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INTER-COLLEGE LECTURE SERIES
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INTER-COLLEGE LECTURE SERIES

Background:

With the establishment of the four College, the Inter-College Lecture Series (ICLS) has come to replace Inter-Faculty Lecture held as part of the scholarly lectures during the academic year.

The Academic Board approved the institution of the Inter-College Lecture series as follows:

Rationale:

To create a platform for faculty member to discuss their research findings with members of the University community and the general public.

Justification:

This would give faculty a public forum to share their ideas, unlike inaugural lecture which are only meant for full professors.

The ICLS would create a forum for the discussions of presentations on findings of ongoing research. The discussion would allow audience to ask questions and make contributions that will improve the project design.

Presenters:

All faculty member in the colleges are expected to present lectures.

Planning Systems:

Inter-College Lectures would rotate between the colleges.

While Public Affairs coordinates and received inputs form the respective Colleges to come up with a schedule, the lecture series is administered and hosted by the respective Colleges.

This document, essentially a book of abstracts, provides a record of the lectures presented in the second semester of the 2017/18.

Joint Lecture:

Prof. Yaw Oheneba-Sakyi & Mr. Gainford Kofi Amponsah

Topic: Still Offline and Behind in this Digital World?, Join in the Sakai LMS Experience.

Delivered on February 22, 2018



Prof. Yaw Oheneba-Sakyi

**Department of Adult Education
& Human Resource Studies
School of Continuing and
Distance Education
College of Education**

PROFILE

Professor Yaw Oheneba-Sakyi (Ph.D.) is a Professor of Sociology and the Founding Dean of the School of Continuing and Distance Education (SCDE), College of Education, University of Ghana. He was earlier the Director of the University's Institute of Continuing and Distance Education (ICDE). As the Founding Dean of SCDE and the Director of ICDE, he championed the pursuit of academic programmes and activities towards the realization of the potential growth that exists for investing in the expansion of adult, continuing, and distance education and e-learning programmes

which would extend the reach of university education to diverse populations in formats which the traditional face-to-face classroom learning cannot provide.

As an experienced Open, Distance, and e-Learning(ODEL) teacher, researcher and professional, he was the Senior Responsible Officer of the University of Ghana-Unisplendour Software System Company Ltd., Tsinghua University, China ICT-Based Distance Education (DE) Project to provide the necessary hardware, accessories and training for the implementation of ICT-based Distance Education programmes in Ghana. This project, which began in 2009, is a component of the University's five-year IT Strategic Plan, which is also in line with Ghana's ICT Policy on Education. The project equipped the University and its Regional Learning Centres throughout the country with fiber-optic network operating centers, fully-equipped computer labs, interactive whiteboard classrooms, learning management systems and video conferencing facilities.

Prior to returning to Ghana in 2008, Prof. Oheneba-Sakyi taught in the United States of America for 19 years. He started his higher education teaching and research career at the State University of New York (SUNY), Potsdam, NY, USA. In 2002 he was promoted to full Professor of Sociology at California State University, Fresno, CA, USA where he served as Chair of the Africana and American Indian Studies Department from 2002 to 2006. In 2009, he was named eScholar Faculty by California State University, Fresno, and awarded a certificate for completing the eScholar Programme designed to enhance and improve online course offerings.

Prof. Oheneba-Sakyi has published numerous research articles in respectable international peer-review journals and has received numerous grants and fellowships to support his scholarship.



Mr. Gainford Kofi Amponsah

Department of Distance Education
School of Continuing and
Distance Education
College of Education

PROFILE

Mr. Gainford Kofi Amponsah is Instructional Technologist and Designer in the School of Continuing and Distance Education, College of Education. In this capacity, he works on Instructional Technology and Curriculum Design, in support of the University's Distance Education programme, by assisting faculty and students to bridge their digital literacy and ICT skills gaps, and advising on how to integrate technology into instruction and best practice in the classroom and online.

He has a Bachelor's degree in Industrial Art (Textile Technology & Design) from the Kwame Nkrumah University of Science and Technology (KNUST), a Master's Degree in Curriculum Development and Instructional Technology from the State University of New York, School of Education, Department of Education Theory, and Practice; and a second Master's Degree in Global Textile Marketing from the Philadelphia College of Textile and Science (now the Philadelphia University).

Mr. Amponsah has extensive experience in the educational enterprise, particularly in Distance and Online Education. Prior to joining the University of Ghana, he worked with various educational institutions and bodies in New York, United States of America, to provide professional development

training for teachers to challenge them to think “outside of the box”, when designing curricula, and to integrate multimedia technologies in their teaching. He has held several workshops to help teachers adopt best practices and strategies that are effective for integrating technology tools in their day-to-day operations to improve and enhance teaching and learning, and to more effectively engage students in the learning process.

Mr. Amponsah was also Statewide Coordinator for the Advanced Technology Training and Information Networking (ATTAIN) Project, a network of educational technology laboratories that promotes digital inclusion and increased access to training in under-served communities located in some of New York State's most economically challenged communities. In this capacity, he was responsible for managing field operations of these labs, by developing plans, strategies, coordinating and overseeing implementation of ATTAIN's workforce training and Microsoft IT Skills Program in the New York State

In the course of his career, Mr. Amponsah has been a member of various professional bodies, including the Association for the Advancement of Computing in Education American (AACE), Association of Adult and Continuing Education(AACE), National Association of Workforce Development Professionals (NAWDP), American Educational Research Association, (AERA), American Association of Computing in Education (AACE), American Computers and Machinery (ACM) and Educase.

ABSTRACT

The world's economy and social landscape have been significantly transformed by the internet, which has enhanced the lives of individuals, promoted business growth and stimulated economic development. The offline population increasingly suffers from constrained prospects of education, class mobility, employment opportunities, and other areas related to quality of life. According to a 2014 research by McKinsey and Company, "...as the Internet becomes even more embedded in every facet of our lives, the costs of the digital divide will mount, and we risk leaving substantial portions of the global population at a disadvantage that they might never overcome." The research concludes that "...The voices, ideas, and contributions of the offline population can't be heard and often can't be made until they're connected." The McKinsey and Company's research raises several key issues for Ghanaian scholars to ponder on, as academic institutions in the country attempt to bring innovation to teaching and learning via the use of Learning Management Systems and emerging technologies, businesses struggle to employ graduates with 21st century skills, and government pursues policies to digitize the Ghanaian economy.

In responding to changing global trends in internet adoption to enhance teaching, learning and research, the University of Ghana, through the Government of Ghana, secured a Chinese Government loan that provided the basic infrastructure to support ICT-based teaching and learning. Encouraged by the opportunities available through the Chinese projects and guided by the University's belief to become a world-class research-intensive university, the Sakai Learning Management System (Sakai LMS) was adopted in 2014. Sakai has made it possible for the University's Distance Education programme to transition from paper-based modules to a multi-mode format where web-based (online) courses have been integrated with face-to-face facilitation by assistant lecturers and tutors. Additionally, Sakai is increasingly being used by some faculty members in departments and schools across all the four colleges of the University for delivery of instructional materials, course content, and assessment. Since the internet is the gateway to Sakai LMS and the backbone of most online/e-learning activities, it is imperative to identify the barriers that the offline population faces in adopting the internet and explore mechanisms or solutions that might help overcome the barriers to the internet.

Using data from exit interviews with Distance Education students, in-group discussions with students, course writers, assistant lecturers, and IT Support Engineers in the UG-Regional Learning Centres; and content analysis of letters of student complaints, this lecture examines experiences of faculty, staff and students at the University of Ghana with Sakai LMS. We seek to share success stories and challenges from institutional, faculty and students' points of view with regard to connecting with services; accessibility and universal design; lessons learned in accessing course materials, uploading, downloading and playing videos; conducting interim assessments (IAs), tests and quizzes, submitting assignments; discussing and communicating between and among students and faculty using the chat room, forums, announcements, messaging, email, and wiki tools.

The lecture discusses LMS best practices and argues that with a combination of Sakai's suite of tools for content management, engagement, collaboration, and differentiation, course instructors can create project and course sites fully customized for each topic and group of learners to achieve the innovative teaching practices for 21st Century learners- student-centered pedagogy, extending learning beyond the classroom, and integrating technologies into teaching and learning. We conclude that the expansion of the online population at all levels of Ghana's educational institutions, government, industry, and nonprofit organizations can improve the lives of individuals, build soft skills for the 21st century world of work, provide job opportunities in the country and beyond, promote business growth and stimulate economic development throughout the country.

Recognizing the need to sustain the gains in the deployment and use of Sakai as the LMS of choice for the University of Ghana, it is recommended that, as a matter of priority, a Centre of Innovation/Excellence in Teaching and Learning be established at the University. The Centre should be headed by a Senior Academic Member who reports to the Pro-Vice-Chancellor (Academic and Students Affairs). With budgetary allocation and adequate support staff, the Centre should be responsible for providing leadership for online and blended courses; instructional technology, classroom recording services, video-conferencing and webcasting, academic support and other

multimedia services. The mission of the Centre would be achieved by focusing on best practices in professional development that ensure effective integration of emerging technologies in quality course design and delivery across all disciplines.

**Prof. Godfred K. Ofofu-Budu**

School of Agriculture,
College of Basic Applied Sciences

Topic: Turning Organic Waste into
Wealth in Agricultural Production
in Ghana.

Delivered on May 3, 2018

PROFILE

Godfred Kwabena Ofofu-Budu is an Associate Professor and Head of the Forest and Horticultural Crops Research Centre (FOHCREC) -Okumaning near Kade, of the School of Agriculture, College of Basic and Applied Sciences, University of Ghana Legon. He attended University of Ghana (B.Sc. Hons Agric) and Hiroshima University (MSc, Ph.D) in Japan, under the prestigious Monbusho Scholarship. Prof. Ofofu-Budu joined the University as a Research Fellow and was promoted to the position of Senior Research Fellow and is now an Associate Professor in Agronomy.

He teaches various courses in perennial tree crops (Rubber, Oil palm, Cocoa and Citrus) at both undergraduate and graduate levels. He is one of the leading scientists on citrus, and rubber in Ghana, and has served as consultant to the World Bank, FAO and International Institute of Tropical Agriculture in Ghana and Liberia. He has served and continues to serve on several University of Ghana Boards/Committees including the University Academic Board and Academic Board of the College of Basic and Applied Sciences. He is also the national Coordinator of the Ghana Compost Project and ORM4Soil Project, co-researcher of the Pro-Eco Organic Agriculture Project, all projects funded by the Swiss National Research Fund.

Research Work

His interest in sustainable plant nutrition led him to conduct research into the recycling of organic waste and use in crop production. He has trained Ph.D students, Masters and Bachelor students in recycling of both agricultural and municipal organic solid wastes in Ghana.

He has consulted for several agricultural companies such as Benso Oil Palm Plantation, Twifo Oil Palm Plantation, PINORA Fruit Processing Company, Serendipalm Company Limited where he successfully recycled the organic wastes generated by these companies into organic fertilizers (compost). He has published extensively on compost production, quality and use for crop production. He also has several publications on tree crop production to his credit.

He is working on soilless media for vegetables (pepper, garden eggs, tomato, cabbage) raising of planting materials of tree crops (cocoa, oil palm, citrus) and plantain, using locally available renewable resources such as sawdust, compost, rice husk biochar.

ABSTRACT

Increasing waste generation due to increasing population density, agro-processing, improved lifestyles and poor citizen education on waste management and environmental sanitation issues among others, calls for an urgent need, to improve on waste management in Ghana. With the current population of 29.6 million and waste generation of 0.47 kg/person/day, about 13,912 tons of waste is generated/ day. About 60% (8,347 tons/day) out of the municipal solid waste generated is organic and biodegradable. In addition, large quantities of human fecal sludge is produced. The management of the municipal solid waste and fecal sludge is currently a major challenge facing city authorities, especially the organic fraction, as they have to contend with dwindling land fill sites, inadequate facilities and poor infrastructure.

Large quantities of agro-industrial wastes such as sawdust, empty fruit bunches, palm oil mill effluent, mesocarp fibre, palm kernel cake, citrus pulp waste, rice husk, cocoa pod husk and animal droppings are produced. The inappropriate management of these municipal and agro-industrial wastes is posing great danger to the environment. Composting and biochar production using these organic wastes are suitable alternative methods of waste reduction, disposal, and reuse because they produce a final product that contains plant nutrients, that is stable, free of pathogens and weed seeds, and can be beneficially used in agricultural production. Thus closing the nutrient loop through recycling of the organic fraction of the waste stream will help develop market for the sustainable use of the products and generate revenue for the maintenance of the value addition facility, improve on the soil fertility and reduce the use of inorganic fertilizer application. This will result in significant financial savings whilst cleaning the environment and reducing greenhouse gas emissions. The viability of organic waste recycling industry depends on the availability of markets for the products. The use of recycled organic waste (Compost and biochar) as a growing medium (soilless media) in transplant production is a potential agricultural business in Ghana. Transplants are widely used in the horticultural industry, and can improve on the availability and uniformity of seedlings, increase productivity and incomes of farmers in the horticultural industry.

Advantages of transplant production include uniform seed germination, elimination of variability caused by direct seeding, extension in growing season, enhanced yield and productivity. Using this technology, vegetables, plantain suckers, cocoa, oil palm, citrus and rubber seedlings in soilless media have been produced and are available all year round. The technology has demonstrated high yields (between 10% and 30%) and significant incomes (20% to 30%) compared to the traditional methods of production.

**Prof. Chris Gordon**

Institute for Environment and
Sanitation Studies
College of Basic and Applied Sciences

Topic: 'Charity Begins at Home'
The University and the Delivery of
the Sustainable Development Goals

Delivered on April 12, 2018

PROFILE

Prof. Gordon holds Bachelor of Science and Master of Science degrees in Zoology from the University of Ghana, Legon. He has a Doctorate degree in Human Environmental Sciences from King's College, UK. He is the current Director of the Institute for Environmental and Sanitation Studies of the University of Ghana. His areas of research cover Ecotoxicology, Human Environment Interactions and Limnology.

He has a distinguished academic career spanning over thirty years at the University of Ghana in the fields of research, teaching as well as advisory and fund-raising contributions. He has successfully supervised over 70 MPhil and PhD students, - two of whom have won the Silver Medal of the Ghana Academy of Arts and Sciences for the Best Post-graduate thesis in Ghana. Prof Gordon has provided guidance and facilitated the development of various national policies and strategies that cover Water, Buffer Zones, Fisheries, Wetlands, Environment, Climate Change and more recently, inputs into the draft policies on Science Technology and Innovation, Biodiversity as well as Environmental Management of the Oil and Gas Sector.

Internationally, Prof. Gordon has served as Invited Expert for project reviews and Think-Tank groups. These bodies include among others, FAO, National Research Foundation of South Africa, the UNEP Foresight Expert Group, the UNEP Programme of Research on Climate Change Vulnerability, Impacts and Adaptation (PROVIA) and Future Earth Africa Interim Scientific Committee, ICSU-ROA, IPCC, IPBES and START. He also served two terms each as Vice President of Wetlands International and Vice President of the International Society of Limnologists. Currently, he serves on the Board of Tersus-Ghana and of KITE.

Prof. Gordon has received various honours and awards including the Parker-Gentry Award for Conservation Biology from the Field Museum, Chicago, the USA in 1997, and the Distinguished Award for Meritorious Service from the University of Ghana, Legon in 1999, and Environmentalist of the Year, by the Ministry of Environment and Science in 2003. In 2016, he was invested as Member, Order of the Volta for his contribution to science, education and development. He has over 100 publications made up of Books, Book Chapters, and Monographs, as well as peer-reviewed journal articles, technical reports and conference proceedings.

ABSTRACT

This paper seeks to analyse the synergies, congruence and interlinkages between the actions and key performance indicators of the current University of Ghana Strategic Plan and the targets, actions and indicators of the Sustainable Development Goals. The purpose of this analysis is twofold, to establish how the University can mainstream the SDGs into its operations where there are gaps, but also to contribute to the global discourse on the SDGs from a 'southern' perspective in terms of approaches and relevance of the SDGs to an academic setting.

The University of Ghana has always been visionary in environmental thinking. In 1990, the then Vice-Chancellor, Prof Akilakpa Sawyer was one of the original 22 signatories of the Talloires Declaration, a declaration for sustainability among like-minded Universities. In 2013, the University became part of the Global Universities Partnership on Environment and Sustainability (GUPES). The current strategic plan of the University (2014 - 2024) is aimed towards the vision of “becoming a world-class research-intensive university” within the decade. The University Strategic Plan seeks to deliver the vision through nine strategic priorities. The Sustainable Development Goals (SDGs), otherwise known as the Global Goals, are a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity. Building on the Millennium Development Goals, the SDGs have 17 pillars, 169 targets and 230 indicators and some more indicators are still being developed.

Standard methods of rapid assessment of SDG mainstreaming, which involved a mapping approach that examined the alignment of the existing priorities of the University with the individual Goals and Targets of the SDGs, the alignment of University Academic Research units and the SDGs and an assessment of the SDGs being targeted by research units have been used. It is clear from the results that the University of Ghana is very much in tune with the SDGs and much of its research by graduate students contribute to the data and evidence needed for their achievement. However, there are some areas where the University can contribute more.

Jeffery Sachs notes that 'universities need to play a role as active solutions networks ... helping society to find technical solutions to achieve these goals'. As a research university, The University can use SDG related criteria such as – impact, paradigm shift, sustainable development, needs of the recipient, ownership, efficiency and effectiveness as a key framework against which project proposals and research directions are assessed. The University can also incorporate SDG case studies, learning material, examples and concepts into its courses and programmes, in such a way that teaching philosophies, learning outcomes and attitudes acquired can contribute to the next generation of policymakers and scholars leading to the 'future we want'. This, in the long run, may be the most important contribution of the University to the Global Goals as it is attitudes and behaviours which control the use of technology and adoption of solutions. Finally, at the institutional and operational levels, the University can integrate SDGs consistently in new social and environmental policies, as well as review existing policies and operational guidelines to encompass the basic philosophy of the SDGs, which can be encapsulated in the phrase 'leave no one behind'.

