasing substantially year on year, the question is this: How will your university sufficiently differentiate itself from the competition to remain attractive enough to students so that they will not prefer to enrol at another university or to take their courses and programs through a MOOC platform?

During this conference, we will encourage participants to find answers to this and other key related questions facing the higher education sector. We will promote a culture of openness, honesty and trust in our discussions, knowing that we all, as educators, have at heart the best interests of our students.

This year's conference includes around ninety presenters from around the world, a number that is double that of last year. As was the case last year, the program includes papers, workshops, poster presentations and displays. Awards for the paper, workshop and poster judged to be the best will be presented during the closing session of the conference.

On behalf of MSU and the Conference Organising Committee, I wish to express my sincere thanks to our sponsors and to our academic partner, Dubai International Academic City (DIAC).

**Dr Tessa Dunseath**  
**Executive Director, Michigan State University in Dubai**



## Opening Remarks

### Dr Ayoub Kazim

**Managing Director, Dubai Knowledge Village and  
Dubai International Academic City, Education Cluster  
TECOM Investments, Dubai, U.A.E.**

Dr Ayoub Kazim is the Managing Director of the Education Cluster of TECOM Investments. Dr Kazim is in charge of both Dubai Knowledge Village (DKV) and Dubai International Academic City (DIAC). He is responsible for strategically steering all DIAC and DKV academic entities and further consolidating their statuses as leading centres of learning excellence in the region. Under his guidance, Dubai Knowledge Village has channelled its focus on Human Resource Management, Consultation, Training and Personal Development programmes. Dr Kazim's vision has also carried over into the launch of DIAC in 2007. DIAC is the world's only free zone dedicated to higher education, hosting 21 International Branch Campuses from 11 different countries around the world.

Dr Kazim holds a Bachelor's Degree in Mechanical Engineering from University of Alabama and a Master's Degree from the Polytechnic Institute of New York University. He received his Doctorate in Mechanical Engineering from University of Miami in 1998.



## Keynote Speaker

### Professor Reza Nassiri

**Associate Dean of Global Health & Director of Institute of  
International Health, Michigan State University**

Prof. Nassiri is a French-trained Hematologist graduate of University of Paris VII in Paris, France (1983). He has undertaken post-graduate fellowship in Clinical Pharmacology at the University of Michigan Medical Center in Ann Arbor, Michigan. He is currently Associate Dean of Global Health, Director of Institute of International Health, Professor of Clinical Pharmacology and lecturer in Infectious Diseases/Tropical Medicine at Michigan State University College of

Osteopathic Medicine.

Dr. Nassiri has expertise in global health education, research, policy and governance. He has made contributions in various fields of medical sciences including health education. One basis of his extensive experience and expertise in HIV/AIDS, he developed HIV/AIDS Clinical Research Programs in South Africa, Haiti, Dominican Republic and Mexico. He has delivered seminar presentations on HIV/AIDS and Hematologic Malignancies in numerous national and international conferences and workshops. He was the keynote speaker for International Association of Medical Students 2000 Conference in Lublin, Poland. His keynote address was focused on training of future physicians and healthcare professional knowledgeable and competent in HIV Medicine. He has served as the member of Merck's and POMA Speaker's Bureau for HIV/AIDS.

His effort in developing Osteopathic International Outreach Programs for medical students is well recognized by the American Osteopathic Association. He organizes student medical missions on annual basis in Brazil, Caribbean region, and Latin America and has developed a clinical elective course entitled "Diseases of Poverty", which is taught during medical missions and international outreach programs. The goals of these programs are to provide medical students and residents with opportunities to experience pathologies beyond the U.S. borders, to enhance students' understanding of cultural competency, and also to make the host countries aware of osteopathic approach to the care of patients.



## Keynote Speaker

### **Professor Trevor Spedding**

**President, University of Wollongong in Dubai  
United Arab Emirates**

Trevor Spedding is an academic with over 25 years of experience as a teacher, researcher and academic leader. He was formally the Dean of the Faculty of Commerce at the University of Wollongong in Australia. The Faculty of Commerce is the largest Faculty at UOW accounting for approximately 25% of students.

Trevor has considerable international experience in education, having worked at various Universities in the United Kingdom, Singapore and Australia.

He spent a decade at Nanyang Technological University (NTU) in Singapore, and experienced the transformation and dynamic growth which saw the University develop from a fledgling institute of the National University of Singapore to an independent world class institution which is ranked in the top 50 Universities in the world.

In 2000 Trevor was appointed the inaugural Medway Chair of Manufacturing Systems at the University of Greenwich in the UK. During his time at Greenwich he developed initiatives, which facilitated the growth of masters and PhD students, short courses and workshops, and resulted in significant funding from the UK government and the European Union.

In 2005 Trevor was appointed Head of the School of Management and Marketing and Deputy Dean of the Faculty of Commerce, of the University of Wollongong. He was subsequently appointed Dean of the Faculty in 2010. During this period the Faculty saw significant growth (over 25%) in student numbers at the undergraduate, and post graduate level. Through a series of strategic initiatives the Faculty's research performance also improved, resulting in a significant growth in highly ranked research publications, research grants and PhD completions. The Faculty is currently ranked in the top band for teaching business nationally and its research is ranked amongst the best in Australia.

A management specialist, particularly in the engineering and manufacturing sectors, Trevor has also worked as a consultant and conducted short courses for leading companies in the United Kingdom, Europe, the United States and South East Asia. His research interests including systems simulation, operations management, quality management and corporate social responsibility.



## Keynote Speaker

### Dr Eesa Mohammed Bastaki

**President, University of Dubai  
United Arab Emirates**

Dr Eesa Mohammed Bastaki is the President of University of Dubai and recipient of the highest award in the UAE: "Emirates Excellence Award in Sciences, Literature and Arts" in the field of Sciences. In his role as an educational leader, Dr Bastaki continues to attend and speak at international conferences, which bring together some of the foremost thinkers in education, technology and communications.

Before joining the University of Dubai, Dr Bastaki worked as a professor at United Arab Emirates University (UAEU) specializing in Communications Engineering. He also recently held positions as the CEO of the Information and Communication Technology (ICT) Fund; Director of Education, Training and Research & Development for Dubai Silicon Oasis (DSO); Consultant and IT Project Manager for Al-Ain Municipality; and Chairman and Partner of Barajeel Engineering Consultants. He is one of the founders of DSO and Rochester Institute of Technology (RIT) Dubai. He is a member of 7 academic boards, Honorary Chair of the Institute of Electrical and Electronics Engineers (IEEE), UAE Section, Chairman of Emirates Science Club, Board member of Cultural & Scientific Association, Board member of KHDA's University Quality Assurance International Board (UQAIB), Board member of Ankabut (UAE's NREN) and many more.

Dr Bastaki received his Bachelor and Master degrees from University of California, San Diego and his Doctorate from University of California, Irvine before returning home to the UAE to work extensively in the education and technology sectors.



## Panelist

### Dr Kevin Dunseath

**Founding Partner & CEO of CorCordi International  
Dubai, United Arab Emirates**

Dr Kevin Dunseath is a founding partner of CorCordi, an education consulting firm based in Dubai in the United Arab Emirates. Kevin has been directly involved with education for more than forty years, in both the secondary and higher education sectors. He has had significant teaching and senior management experience at educational institutions across the world. This experience includes leadership positions in Brunei, Rwanda, Saudi Arabia, the UAE, the UK and Zambia. The universities at which Kevin has worked for significant periods include: London

Business School, the University of Sheffield, the University of Exeter, Universiti Brunei Darussalam, the University of Sharjah and King Fahd University of Petroleum and Minerals.

Kevin has held senior positions not only in academia but also in the corporate world. From being Director of London Business School's Dubai Centre, he became Director of Education for Cisco in Europe, the Middle East, Africa and Russia, developing strategies for engagement with ministries and other governmental agencies responsible for education as well as with educational institutions both public and private. He played a key role in encouraging and enabling education development across the regions, aligning Cisco's wide-ranging expertise and state-of-the-art solutions for the education sector.

As well as being a fully UK-qualified teacher, Kevin has a first degree from the University of Oxford and a MPhil degree from the University of Cambridge. In addition, he has both a MBA degree and a Doctorate in Education from the University of Sheffield. His doctoral thesis explored changing perceptions among government leaders, the media, and researchers themselves about the role and value of educational research in the UK in the late 20<sup>th</sup> century. Kevin has been an invited speaker at numerous international education conferences and events across the world. He is often asked to address issues to do with the exciting world of 21<sup>st</sup> century learning and the role of technology as a key enabler of education transformation.



## Panelist

### Professor Raashid Luqmani

**Professor of Rheumatology  
Nuffield Department of Orthopaedics, Rheumatology and  
Musculoskeletal Sciences, University of Oxford, U.K.**

Professor Luqmani is trained in Nottingham as an undergraduate. After junior posts in Birmingham and Nottingham, he completed general medicine training in Stoke on Trent before going to Southampton as a rheumatology research fellow, then to Birmingham to complete his senior registrar training in rheumatology. His first consultant/senior lecturer post in rheumatology was in

Edinburgh from 1994 to 2005, after which he moved to Oxford and received a personal chair in rheumatology in 2011. His research and clinical interest is in systemic vasculitis. He manages a specialist vasculitis service as well as being responsible for supporting the general rheumatology service. He has published a number of papers in vasculitis and has research grants to develop better diagnostic strategies in vasculitis, to develop patient reported outcome measures and to assess long term prognosis in vasculitis. His current projects focus on diagnosis and classification of vasculitis, the role of ultrasound as a diagnostic tool in suspected giant cell arteritis; the risk of aortic aneurysm development in giant cell arteritis; long term damage in small vessel vasculitis. Professor Luqmani has published a textbook of rheumatology and orthopaedics, a pocket book on rheumatoid arthritis and coordinated national and international guidelines on various aspects of rheumatic diseases.



## Panelist

### **Dr Narayanan T. Ramachandran**

**Pro Vice Chancellor  
Amity University Dubai, United Arab Emirates**

Dr Narayanan T Ramachandran is currently the Pro Vice Chancellor, Amity University Dubai. He has an experience spanning over 25 years in the Higher education sector. He has taught in the HEIs in India, Malaysia, and the Sultanate of Oman. Dr Ramachandran has been involved in establishing higher education institutions, developing transnational higher education programmes, and providing leadership and guidance for academic audits from international accreditation authorities, including the Collaborative audit from QAA, UK.

Dr Ramachandran holds a doctorate from the University of Madras, India and MBA in Higher Education Management from the Institute of Education, University of London. His research interests include Software Engineering, Quality Assurance, transnational higher education, and higher education management. He has been the Principal investigator for the research projects awarded by ACM-SIGCSE, USA, and the UGC, India. During his brief stint in the industry, Dr Ramachandran has worked on prestigious real time IT projects in the USA and India. He has co-authored books and published papers in international journals and conferences. His paper entitled *Enhancing international students' experiences: An imperative agenda for universities in the UK*, published in the Journal of Research in International Education (JRIE), by Sage, UK continues to be among the top ten most read papers published in the JRIE.

Dr Ramachandran was a member of the panel of reviewers for project funded by British Council, UK, for strategic partnership among higher education institutions in different countries. He has given invited talks in many international forums and conferences, and has conducted several prestigious workshops including a workshop held during the ABET Symposium, 2011, in the USA.



## Panelist

### **Professor Anuar Zaini Md Zain**

**Professor of Internal Medicine, & Head of School,  
Jeffrey Cheah School of Medicine and Health Sciences,  
Monash University Malaysia**

Professor Anuar's present role at Monash University involves overseeing the implementation of the Monash MBBS, and Psychology programs at the Sunway campus and developing high-end facilities and attracting high caliber research community into the medical school. To-date the MBBS program has obtained full accreditation by the Australian, Malaysian, Sri Lankan and Thai Medical Councils. The Bachelor of

Psychological Science and Business is accredited by the Australian Psychology Accreditation Council. He is also actively involved in clinical practice at Tanglin Community Polyclinic, which is a collaborative clinical teaching centre for Monash University. His current research program focuses on aspects of improving the treatment and management of T2DM in particular relating to primary prevention of diabetes and community empowerment, translational studies of diabetic nephropathy and at the same time actively involved in several international multicentre clinical trials in diabetes at the Monash Medical Precinct/Clinical Trial Unit (CTU).

# ADVISORY BOARD



**Dr Tessa Dunseath**

**Executive Director, Michigan State University in Dubai, U.A.E.**

Dr Tessa Dunseath is the Executive Director of Michigan State University in Dubai and a visiting Professor of Medical Education at Monash University Malaysia. An award winning teacher and writer, with a Doctorate in Education and Fellowship of the Higher Education Academy in the UK, she holds dual teaching qualifications in both healthcare and the humanities. She has extensive experience in inter-professional clinical teaching, both in the UK and internationally. She holds a number of international posts including chairs and memberships of several professional organizations.

Dr Dunseath's academic interests include medical law, training teachers in higher education and the design and implementation of courses in education and healthcare.



**Dr Cindy Gunn**

**Director, Faculty Development Center & Associate Professor in the English Department, American University of Sharjah, U.A.E.**

Dr Cindy Gunn is the Director of the Faculty Development Center and Associate Professor in the Department of English at American University of Sharjah (AUS). Before joining AUS in 2001, she lived and taught in Canada, Japan, New Zealand, Thailand, Turkey and the United States. While a member of the English Department at AUS, she helped to develop and taught in the MATESOL program and the Education minor. Her main research paradigm is Exploratory Practice focusing on the contributions teachers and learners make to classroom research. Her main research interests are reflective teaching and learning, materials development and technology use in Education.

She has published in peer reviewed journals such as Language Teaching Research, Journal of Educational Technology & Society, The Buckingham Journal of Language and Linguistics and Academic Exchange Quarterly. Her edited books include Enhancing Teaching and Learning in Higher Education in the United Arab Emirates: Reflections from the Classroom, published in 2012 and Exploring TESOL practices in the Arabian Gulf, published in 2009. Her single authored book, Teaching, Learning and Researching in an ESL Context, was published in 2003. She has presented her research both internationally and locally in the UAE at conferences with a focus on TESOL, Education, Leadership and Educational Technology.



**Dr Daniel Kratochvil**  
**Director, Office of Planning and Performance,**  
**University of Wollongong in Dubai, U.A.E.**

Daniel Kratochvil is a senior higher education administrator with experience in university strategic planning, academic program development, local and international accreditation, and the promotion of international initiatives. Currently the Director of the Office of Planning and Performance at the University of Wollongong in Dubai, he has previously served as a senior administrator at universities in Abu Dhabi and Bahrain as well as working for the government of the United Arab Emirates. Prior to moving to the Arabian Gulf Region, he worked for the Council on International Educational Exchange and as a researcher on projects funded by the

Freedom Forum (Columbia University) and the Mellon Foundation. He holds a PhD, MPhil and MA from Columbia University in the City of New York and a BA from the University of Texas-Austin.



**Dr Glenda Crosling**  
**Professor, Sunway University, Selangor, Malaysia**

Associate Professor Crosling has extensive experience in higher education internationally. Her expertise is in the development of learning, teaching and curriculum for educational quality. As inaugural Director in 2009 of Education Quality and Innovation at the foreign branch campus in Malaysia of the Australian Monash University (Sunway Campus), she has held campus-wide responsibility for education quality assurance, improvement, and innovation. She was campus leader in the 2010 Malaysian Qualifications Agency (MQA) Institutional Audit, from which the campus was granted self-accrediting status by the Malaysian government. Subsequently, A/ Professor Crosling developed and implemented the campus Course Self-accreditation System. Her major activities in educational innovation include developing the Monash University Sunway

campus Education Strengths program and professional development programs for academics, including the Graduate Certificate in Higher Education and seminar series based on teaching excellence awards.

Associate Professor Crosling's expertise has been acknowledged broadly and she has been invited MQA Expert Panel member in the development of national policy and best practice guidelines, and an Honorary Auditor for both the Australian government Tertiary Education Quality and Standards Agency (TEQSA, formerly AUQA), and for MQA. She serves on the Executive Committee for the Malaysia Australia Business Council, and is Chair of the Education and Training Sub Committee. She has been Visiting Professor in universities in Thailand and China, and has taught in Singapore and Hong Kong. Associate Professor Crosling has published widely in books, chapters, refereed journal articles, and been invited keynote and plenary speaker at conferences. Her work is cited often in international publications, and her current research interests include quality in transnational higher education and the development of creative thinking for innovative societies.



### **Dr Paul Fullerton**

Paul is a Paediatrician by background, and is still unsure whether an element of cheekiness was a pre-requisite, or is a side effect of over 35 years in that discipline! He has been interested in medical education all his career – he was involved in nurse and Aboriginal Health Worker training initially, then medical student teaching for the last 20 years; he has been teaching full-time for the past 7 years. Paul is an Associate Professor (Paediatrics) and teaches in the Graduate Certificate of Higher Education, both with Monash University Malaysia. He has been involved in a number of committees and working groups of the Royal Australasian College of Physicians.

As a consultant general Paediatrician, Paul's particular passion has been in developmental disability, and he hopes this passion will infect at least some of his students.

He sees himself as a life-long learner. In medical education, his interests are in Problem Based Learning, in assessment, and in the influence of culture on approaches to learning. He considers himself privileged to have been exposed to a number of cultures since childhood and this led to his interest in culture and learning approaches. He is currently part way through a Masters of Health Professional Education in which he is looking at this topic.



### **Dr Sarita Sahni**

**Vice President Academic Affairs, Emirates College for Management and Information Technology, U.A.E.**

Dr. Sarita Sahni is the Vice President, Academic Affairs at ECMIT, Dubai. Her career in Education spans 35 years. She has provided leadership to the academic departments and administrative direction to all support units. She has been involved in planning, designing, developing, implementing, monitoring and assessing strategic educational projects as per national and international licensure and program accreditation requirements. Dr. Sahni has developed strategic plans, program proposals, institutional quality assurance and effectiveness measures, curricula for programs and provided leadership for accreditation of various programs.

At various stages of her career, she has taught Psychology courses and facilitated Admissions, Marketing and Student Life programs for various institutions in the UAE namely Champlain College, Vermont, USA, ECMIT, RAK Medical and Health Sciences University and a Senior Secondary School.

Dr. Sahni is a Supervisory Psychologist for MENSA, UAE, MBTI Practitioner, certified by AMA, New York, USA, SEI Coach, certified by 6Seconds, California, USA, for EQ assessments and 360° feedbacks. She is one of the Editors of the American Journal of Applied Psychology. She has proficiently conducted workshops and trainings for faculty, staff and students for personal and professional development. For the last two years she has been working on developing best practices guidelines for Outcome based Teaching, Learning and Assessments and a Learning Management System that is compliant with above practices.

# CONFERENCE ORGANISING COMMITTEE

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## **Susan Thomas**

Coordinator, School of Medicine Education Unit

Jeffrey Cheah School of Medicine & Health Sciences, Monash University Malaysia



## Effectiveness of using web-based instruction in universities in Saudi Arabia

**Aboalhaj, Abdulrahman**

University of York

### Abstract

*The study is clearly concerned with focusing on the benefits of using Web-Based Instruction (studying through an asynchronous classroom and synchronous teaching method) and blended learning (studying through an asynchronous virtual classroom in addition to traditional learning) as compared to traditional learning (attending classroom lectures) in their effects on students' perception and achievements characteristic the courses at some universities in Saudi Arabia. However, the researcher in the end had to find out whether there is a significant difference between three methods of teaching.*

*In this research, two experimental groups with a control group were involved. The three groups were randomly chosen and consisted of 43 and 55 participants respectively and a control group involving 50 participants.*

*The study shows that there is a statistically significant difference between the three teaching methods in terms of students' achievements, favouring WBI, while no statistical differences exist between blended learning and traditional learning in terms of students' achievements. This study also shows that there is a statistically significant difference between the two experimental groups on the one hand and the control group on the other hand, favouring the former, while no statistically significant difference exist between blended learning and WBI in terms of students' perception.*

### Introduction

Modern technologies have been important to different sectors of the state, and different parts such as the economy, social life, education, entertainment, etc. In Saudi Arabia education, technologies play an important part in the acquisition of information and the enhancement of achievements alike have a duty to cope with the current technological advancements in order to respond to the needs of their relevant societies.

Other sectors have been influenced by the core of the government systems and higher education should take the initiative and lead those sectors (Arab Bureau of Education for the Gulf States, 2013). Some studies confirmed that higher education in the Arab countries is below the international standard (Sabri, 1986; Al-Omar et al., 1988; Al-Muaayrah, 1999). Al-Baloushi and Al-Asiri (2005) believe that the higher education in Saudi Arabia is yet to reach the required standard of electronic education. Al-Ghadyan (2004) confirmed that Saudi universities should follow the example of the advanced countries where higher education has made the maximum use of technology to develop their education systems. Al-Sunbul (2004) believes that modern technology is becoming increasingly important to improve the higher education systems in Saudi Arabia.

Technology can be defined as "any practical art using scientific knowledge" (Saettler, 1968, p. 5) via machines. Technology seeks knowledge to improve the human condition (Tumer, 1997). Technology in learning is associated with two definitions: (1) the physical concept of science and (2) the behavioural concept of science (Saettler, 1968).

## Literature Review

The new technology has led to a growth in all fields of knowledge making it an imperative requirement for universities and companies to benefit from this development in information and communication technology to improve the learning environment. Malalla (2004) and Sonwalkar (2002) point out that educational institutions and private companies have been quick to offer distance education programmes.

Nowadays, computer technologies have been made affective significant difference in the effectiveness of the instructional teaching methods. The idea that computers can provide great instruction for a large number of learners is supported by two groups or individuals (Larkin & Chabay, 1992).

The suing of the Internet wildly affects the methods of computer-based education and training. The grate World Wide Web (WWW) provides attractive features for web-based education, e.g. incorporation of distributed multimedia resources, self-paced learning and multiple opportunities for instructors and students to communicate both synchronously and asynchronously. Moreover, the Web offers students and teachers participation in their location independent whenever and wherever it is more convenient. Web-based education has become very popular. However, there are some problems that affect the effectiveness of using web-based education, which point to the need for further studies to enhance the use of web-based education.

Distance education opportunities are increasing into educational courses and training programmes countries around the world. The availability of distance education programmes that can effectively link learners and teachers separated by distance and time barriers offers new opportunities for learning. We can say that distance education is an excellent method for learners because it offers them a high level of educational flexibility to overcome challenging priorities, such as work, home, etc. In addition, the equity of educational opportunity is one of the most obvious advantages of distance education: it offers study to students who would otherwise be unable to undertake a full-time course. Moreover, in distance education students are extremely diverse and may include a significant proportion of individuals with different goals, needs, knowledge, expectations, etc. (Wood, 1996).

There have been many attempts to define distance education. For example, distance education is defined as “the acquisition of knowledge and skills through mediated information and instruction, encompassing all technologies and other forms of learning at a distance” (Rockwell et al., 2000).

From the beginning of the Internet, there were multiple efforts to use it as a medium for education. The WWW has been created ability to easily distribute educational material around the world. In the field of education, there is an agreement between various domain experts and teachers and students that the Internet supports the design of novel approaches to teaching and learning, as well as cooperation among teachers and students who can share instructional material. It also offers opportunities for designing tutoring systems with diverse pedagogical strategies (Kinshuk & Patel, 1997). As reported in Alpert et al. (2000), Mitrovic (2000) and Peylo et al. (2000), there are many strong reasons for using the Web as a medium for education, amongst which are:

- The Web can reach a greater number of students and a much wider audience.
- Students are no longer constrained as to where or when they can interact with the instructional system.
- Students can access tutoring material via Web browsers, and do not need to own a copy of the educational software.
- Several advantages of WBI have been reported, indicating that there is a common acceptance from students and academics to use and develop WBI courses:
- Students found the flexibility of online courses more suited to their personal lifestyle. The fact that there is no need to be physically present at the university is considered by many students as a key advantage (Smith et al., 2000).

- WBI was found to be more directed to the needs of individual students, and opportunities for faculty-student and student-student interaction were enhanced as a result of advanced computer mediated communication technologies (Smith et al., 2000). Furthermore, Jones (1999) considers the possibility of increasing the interaction as one of the most successful aspects of WBI.
- Academics from different disciplines found that the students and students' interests and motivation increased when the use of the Internet was an essential course requirement. Students appeared to be more active pursuers of knowledge and were keen to distribute findings to their peers (Smith et al., 2000).

### **Types of Distance Learning:**

Al-Musa and Al-Mobark (2005) and Mylott (2008) refer to the following types of distance learning:

#### **Synchronous Distance Learning**

This type of distance learning requires learners and instructors to communicate online at the same time from different places. For this reason, this type of distance learning needs modern equipment and a good network connection. However, it has the advantage of immediate feedback and live online interaction. To conduct synchronous distance learning, there are a number of tools that can be used, such as video conferencing, audio conferencing, chat rooms and white board (Myllott, 2008).

#### **Asynchronous Distance Learning**

This type of distance learning does not require students and teachers to be online at the same time. The advantage of asynchronous distance learning is that the student will be able to choose a suitable time to access what they need, and this will allow the student to do their learning at their own pace (Sussman, 2006).

On the other hand, with this type of distance learning students will be unable to get immediate feedback from the instructor and will be more isolated than with synchronous distance learning. But as yet in both types of distance learning the students need to be motivated for learner in order to overcome the negative effects of the separation from one another and from their instructor (Ellis, 2004).

### **Interaction**

Many studies have examined the theoretical framework of interaction in distance learning. Bates (1995) considered that instruction according to the time and the context such as synchronous, asynchronous and personal social interaction. He reported argument that with different objective need and require different types of induction. Paulsen (1995) confirmed some types of instruction in the computer communication environment: person-alone, person to person, person to many and many to many.

Other types of instruction that use WBI are provided by Moore (1993; Moore and Kearsley, 1996): student-content, student-teacher and students among themselves interaction. Another type, learner-interface instruction, is added by Hillman et al. (1994) in the distance learning environment the student's face has to intercut with the medium. In WBI, Moller (1998) has based three types of interaction which are academic community between students and teachers, intellectual community through peer interaction or collaborative work and personal community developed by encouragement and assistance.

## The Purpose of the Study

This study aimed to make a contribution towards improving the quality of teaching in the Saudi universities by investigating the impact of the WBI method and the blended learning method on students' achievements and perception. Hence, in essence the specific aims of this study are as follows: to identify the effect of the WBI method on students' achievement compared to blended learning and the traditional learning method in Saudi universities, to identify the influence of WBI method on students' perception as compared to blended learning and the traditional methods in the Saudi universities.

A review of previous studies regarding the use of modern technology in education in the Kingdom of Saudi Arabia shows that most of these studies have concentrated on the theoretical perspective, such as defining the use of technology and identifying the potential barriers. Also, these studies have discussed the different views of academics and students regarding the application of modern technology in education.

By contrast, a few studies have concentrated on the practical perspective, featuring the impact of the use of modern technology in education, particularly in some specialised areas such as Islamic education as indicated by Al-Gadiri (2006).

However, the need for these studies is dictated by the fact that there is still disagreement between the results of the studies in relation to the impact of the modern methods of education compared to the traditional methods. For example, Al-Zahrani (2005) has investigated the impact of the use of computers in learning the Koran on the students' achievement. He concluded that there had been no significant differences between the average points scored by the participants of the experimental sample compared to those scored by the participants of the control sample. The result of the above study is supported by many studies which proved that there was no significant difference between the achievement of the students who were taught by the traditional method and the electronic method, such as Al-Zahrani (2002), Ryan (2002) and Al-Mubarak (2004). Moreover, Kennedy and McCallister (2000) found that there are no significant differences between the electronic methods, conventional and blended approaches with regards to the effect of them on the students' outcomes.

## Main Research Questions

1. Is there significant difference between the achievement of students who used WBI and the achievement of students who used blended learning?
2. Is there significant difference between the achievement of students who used WBI and the achievement of students who used traditional learning?
3. Is there significant difference between the achievement of students who used blended learning and the achievement of students who used traditional learning?
4. Is there significant difference between the perception of students who used WBI and the perception of students who used traditional learning?
5. Is there significant difference between the perception of students who used blended learning and the perception of students who used traditional learning?
6. Is there significant difference between the perception of students who used WBI and the perception of students who used blended learning?

## **METHODOLOGY**

### **Participants**

The population involved in this study included 148 students of the universities in the Kingdom of Saudi Arabia, who are studying the education course at AL- Qassim University. For the purpose of this study, a sample was selected from this population. The target sample was year three students of the academic year 2012 / 2013.

The students at this level are more suitable than lower levels (the first and second) as they are relatively aware of the second level curricula which have recently been updated to cope with the state of the art curricula, such as the use of modern technology in education. This makes them more appropriate and reliable than other levels for the purpose of this study.

### **Research Design**

In order of this research pre-test/post-test control groups have been selected. This type of true experimental design should consist of at least two groups that could be expanded to three or more groups (Gay, 1976).

The current research involves three equivalent groups, two experimental groups and one control group. All research groups were given a pre-test achievement, and then the two experimental groups were exposed to the independent variable: the first group was taught by the WBI method and the second group by blended learning, while the control group received the usual treatment, which was the traditional learning method. The differences between the three groups were then identified.

### **Procedure**

The students who participated in this study were responsible for completing a WBI course that consisted of three units. After finishing each unit the student was required to do a final exam which would be given a grade by a teacher. The three exams were to measure the student's achievement.

All students received training regarding how to use the WBI course before starting and they were given time to familiarise themselves with WBI. The students in each group started the course and were required to finish it within six weeks with the last week set aside for testing and wrapping up the course. The students spent one to two hours every day working on the course.

### **The Achievement Test**

The achievement test is considered one of the most important tools for gathering accurate information to help safe and accurate decision-making (Al-Dosari, 2001). In this regard, Johnson and Christensen (2008, 160) describe the achievement test as a test "that is designed to measure the degree of learning that has taken place after a person has been exposed to a specific learning experience".

The researcher prepared an achievement test in the light of determining the aim of the test and wording of the test items. After referring to some references on the objectivist test and the conditions which should be followed to produce a well-designed test the researcher designed the initial draft of the achievement test items consisting of (30) questions, i.e. (15) true/false questions and (15) multiple choice questions. In the light of the assessor's comments and suggestions, the achievement test has been amended in its final draft to consist of (23) questions, all of them multiple choice questions.

These instructions aimed at explaining the idea of the test in a brief and simple way, taking into account the following points:

- Clarity of the instructions in order that students can understand how to answer the test.
- Drafting the instructions in short sentences.
- Writing them in the introduction of the test.

## **The Interview**

The purpose of using the interview in this research is to support and complete the findings of the perception scale. In this respect, Jonson and Christensen (2008, 203) define an interview as “a data-collection method in which an interviewer asks an interviewee questions”. However, the interview method is considered one of the most important research instruments which can reach the underlying causes of human behaviour and unobservable perception that might not be reached by other tools.

For the purpose of this research the researcher has chosen the semi-structured interview method. This type of interview gives the interviewees a degree of freedom and flexibility to talk without any influence from the interviewer to lead the interviewee to say what he/she would like to hear.

As far as the current research was concerned, the interviewees were asked a number of questions by the interviewer, and were encouraged to express their opinions at some length and in their own way, which would allow the researcher to explore their perceptions in more depth. For this purpose, the researcher prepared an interview schedule which was discussed with his supervisor to check the wording of the questions and their language.

## **Result**

For the purpose of this study the researcher has electronically designed a unit of the course to be taught to the study sample by using three different methods of teaching. Thereafter the three groups of the study sample have been subjected to different measurements including an achievement test in order to identify the impact of these methods on the students' achievements. Furthermore a perception scale supported by an interview has been applied to establish and compare the effects of these methods on the students' perception. The results of the application of the instruments associated with these measurements and the related data analysis to be conducted through using the appropriate statistical methods are discussed in the following paragraphs.

To verify those questions, arithmetic means and standard deviation featuring the performance of the three groups of the study sample in the pre and post achievement test have been worked out. The following table shows the values of arithmetic means and standard deviations which have been obtained as well as a summary of Levens' tests for the homogeneity of variance.