



**The Interlink Alliance**

**2nd Faculty Development Conference:  
*Teaching and Learning in the 21<sup>st</sup> Century***

**North Carolina Central University  
March 9-10, 2012**

**Abstract**

Hosted by The Interlink Alliance, this faculty development conference provided higher education instructors the opportunity to share best practices in teaching and learning, discuss research on teaching and learning processes, and establish relationships with faculty from other Interlink Alliance campuses. Conference programs and activities centered on four tracks: Teachers and Leaders; Teaching the Millennial Student with Technology; Knowledge Economy and University-Industry Research Collaborations, and Distance Education. This paper serves as a summary of conference proceedings.

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## **TEACHING WITH TECHNOLOGY FOR IMPROVING LEARNING AND DECISION MAKING**

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### **Abstract**

As members of the International Global Seminar Program, three HBCUs, Virginia State University (VSU), Florida A & M University (FAMU), Elizabeth City State University (ECSU), and Bethune-Cookman University (BCU), adopted the case study approach for increasing the quantity and quality of undergraduate instruction. In collaboration with the internationally recognized program, “Global Seminar” ([www.globalseminar.org](http://www.globalseminar.org)) at Edward Via College of Osteopathic Medicine, the participating HBCUs have written case studies on Antibiotics Use in Agriculture, Florida Orange Juice and Food Safety, Global Warming and Ratification of Kyoto Treaty, Climate Change, Bottled Water More Expensive than Gasoline. These cases are available to faculty through hardcopy and electronic means, and have been implemented in agricultural courses at each participating institution. The students read the case studies and write their reflections for discussions with their peers at the above-mentioned HBCUs, via videoconferencing. The integration of videoconferencing and discussion board of Blackboard has resulted in students’ improved learning and decision making on current global topics. The outcome of this innovative teaching method was students who were better prepared to express their knowledge, skills, and abilities (KSA) in environmental, earth, and food sciences, by using technology and multimedia.

### **Introduction**

Case studies are an increasingly popular form of teaching and have an important role in developing skills and knowledge in students. Teaching and learning styles are always changing and in recent years there has been a noticeable move from lecture-based activities towards more student-centered activities. The cases often center on the decisions that were made, the people who made them, the people affected by them, and the impact of the decisions on all parties. The 2009 NRC publication, Transforming Agricultural Education for a Changing World, clearly

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noted the need for teachers to present material in a contextual manner that promotes experiential learning by students, and to develop the ability of students to learn in team/group formats. Case-study teaching provides a means by which to accomplish this because it provides multiple approaches for effective teaching through 'real life' examples.

### *What Is a Case Study?*

It is now documented that students can learn more effectively when actively involved in the learning process (Bonwell and Eison, 1991; Sivan et al, 2000). There are a number of definitions for the term case study. For example, Fry et al. (1999) described case studies as complex examples which give an insight into the context of a problem as well as illustrating the main point. Most case studies are written in such a way that the reader takes the place of the manager whose responsibility is to make decisions to help solve the problem. In almost all case studies, a decision must be made, although that decision might be to leave the situation as it is and do nothing.

### *Why Use Case Studies in Teaching?*

Educational research has shown case studies to be useful pedagogical tools. Grant (1997) outlines the benefits of using case studies as an interactive learning strategy, shifting the emphasis from teacher-centered to more student-centered activities. Raju and Sanker (1999) demonstrate the importance of using case studies in engineering education to expose students to real-world issues with which they may be faced.

## **Methodology**

VSU, a Land-Grant Institution received funding from the USDA Capacity Building Grants (USDA 2006-3880-17536) to enhance teaching of agricultural, food, earth, and natural sciences by integration of technology. This grant included three collaborating institutions: FAMU, ECSU, and Edward Via College of Osteopathic Medicine (VCOM) located at Virginia Tech Campus. (1862 Institution). These institutions joined the International Global Seminar ([www.globalseminar.org](http://www.globalseminar.org)) which was founded in 1997 by Dr. Dean Sutphin at Cornell University. The Global Seminar is a Global Learning Community of universities in the United States, Mexico, Germany, Australia, Austria, Sweden, Denmark, and South Africa. This organization's framework is divided into four clusters. Since 2003, the activities of the Global Seminar are conducted from Virginia Tech due to the relocation of Dr. Sutphin. This article describes the activities of Cluster # 3 which include VSU, ECSU, and FAMU. The faculty members at these three institutions wrote case studies to enhance instruction in agriculture, environment, and food safety, under the guidance of Dr. Sutphin, Vice President of International and Appalachian Outreach, VCOM. The project director (Dr. Shobha Sriharan at VSU) and the co-project directors (Dr. Verian Thomas of FAMU and Dr. Francisco San Juan of ECSU) took the leadership in coordinating faculty development workshops for writing case studies which can be used for instruction. Each case study was created through a comprehensive development cycle which includes initial planning and research, videoconference-based discussions with participating faculty members and mentor, case writing, development of instruction and materials, pilot testing in the classroom, student reflection and shared discourse, formative evaluation, and revision.

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During 2006-2011, five cases studies were developed through faculty development workshops at VSU, ECSU, FAMU, and VCOM. These case studies are:

1. Antibiotic Use in Agriculture
2. When Will the Public Be Informed? The Case of a Salmonella Outbreak in Florida
3. Global Warming and Status on Ratification of Kyoto Treaty
4. A Case Study on Climate Change in India
5. Bottled Water: More Expensive than Gasoline

Each case study was created through a comprehensive development cycle which includes initial planning and research, videoconference-based discussions with participating faculty members and mentor, case writing, development of instruction and materials, pilot testing in the classroom, student reflection and shared discourse, formative evaluation, and revision. To discuss each case study, the students were engaged in Videoconferencing (VC), initially facilitated through bridge service provided by VCOM, later transitioning to institutional resources. International partnership was also developed with the Cape Institute of Agricultural Training (CIAT) in Elsenburg, South Africa and Maldives College in Maldives to engage students in communications on varied cultural and social perspectives. The case studies were first prepared by instructors and distributed among the students for training students to read the case studies in small groups (4-6) and write their reflections on the pro and con sides of each case study. Students learned how to evaluate a problem, how to make decisions, and how to orally argue a point of view. Using this method, they also learned how to think in terms of the problems faced by the community, private and public agencies associated in making policies. Each case study was created through a comprehensive development cycle including: (i) initial planning and research, (ii) suggestions from expert consultants, (iii) case writing, (iv) development of instruction and materials, (v) pilot testing in the classroom, (vi) student reflection and shared discourse, and (vii) videoconference-based discussions with participating faculty members and mentor, and (viii) formative evaluation and revision. The evaluation of the case study instruction in the classroom was through the students' evaluation which included students' participation in case discussions and written case analyses.

### *How to do a Case Study*

For maximum effectiveness, the case study approach had three components.

*Before the class discussion*, the students: (i) read in detail the reading assignments, (ii) familiarized themselves with the case, (iii) analyzed the case, (iv) met at group meetings to discuss their ideas, and (v) write up their reflections on the case study on Power Point slides.

The students read: (a) opening paragraph which introduced the situation, (b) background information of the industry, organization, products, history, competition, financial information, and anything else of significance, and (c) specific (functional) area of interest: marketing, finance, operations, human resources, or integrated.

*In the class discussion*, the students: (i) started the discussion, usually at the prompting of the Instructor, (ii) listened carefully and took notes, and (iii) took part in the discussion. The students were directed to the specific problem or decision(s) to be made and alternatives open to the decision maker, which may or may not be stated in the case. The students concluded their reflections on the case study by setting up the task, any constraints or limitations, and the urgency of the situation.

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*After the class discussion*, the students: (i) reviewed the case after the class and noted what the key concept was and how the case fits into the course.

The students analyzed the case by the following steps: (i) defining the issue(s), (ii) analyzing the case data, (iii) generating alternatives, (iv) selecting decision criteria, (v) analyzing and evaluating alternatives, (vi) selecting the preferred alternative, and (vii) developing an action/implementation plan.

The students wrote their reflections on the case study by:

### *Defining the issue(s)/Problem Statement*

The problem statement in a clear and concise statement of exactly what needs to be addressed in a step by step approach: (i) what appears to be the problem(s) here? , (ii) how do I know that this is a problem?, (iii) what are the immediate issues that need to be addressed? This helped the students to differentiate between issues that can be resolved within the context of the case, and those that are bigger issues that needed to be addressed at another time, (iv) differentiate between importance and urgency for the issues identified.

### *Analyzing Case Data*

In analyzing the case data, the students answered the following:

*Why or how did these issues arise?* The students tried to determine cause and effect for the problems. They framed questionnaire consisting of the following components: (i) resources, such as materials, equipment, or supplies, (ii) people who transform these resources using, and (iii) processes, which creates something of greater value.

*Who is affected most by this issues?* The students tried to identify who are the relevant stakeholders to the situation, and who will be affected by the decisions to be made.

### *Structure of the Written Report*

The students prepared their independent reports with the following sections in this order:

(i)Title page, (ii)Table of contents, (iii)Executive summary, (iv)Problem (Issue) statement, (iv) Data analysis, (v)Key Decision Criteria, (vi)Alternatives analysis, (vii) Recommendations, and (viii) Power Point Presentation for Videoconferencing.

### *Evaluation of Alternatives*

The students prepared key decision criteria and alternative. Each alternative was compared to each criteria and its suitability ranked in some way, such as met/not met, or in relation to the other alternatives, such as better than, or highest. This enabled them to point in selecting an alternative. Since most of the case studies written by the participating institutions were for discussion among the student groups, the list was prepared on the advantages and disadvantages (pros/cons) of each alternative, and then discussing the short and long term implications of choosing each (Thomas et al., 2008).

## **Results**

This interactive education through case studies provided students opportunities to engage in problem solving teams, student-faculty, student-student engagement and to network with Global Seminar coordinators for case studies connected to agricultural, food and natural science courses. The cases used were primarily decision/discussion cases. The case study teaching approach was beneficial to the academic advancement in the following areas:

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*Curriculum and Pedagogy Development:* As a result of the faculty development workshops for writing case studies, a multi-institutional and cross-disciplinary collaboration took place. This collaborative efforts led to writing office case studies, instructional materials and related infrastructure for internet based interactive learning.

*Students Communication Skills:* The students of all the partner institutions (VSU, FAMU, and ECSU) developed critical thinking and communication skills to resolve issues in agricultural and food sciences, environment and sustainability.

*Institutional Capacity Building:* The case study writing activities resulted in long-term collaboration for science teaching among Land Grant Universities (VSU and FAMU), Historically Black Colleges and Universities (ECSU), and the award-winning Global Seminar program at VCOM.

*Enrichment of Case Study Curriculum at Global Seminar:* The project activities contributed to the course development within and across universities by the addition of five new case studies: “Antibiotic Use in Agriculture”, “When Will the Public Be Informed? The Case of a Salmonella Outbreak in Florida”, “Global Warming”, “A Case Study on Climate Change in India”, and “Bottled Water: More Expensive than Gasoline.

Food safety is a significant concern for the health of U.S. citizens and the viability of the food industry. Traditional approaches for teaching food safety and microbiology have focused on instructor-centered lectures, memorization of the names and characteristics of microorganisms, and the role of processing for ensuring food safety. Integration of fundamental concepts for application within a ‘real world’ context has not typically been addressed. To cite the students’ development of communication skills, the case study on Florida Orange Juice demonstrated the debate between the Pro and Con groups over the topics, “When Will the Public Be Informed? The Case of a Salmonella Outbreak in Florida.” The students discussed how the safety of the food supply is of paramount importance to each nation and consumer in the world. At the same time, the advances made in food safety methodology have made the early detection of health outbreaks possible. However, identification of an outbreak is not always accompanied by conclusive knowledge about the causal agents, sources, and modes of transmission. Consequently, in deciding whether information should be released to the consumer, health sector officials must balance the public’s need for health information against the potential for public panic. In the 1990s, health officials in the state of Florida faced this very situation as they dealt with an outbreak of salmonellosis among unrelated travelers who had visited a theme park in Orlando, Florida. The student is expected to play the role of a health inspector in the park.

*Case Study Application Exercise:* The students from Pro and Con groups expressed their views on informing the public about the Salmonella Outbreak due to Orange Juice Consumption in Orlando, Florida.

### *Student Learning Outcomes*

At the end of this case the students were be able:

1. To describe the regulatory agencies involved in food safety in the USA and the mechanism by which they work together to protect the food supply.

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2. To appreciate differences in food safety regulation among various countries.
3. To describe the mode of transmission, symptoms, causes, risks, treatments and methods of identification associated with salmonellosis.
4. To describe the methods used to produce orange juice and the safety factors that must be taken into consideration to extend its shelf life.
5. To appreciate the challenges involved in obtaining information about a food outbreak.

The second case study, “Antibiotic Use in Agriculture: Risky or Beneficial?” was read and discussed by the students. Antibiotics are routinely added to feed livestock to act as a disease prophylaxis since animals are normally raised in crowded and stressful conditions to maximize the economic concerns. Additionally, it was noted that certain antibiotics and hormones cause animals to produce greater amounts of muscle and milk in the case of cattle. Since the full impact of antibiotic released into the environment is still largely unknown, the scientific information and related background information on the use of antibiotics in agriculture raises key issues related to food systems, environment and health. The students reviewed the roles of Government regulatory agencies and producers in making decisions on the use of antibiotics in agriculture. Based on the available information, the consumers choose products for their food. The students from VSU, FAMU, and ECSU expressed their Pro and Con viewpoints on antibiotics use in agriculture by preparation of Power Point slides and discussion with their peers via videoconferencing, thereby demonstrating the opportunities for developing communication skills. The case study teaching contributed to students’ developing analytical skills and comprehension of the global topics in following areas: (i) social, (ii) cultural, (iii) economic, (iv) ethical, (v) technological, and (vi) environmental. Further the exercises due to case study teaching resulted in: (a) interactive videoconference teaching among collaborating schools and (b) building confidence in students for communication with their peers.

## Conclusions

The case study teaching was beneficial in: (a) creating awareness among students for their understanding of global agricultural, environmental, and sustainability issues, (b) skills in problem-solving and decision-making, (c) interaction among students, students with faculty, and faculty with other faculty across institutions. (d) independent research skills, cross-cultural communication skills and ability to use new technology to develop solutions to problems, (e) improved student self-confidence in developing a position and supporting their views, (f) overall positive feedback from students end-of-course evaluations, (g) broadened students’ world views and appreciation for different perspectives, (h) raised student awareness of implications of global interconnectedness with local outcomes, (i) strengthened students’ ability to work in groups and take a team approach to problem-solving, and (f) decision-making in complex situations and coping with ambiguities. The publicity of Global Seminar and its benefits in training students to conduct case studies on various agricultural, environmental, and food sciences topics, led to enthusiastic participation of faculty and students in many countries. The Global Seminar has become part of the curriculum at each participating institution and the student enrollment has increased significantly.

### References

- Bonwell, C. C & Eison, J. A. (1991). Active Learning: Creating Excitement in the Classroom, ASHE-ERIC Higher Education Report No. 1. The George Washington University, School of Education and Human Development, Washington, DC.
- Fry, H., Ketteridge, S., & Marshall, S. (1999). A Handbook for Teaching and Learning in Higher Education, Kogan Page, Glasgow, pp. 408.
- Grant, R. (1997). A Claim for the Case Method in the Teaching of Geography Journal of Geography in Higher Education Vol 21(2) pp.171-185.
- Raju, P. K. & Sanker, C. S. (1999). Teaching Real-World Issues through Case Studies, Journal of Engineering Education. Vol. 88 (4) pp.501-508.
- Sivan, A., Wong Leung, R., Woon, C., & Kember, D. (2000) An Implementation of Active Learning and its Effect on the Quality of Student Learning Innovations in Education and Training International. Vol. 37 (4) pp381-389.
- Sutphin, D. (2008). Global Seminar for Case Study Writing. <http://www.globalseminar.org>.
- Thomas, V., James, N., & Musingo, M. (2008).Case Study EvaluationQuestainnaire, Florida A & M University Blackboard, <http://FAMU.Blackboard.com>.

## **KNOWLEDGE ECONOMY—A NEW PARADIGM OF ECONOMIC GROWTH IN REGAINING MARKET CREDIBILITY**

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### **Abstract**

One of the most used words in today's public life is "hope", along with the word "change". The world economy is emerging from the deepest 2007-9 recession, with some unusual characteristics: sluggish and uncertain recovery of the advanced economies; improved performances of the emerging economies, and a vigorous ascendance of the BRIC countries (acronym of the first letters of Brazil, Russia, India and China) that are at the core of the club "Growth Economies", being complemented by a few other economies, each one contributing by at least 1% to the global output. But the most important impact, in our opinion, the recent crisis had on redistribution of hope, on erosion of confidence in free markets and American model of liberal capitalism, on capacity of the governments to reestablish the macro-equilibrium with sustainable economic growth, low unemployment and low prices, especially on oil and other energy recourses (Ciobanu, Ceslav. 2009, 2010, 2011). To restore this confidence and regain market credibility is crucial important to revise the existent model of economic growth, putting the emphasis on knowledge economy and its major impact in form of a) information-technology revolution and b) pro-entrepreneurial revolution. We need to rethink the economics itself, to redefine one of its most important concepts – economic growth – in a new context of globalization and human behavior (Krugman, 2008; Stiglitz, 2010; Spence, 2011).

### **Introduction**

The Global Recovery of about 4.0% annual increase of global output is a two-speed process, with a subdued 2.5% annual growth in advanced economies for the next two years and much more impressive rates for emerging and developing economies: 7% in 2011 and 6.0% in 2012. The BRIC's prospects are even more optimistic with a forecast of 8.6% and respectively 8.2% (IMF. WEO, September, April 2011; Goldman Sacks, February 1, 2011). The weak and unstable recovery of the US economy – 1.6 and 2.2% correspondingly, is due to several reasons: severe deterioration of households' net worth during last three years (by 25-30%); persistent high unemployment rate (above 8.0%) and restrictive credit policy of banks that are still reluctant to lend. At the same time the challenges and potential of growth economies, emerging and developing markets are obvious: 85% of the World population with the biggest potential and rapidly expanding consumer market; the largest explored reserves of oil, natural gas and other energy and mineral resources; an impressive annual growth rate over the past few years with just a slowdown during recession; a "wall of money", more than \$5 trillion in central-bank reserves with much bigger rate of saving in comparison to advanced economies. This represents the most remarkable transformation at the beginning of 21<sup>st</sup> century.

The US economy needs today, perhaps more than ever, booming private investments and booming export, its own BRIC equivalent of "growth engine", which is the knowledge economy. To ensure healthy recovery, strong and sustainable economic growth, two rebalancing acts are

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necessary: internal rebalancing based on increasing private demand in advanced economies, which will lead to fiscal consolidation; and external rebalancing, requiring a rise in net exports in deficit economies, such as the United States, and a decrease in net export in surplus economies, first of all emerging Asia (IMF. WEO, October 2010). To understand how these two difficult and intertwined rebalancing acts could be achieved it is important to focus on a new paradigm of economic growth with an emphasis on the knowledge economy. Being at the core of a “soft revolution”, the knowledge economy with its four main pillars (Economic and institutional regime; Education and skills; Information and communication infrastructure, and Innovation system. WBI. Measuring Knowledge in the World’s Economies) - arises as the main driver of economic growth at the beginning of 21<sup>st</sup> Century.

### **Risks and Effects of the 2007-2009 Financial Crisis**

The authors of the Global Risks-2011 study - experts of the World Economic Forum (WEF), published on the eve of meeting in Davos, Switzerland (January 2011), indicated two major forces, provoking global risks and generating external and internal imbalances: economic disparity between countries and within states, and poor management on the global scale. These two major risks are complemented by other types of risks: a) macroeconomic imbalances and volatility of the exchange rates, b) illegal economy amounted to \$1.3 trillion by 2009 and c) depletion of natural resources, demand and prices for which, especially for food and energy, are expected to increase by 30-50% during next few decades. These major risks are amplified by other types of risks, such as cyber security, demographic volatility and volatility of prices for resources, withdrawal from globalization and proliferation of weapons of mass distraction. Robert Greenhill, the Managing Director and Chief Business Officer at the WEF, considers that “Twentieth century systems are failing to manage 21st century risks; we need new networked systems to identify and address global risks before they become global crises” (Shushunova, Alekseev and Sterkin, 2011).

Analyzing the roots of the crisis of financial system, it could be concluded that these problems had been cumulatively accumulated during last decades. Martin Wolf, the author of *Fixing Global Finance*, mentioned that “the failure of the past led to the so-called imbalances of the present” that were at the core of the recent financial crisis. According to Wolf (2008), the bigger is the gap between the financial sector and the “real” economy – the more risky become financial games and manipulations, especially with the exotic financial instruments known as over-the counter derivatives, the more inherent become the risk of crush, and, when it occurs, it is much more spectacular than whatever was noticed before. Cumulatively during years of the recent crisis Americans have lost 33% of their largest and most valuable asset – equity in their homes, 22% in the total retirement asset, - the second largest household asset, \$1.2 trillion in savings and investments and \$1.3 trillion in pension assets. These losses together reached a staggering \$8.3 trillion (Altman, 2009).

But the most striking conclusion came from the 545-page report of the U.S. Congress Financial Crisis Inquiry Commission: the 2007-2009 financial crisis was an “avoidable” disaster caused by widespread failure in government regulation, corporate mismanagement and heedless risk-taking by the Wall Street (Chan, 2011; Moollenkamp, Luchetti and Ng, 2011). The financial and banking system policies represented the most powerful U.S. administration policy reaction to the crisis, implemented through conventional and unconventional monetary policies, bank “stress tests”, bailouts of a few banks and financial institutions. The problem, as Frederic

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Mishkin, professor at Columbia University, emphasized, was in modus operandi of the Fed during the crisis: “massive experimentation in an unprecedented situation: that is, it was employing a large number of measures to contain the crisis, not knowing exactly which ones would work” (Mishkin, 2010).

The paradoxical effects of this crisis are still dominating the agenda of the G-20, World Forums, and other international institutions, scholars’ research and debates, requiring a reassessment of the role and power of the developed and emerging markets, a new Post-Washingtonian Consensus (Birsdall and Fukuyama, 2011; Roubini and Mihm, 2010; Frydman and Goldberg, 2011; Fidler, 2012).

Obviously post-Crisis period will be recorded as one that will challenge (and eventually reshape) the existing global financial system with its most critical issues: deep and prolonged asset market collapses; profound declines in output and employment, and the big jump in the real value of government debt, on average, by 86% (Reinhart and Rogoff, 2008). Creating a 21<sup>st</sup> –century regulatory system is the most pressing requirement and response to the crisis. As the U.S. President Barack Obama stressed, “it means using disclosure as a tool to inform consumers of their choices, rather than restricting those choices... We can make our economy stronger and more competitive, while meeting our fundamental responsibilities to one another” (Obama, 2011).

### **Emerging Markets – New Engines of Global Growth?**

The paradox of the 21<sup>st</sup> century, as the Global Risks – 2011 study emphasizes is the fact that “the world is not only being integrated during the globalization process, but is also becoming more disconnected as the majority of the fruits of globalization are enjoyed by the minority” (Shushunova, Alekseev and Sterkin, 2011). The “decoupling” trends are illustrated by the increased disparities between the core of Europe and its periphery, between the real economy and its financial stresses, between emerging and advanced economies. Nevertheless the global economy is still tightly interconnected and its rebalancing lead relentlessly to a new paradigm of growth, shifting the economic gravity to the emerging world. The Economist’s 2010 special report on the world economy “How to grow?” pointed out at three main reasons that explain “stagnation of the West and the emergence of the rest”:

First, the sheer scale of the recent recession and the weakness of the following recovery with a high rate of unemployment and high degree of unused capacity expressed in persisting output gap as % of potential GDP;

Second, a slowing supply of workers caused by ageing population, especially in western Europe and Japan, and flat or slowing productivity growth due to declining rate of capital investment and sluggish pace of innovations.

Third, the economic potential is damaged by hangover from the crisis and feebleness of recovery that may reduce the rich countries’ output by some 3% and situation may deteriorate furthermore if their governments will not foster growth by supporting short-term demand and boosting long-term supply (The Economist, 2010).

A striking fact becomes obvious: emerging economies have performed better after each of the last five advanced economies recessions: 1974-75, 1980-83, 1991-93, 2001. They also become

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more correlated with advanced economies growth rate, based on purchasing power parity. This surprising pattern of improved economic growth after each subsequent recession is confirmed also by the comparatively better performance of emerging economies after the current recession. To be mentioned that strong growth from the productivity gains and continuing integration of emerging and developing economies into the global economy as well as stabilization gains from significantly improved macroeconomic policy framework are “the secrets” of the resilience of these countries to the global financial crisis and their much more robust post-crisis development (IMF. WEO, April 2008).

All these tendencies require a redefinition and differentiation of the role of emerging markets in a post-crisis recovering, taking into consideration that 40% of recent global consumption and more than two thirds of global growth are accounted with these markets (Wessel, 2012). From this group of countries eight were “graduated” recently by Goldman Sack’s experts from “Emerging” to “Growth Markets”, the ‘threshold’ being at least 1% of the current global GDP (Mexico, Korea, Turkey and Indonesia with good prospects for Nigeria, Philippines and in more distant future – Egypt and eventually Iran). The BRICs are expected to make an outsize contribution to the increases in global GDP between 2011 and 2020, - twice that of the G-7, according to Mr. O’Neill predictions (O’Neill, 2011; O’Neill, March 2011; The Economist, December 2011).

Michael Spence, Nobel Prize winner in economics, emphasized in his recent book “Next Convergence”: “The huge asymmetries between advanced and developing countries have not disappeared, but they are declining, and the pattern for the first time in 250 years is convergence rather than divergence” (Spence, 2011).

To understand the prospects and the limits of a strong growth momentum, which is on the base of a new global growth paradigm, especially important is analysis of the growth in productivity – an increase in output from a given quantity of inputs. This is a driving force of economic growth and key factor for the growth economies, including BRIC, emerging and developing markets’ long-run prospects and their new role in the world economy. The Goldman Sack’s (GS) economists analyzed the productivity’s growth in these countries by using Growth Environment Score (GES) model as a process of catch-up to the developed economies. (Goldman Sacks, October 2010). The higher the GES – the higher is the growth rate of productivity and the better and faster is the convergence. The GS experts expect BRIC’s productivity to outperform both developed markets and other emerging markets. Over the past decade the productivity average growth in these countries was 3.0% per year, being particularly impressive in Russia (6.7%) and China (3.5%).

The BRICs and EMs in general are benefiting from the breakthrough innovations that are becoming one of the major driving forces of their fast growth. According to the UN World Investment Report there are more than 21,500 multinational companies based in the EMs, many of them being leaders in the respective industries: China’s BYD in batteries, India’s Arcelor Mittal in steel, Brazil Embrayer etc. The number of companies from BRICs in the *Financial Times* 500 list quadrupled during last three years (from 15 to 62). There are already some areas where the EMs are ahead of the advanced markets, such as mobile money (using mobile phones to make payments), using computer’s programs to recognize handwriting, designing products and organizing process to reach billions of consumers, reinventing systems of production and distribution and proposing total new business models. The four main factors of the disruptive

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power of innovations in emerging markets, according the authors of The Economist's special report are: a) much more liquid and transparent markets for corporate control and senior managerial talents than they were two decades ago; b) the sheer size of the emerging markets with the world recognized export oriented leaders in practically every industry; c) the big impact of the volume of the market; d) the biggest West companies are increasingly looking for the potential of emerging markets not only as sources for assembling and manufacturing, cheap labor force, but as sources of innovations and growth. At the same time it is important do not overestimate this potential and nourish illusions that the world economy could be "saved" from this recession by the "Rise of the Rest", using Fareed Zakaria's phrase from his famous book (Zakaria, 2008).

### **Knowledge Economy – Key to Competitiveness and Economic Growth**

There is a direct correlation between knowledge, measured by Knowledge Economy Index (KEI), and the level of development of the economy, its future growth rate. The larger is the stock of accumulated knowledge the higher is the level of economic growth and development. Sustained long-term economic growth is a function of the quantity and quality of the factors of production, of their total productivity. In a pursuit of long-term, self-sustainable growth and increase in total factor productivity, the most important objectives, according the World Bank Institute Special Report are: a) creating a learning (knowledge) economy with improving the quality of education, especially of higher education, as a priority; b) stimulating entrepreneurship and organizational efficiency; c) promoting competition and openness, particularly trade openness; d) building effective institutions and institutional infrastructure to implement long-term strategies, and e) managing urban systems to take of agglomeration economies and positive spillover effects (WBI, Pathways to Development, 2011)

According to the Knowledge Economy Index classification (KEI, 2008) – a broad measure of preparedness of a country for the knowledge economy that summarize country's performances on 12 variables related to four knowledge economy pillars – the United States is placed on eight position from the third in 1995, losing ground in all four pillars. The higher KEI is associated with the future higher rates of economic growth and development and vice-versa. The U.S. is in the top ten only on the innovation pillar (nr. 7), and no longer on the other three (WBI. Measuring Knowledge in the World's Economies, 2011). The most impressive performers in this period (1995-2008) are the BRIC's countries: Russia climbed 3 positions, India – 4, Brazil – 11 and China – 18). These evolutions are closely related to the quality and effectiveness of education system, which has been a priority for last decade in the U.S., yet the results are still in doubt. In set of standardized International Students Assessment tests, administered by the Organization for Economic Cooperation and Development (OECD) across more than 60 countries the United States ranks close to the average in reading and science and well behind most countries in mathematics (Spence, July/August 2011). Clearly, education should be boosted to restore the competitiveness and efficiency of the U.S. economy and to ensure higher rates of growth.

The United States economy has some very strong comparative and competitive advantages that could make changes. How to make it stronger and more competitive – the answer could be found in the budget proposal of the U.S. administration for the next (2013) fiscal year starting

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October 1: \$137 billion in spending proposals designed to spur economic growth by funding education and other programs, that the White House describes as “mandatory” (Lee and Paleta 2012).

### Conclusion

First, the most important technological transformations that will reshape the world economy, provide a new paradigm of development and boost economic growth in 21<sup>st</sup> Century have their home in the United States, particularly:

- a) the informational technology – software revolution - with Internet evolving into the “cloud” lead to emergence of new markets with new services, products and businesses unimaginable just a decade ago; b) the new material science – smart manufacturing revolution - in combination with automation and information systems, 3-D printing radically change not only what, but how our economy is producing, the parameters and quality of economic growth, and
- c) the communication systems - wireless revolution – that open opportunities for billions of people to communicate, socialize and trade – is transforming our economy into what it is called “Borderless Economics” with the most important resource at its core that makes the U.S. the richest and most powerful economy – talent (Guest, 2011; Mills and Ottino, 2012; Anderssen, 2011).

Second, the unique opportunities for entrepreneurship - a traditionally strong American characteristic, being advantaged by favorable business culture, mature venture capital industry, integration of universities and industry, an open immigration policy, placed the United States in a 2009 Global Entrepreneurship Monitor (GEM is an academic consortium assessing entrepreneurial activity worldwide) survey first in the world in providing such opportunities (Subramanian, 2011). These opportunities for inventors, innovators, entrepreneurs and workers, led to an astonishing revolution in productivity: one American produces as much, per capita, as six Chinese, outproducing Japanese and Germans by nearly 30% and the European Union citizen by nearly 45% (Drehle, 2011, p.35).

Third, the American higher education, often criticized as inadequate to the contemporary global challenges, is still the best system in the world and strong generator of economic growth, being supported by: a) Higher public and private spending on education, research and development – sine qua non condition of future growth performances (close to 6% of GDP over the last quarter century) - than that of China, Brazil, India, Japan, Russia, and the EU; b) Best universities: according to the classification of the Institute of Higher Education at Shanghai Jiao Tong University of the world’s top 20 universities, all but three are American, of the top 100 more than half are American; they employed 70% of the world’s Nobel prize winners and produced more than a third of the world’s output of articles on science and engineering (Joffe, 2009); c) The key for America’s higher education system success lies in its organization, flexibility and diversity, in competition for everything, from students and professors to basketball stars, in forging links between academia and industry, and limited intervention of the government (there is no central plan for its universities).

The world is changing and so is changing American system of higher education. There is a lot of work to do to keep up, to address the wave of new criticism and the risk of erosion of its

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competitive principle. Among them could be mentioned: “the universities are no longer devoted to free inquiry as they ought to be”; “America’s universities are pricing themselves out of the range of ordinary Americans” with astonishing increase in annual tuition costs; “the universities are becoming bastions of privilege rather than instruments of social mobility”( The Economist, 2005). But it should be also stressed that in good time or bad, Americans have always worried about falling behind, and this probably could better explain why the U.S. is still the number one leading economic power with good prospects for regaining its “sputnik momentum”.

### References

- Altman, Roger C. (2009). The Great Crash, 2008. A Geopolitical Setback for the West, *Foreign Affairs*, January/February, p. 5.
- Andreessen, Mark. 2011. Why Software Is Eating The World. *The Wall Street Journal*, August, 20.
- Barta, P. & Walker, M. (2008). Developing Economies Face Reckoning as U.S. Stumbles, *The Wall Street Journal*, January 24
- Birsdall, N. and Fukuyama, F. (2011). The Post-Washingtonian consensus. Development After the Crisis. *Foreign Affairs*, March-April, pp.47, 49, 50.
- Chan, Sewell. (2011). Financial Crisis Was Avoidable, Inquiry Finds. *The New-York Times*, January 25.
- Ciobanu, Cezlav, (2009). Emerging Markets and the International Financial Crisis: Controversial Search for Solution. *Journal of Global Business Development*, Vol. 2, Nr.1.
- Ciobanu, Cezlav. (2010). The Global Financial Crisis: Emerging Markets’ Prospects for Economic Recovery and Democratic Transformations. *COGITO Multidisciplinary Research Journal*, Bucharest, Romania.
- Ciobanu, Cezlav. (2011). Toward a New Paradigm of The Global Economic Growth: Emerging Markets, Russia and USA. *Journal of Global Business Development*, Vol. 3, Nr.2.
- Drehle, Von David. (2011). Don’t Bet Against the United States. *The Time*, March 14, p.35.
- Fidler, Stephen. (2012). Shadow Over Growth. *The Wall Street Journal*.
- Frydman, R. & Goldberg, M. (2011). Beyond Mechanical Markets. Asset Price Swings, Risks, and the Role of the State. *Princeton University Press*
- Goldman Sachs Global Economics. (2011). Little ‘Room to Grow’ in the BRIC, No 11/01, February 1.
- Goldman Sachs Global Economics. (2010). Productivity growth in the BRICs. BRICs monthly issue No 10/04, October 14.
- Guest, R. (2011). Borderless Economics. *Palgrave Macmillan*, 250 pages.
- International Monetary Fund. (2011). World Economic Outlook. *Slowing Growth, Rising Risks*, Washington, D.C., September
- International Monetary Fund. (2011). World Economic Outlook. *Tensions from the Two-Speed Recovery. Unemployment, Commodities, and Capital Flows*, Washington, D.C., April
- International Monetary Fund , (2011). The World Economic Outlook Update. *Global Recovery Advances but Remain Uneven.*, January 25, p. 2,4.
- International Monetary Fund. (2010). World Economic Outlook. *Recovery, Risk, and Rebalancing*, Washington, D.C., October.
- International Monetary Fund. (2009). World Economic Outlook. *Crisis and Recovery*. April, pp.4, 9;

## Interlink Alliance

- International Monetary Fund. (2008). The World Economic Outlook. *Housing and the Business Cycle.*, April, p.23. (<http://www.imf.org/external/pubs/ft/weo/2008/01/pdf/text.pdf>).
- Joffe, J. (2009). The Default Power. The False Prophecy of America's decline. *Foreign Affairs*, September. October, p. 30.
- Krugman, P. (2009), winner of the Nobel Prize in Economics, The Return of Depression Economics and the Crisis of 2008, New York, *W.W.Norton & Company*.
- Lee C. and Paletta D. (2012). Obama Seeks New Tax on Rich, *The Wall Street Journal*, February 14.
- Mishkin, F. (2010). Over the Cliff: From the Subprime to the Global Financial Crisis, by NBER Working Paper 16609 (<http://www.nber.org/papers/w16609>), December, p.11.
- Mills, M. and Ottino, J. (2012). The Coming Tech-led Boom. *The Wall Street Journal*, January 30.
- Moollenkamp, C., Luccheti, A. and Ng, S. (2011). Report Details Wall Street Crisis. *The Wall Street Journal*, January 28, p. A4.
- O'Neill J, Stupnytska, A. and Erisdale, J. (2011). It is Time to Re-define Emerging Markets., *GSAM Strategy Series*, January 31, pp. 4, 6.
- O'Neill, J. (2011). The Growth Map. Economic Opportunity in the BRICs and Beyond. *Portfolio/Penguin*
- O'Neill, J. (2011). Viewpoint from the office of the chairman, *GSAM*, March 5.
- Obama, Barack. 2011. Toward a 21<sup>st</sup>-Century Regulatory System. *The Wall Street Journal*, January 18, p. A17.
- Perry, J. (2009). Economies Search for Growth. Davos Forum Focuses on Halting the Slide and Climbing Back, *The Wall Street Journal*, January 28.
- Reinhart C. and Rogoff K. (2008). The Aftermath of Financial Crises, December 19 [www.economics.harvard.edu/faculty/rogoff/ff/files/Aftermath.pdf](http://www.economics.harvard.edu/faculty/rogoff/ff/files/Aftermath.pdf)
- Roubini, N. and Mihm, S. (2010). Crisis Economics. A Crush Course in the Future of Finance. *The Penguin Press*, New York
- Spence, M. (July/August 2011) The Impact of Globalization on Income and Employment. The Downside of Integrating Markets. *Foreign Affairs*, Volume 90, No 4
- Spence, M. (2011), winner of the Nobel Prize in Economics, The Next Convergence. The Future of Economic Growth in a Multispeed World, New York, *Farrar, Straus and Giroux*.
- Stiglitz, J. (2010). Freefall. America, Free Markets, and the Sinking of the World Economy, *W.W.Norton & Company*, p. 238.
- Subramanian, A. (2011). The Inevitable Superpower. *Foreign Affairs*, September/October p. 72
- Shushunova, E., Alekseev, A. & Sterkin, F. (2011). The Davos agenda- the world is helpless in the face of global risks, *Vedomosti*, January 13.
- The Economist*. (2011). The BRICs at ten. December 10, p. 86
- The Economist*. (2010). The number of companies from Brazil, Russia, India and China on the Financial Times 500 list more than quadrupled during last few years. *The world turned upside down*. A special report on innovation in emerging markets., April 17, p. 3.
- The Economist*. (2010). *How to grow*. A special report on the world economy. October 9<sup>th</sup>, p 3-4.
- The Economist*. (2005). The Brain business. *A survey of higher education*, September.
- Thomas, B., Hennessey, K., and Holtz-Eakin, D. (2011). What Caused the Financial Crisis? *The Wall Street Journal*, January 27, p. A21.
- Wessel, D. (2012). Emerging Questions on Growth Path. *The Wall Street Journal*, January 3
- Wolf, M. (2008), *Fixing Global Finance*, *The John Hopkins University Press*

Interlink Alliance

World Bank Institute. (2011). *Measuring Knowledge in the World's Economies. The Knowledge Assessment Methodology and Knowledge Economy Index*: [www.worldbank.org/kam](http://www.worldbank.org/kam), Downloaded October 30, 2011.

World Bank Institute. (2011). *Pathways to Development: What we know and don't know*. (<http://wbi.worldbank.org/wbi.2011>). Downloaded October 23, 2011.

Zakaria, F. (2008). *The Post-American World*. *W.W.Norton & Company*, New-York

**ADMINISTRATORS AS TEACHERS, TEACHERS AS TUTORS, AND TUTORS AS TEACHERS: BUILDING A COLLABORATIVE RELATIONSHIP BETWEEN WRITING CENTER PROFESSIONALS AND CLASSROOM TEACHERS TO DEVELOP CAMPUS LEADERS**

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**Abstract**

In the new millennium, when we consider teaching and learning, notions of who we view as leaders need to change. In the Writing Studio at North Carolina Central University, we aim to empower faculty in the classroom and on our campus by providing classroom presentations and faculty development workshops (for writing intensive classes) to help teachers to be leaders on our campus. In this presentation, the Director and Professional Consultant will explore writing center practices and teaching pedagogies to note specific ways that writing center professionals and faculty members can empower each other to become leaders who, together, can encourage students to be the best writers and learners they can be.

**Introduction**

Traditionally, when the idea of “academic leadership” is presented, people often think of campus administrators. Educational Leadership programs focus on developing people who specifically aspire to be administrators in higher education. The leadership taken on by faculty members often is ignored or devalued, with their contributions being classified as confined to the classroom. Yet, when we consider teaching and learning in the new millennium, notions of who we view as leaders need to change. The leadership potential of faculty members must be embraced; and faculty and administrators should not be viewed as on opposing sides of the spectrum, but rather as colleagues who can both lead in different ways. Thus, these ideas encourage us to question, how can we best use the talents of both administrators and teachers simultaneously? What are ways in which the leadership skills of teachers can complement those of administrators so that students benefit most? And perhaps most importantly, how can we re- envision notions of teaching so that there is shared governance, share accountability, and shared success between those who teach in all ways and those who serve as administrators?

One example of where this type of collaborative effort can be effective is in writing centers. On the campus of North Carolina Central University, our Writing Studio is a campus-wide center where students and staff members can receive one-on-one help with their writing tasks. In our space, the Director, who essentially functions as an administrator, is officially classified as a faculty member with release-time to direct the Writing Studio. In fact, she began her career at NCCU as a tenure-track faculty member who was later asked to take on the role as an administrator over the then-Writing Center (which ultimately became the Writing Studio). Thus, she wears both hats each day, hearing the concerns of fellow faculty members who vent about

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their students' writing skills, and then as the director she hears the concerns of her writing consultants (tutors) who work with students on a more intimate basis. Similarly, her professional consultant, who functions partly as a tutor and partly as an administrator in the absence of the Director, also wears both hats, for she "teaches" students through her tutorial sessions, but also must perform some administrative duties, when necessary.

Moreover, in recent years, the Writing Studio has worked hard to share with faculty members the details of our services so they can encourage their students to be prepared when visiting us. We aim to empower faculty in the classroom and on our campus by providing classroom presentations and faculty development workshops (for writing intensive classes) to help teachers to be leaders on our campus. In this presentation, the Director and professional consultant will explore writing center practices and teaching pedagogies to note specific ways that writing center professionals and faculty members can empower each other to become leaders who, together, can encourage students to be the best writers and learners they can be.

### **Methods**

Specifically, we will build upon Marilyn Cooper's (1994) notions of writing tutors being agents of student ownership and power and how teachers can exercise some of those same strategies in the classroom. In addition, we will explore research from early Compositionists such as Donald Murray (1979, 1972) who advocates for individual writing conferences and celebrating the actual writing process, and Kenneth Bruffee, who has always championed collaborative learning and writing (1984), to note how writing centers can borrow those ideas to strengthen our tutorial sessions. We also will analyze approximately 1/3 of completed post-tutorial student surveys from the Fall 2011 semester for evidence of how our services impacted confidence and leadership developments in our students. Ultimately, we believe that the Writing Studio can employ classroom strategies and teachers can use writing center methodologies in a way where all parties emerge as leaders at North Carolina Central University and beyond.

### **Discussion**

**(Dr. Karen Keaton Jackson)**

When I came to North Carolina Central University in August 2004, I did not anticipate that I would be playing the dual role of faculty member and administrator. I was hired as an assistant professor of English and expected to spend the next six or so years teaching a full load, serving on committees, and attempting to publish as much as possible. Just months after arriving on our campus, I was informed that the General Education Curriculum had just been instituted and that a new writing across the curriculum, or writing intensive component, would be a requirement of all freshmen beginning in the fall of 2005. I was asked to coordinate that new writing intensive program, and to also take over as director of the Writing Center to help support the new writing initiative.

Thus, by the beginning of my second year as an assistant professor, I now had administrative titles and duties attached to my job duties. I taught two, sometimes three writing classes per semester, reenvisioned the Writing Center so it became the Writing Studio, helped to facilitate and create assessment measures for the writing intensive program, engaged in scholarly research

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and presentations, and served on various departmental and university committees for both roles I occupied. While I hoped to be viewed as a leader in my classroom, I did not expect so early in my career to become a leader on the campus. Yet, I thank our then-Provost and administration for giving me, a junior faculty member, the chance to develop and strengthen my own leadership skills. And ultimately, I used my dual position to try to strengthen my performance in each area of my job.

As a trained Compositionist, I studied writing and the teaching of writing throughout my graduate career. Thus, I felt comfortable sharing basic teaching strategies with my tutors as I worked to develop the first formal training workshop for the graduate assistants who worked as tutors. When I changed the name of the Writing Center to the Writing Studio in 2005, I did so to make the space more visible and viable on campus, and to help erase the stigma attached to tutoring; the idea was for students to think of the space as positive and empowering, not negative and silencing. Because I am a first-year composition instructor, I see first-hand what writing skills students come with and what readings and activities engage them. Thus, when training my consultants (tutors) on how to work with them, I was very specific and intentional, making our methods context and student-specific.

Similarly, because of my director role, I work closely with the writing consultants and hear their frustrations and concerns. Perhaps their biggest concern is the idea that students, and faculty alike, often have a misconception of what we actually do in the Writing Studio. These misperceptions are not unique to NCCU, for most writing centers experience these concerns to some extent. But overall, the majority of students (and in many cases, faculty) think of us as a “fix-it” shop and as a place that will “edit” or “proofread” student papers; nothing could be further from the truth. In reality, we rarely edit or proofread *for* the student; rather, we help the student outline, draft, and revise ideas, explaining our corrections all along the way. Our motto is to “make better writers, not just better writing.” In short, we mean that our goal is not simply to help students get better grades on particular assignments, but to help them understand *why* certain corrections need to be made so that ultimately, they know how to avoid those mistakes on their own.

My dual position has helped me to be a leader in multiple ways. As the teacher, I know first-hand of the concerns and writing weaknesses students will bring into the Studio, so I can better train and prepare my tutors to be more effective helpers. Similarly, as the administrator/director, I am sensitive to the needs and concerns of the tutors, so I can be a better teacher and prepare my students for what to expect in tutorials. In addition, when I conduct faculty writing workshops for colleagues in various disciplines, I can better prepare them for how to approach writing in their classes and how to prepare students for tutorials. Thus, it is my hope that they will then become leaders in their own departments, showing faculty how they, too, can incorporate writing in their classes. Moreover, my other goal as director is to develop leaders in my graduate student writing consultants. In better economic times, we would prepare a panel presentation and present each year at the Southeastern Writing Center Association Conference. For many of the graduate students, this was their first academic conference. It was my goal for them to get the conference experience and then go on to create and submit proposals for conferences in their own research areas. And that is exactly what many of them have done. We also participate, as a staff, in other professional development activities and workshops so the consultants can build their

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resumes'/vitae and be exposed to more experiences. I want them to emerge as leaders, as well, and my co-presenter, a former graduate student here at NCCU, is proof of that leadership taking form.

**Discussion**  
**(Ms. LaKela Atkinson)**

What or Rather *Who* is Our Focus?

Writing centers have always held the idea that student-centered teaching is the best approach to helping students learn. Our goal is to reveal to students how to recognize writing issues so that they understand the process of addressing them. In the 1970s when Composition was just establishing itself as a true field of study, Compositionist Donald Murray (1979) was one of the first to discuss the benefits of individual writing conferences. He noted how taking students through the writing process was the way to help them become more aware of their own learning and the power of their words. Five years later, Kenneth Bruffee (1984) argued that collaborative learning, which could take the form of peer review, tutorials, and other group sessions, ultimately could help students become better writers.

Through consistent visits in the Writing Studio, we anticipate that students will be able to help themselves. If students are aware of how and why they write a certain way, they are able to begin assessing techniques that will help them develop as writers. As Jeff Brooks (1991) says in *Minimalist Tutoring: Making the Student Do All the Work*, “fixing flawed papers is easy; showing the students how to fix their own papers is complex and difficult” (224). Perhaps when students feel that they are the main focus, they are more motivated to improve their writing. The initiative students take to improve their writing style will ultimately help them become better writers. As writing tutors, we are there to simply encourage them to be leaders in their academic and social development.

Our main goal is to help students to become leaders in their academic success. One way in which writing tutors help students to lead is through our peer-to-peer tutoring process. With this process, we immediately put the sessions in the hands of the students and allow them to “drive” the sessions. We accomplish this by having the students read their writing aloud. This way, students are able to feel as if they are indeed in control of the sessions instead of the tutors. This procedure allows them to hear how they write and self-correct before they discuss any concerns in their work with the tutors. In turn, students are able to pinpoint issues before the tutor offers constructive feedback. The tutoring process really is a teaching tool where students learn how to discover areas where they can grow. More importantly, this simple process gives students the ability to learn a skill that they can apply beyond the Writing Studio. It is amazing to see repeat students who become so accustomed to our tutoring process that they rarely hesitate to read aloud but instead, take the initiative to share their work. Whether or not they realize it, this shows that the students have experienced growth in the way they learn. For many students, it is normal to mainly rely on the feedback—be it positive or negative—from an instructor as a means of learning. Yet, various students admit that the peer-to-peer tutoring has opened their minds to the possibility of learning in more than one way. For students who are accustomed to learning only from an instructor, it can be a challenge to trust a new learning style. However, our tutoring process not only reveals to students that there are multiple ways of learning but that learning

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involves more than one-way communication. Students learn that it is necessary to be active in their learning and trust their own instincts as it concerns their academic progression. Since writing tutors encourage students to give input about their work, students are made to feel less intimidated about receiving assistance and how they receive this assistance.

Further, writing tutors aid students in becoming leaders in their social development. With the confidence that students have gradually developed about their writing, some have shown an interest in presenting their writing for events outside of class assignments. Because students realize that they have the tools needed to enhance their written communication skills, they appear eager to branch off and take part in extracurricular activities, some of which they would never have thought about engaging. Each year, for example, writing tutors will work with several students who are interested in running for a Student Government Association (SGA) office. Again, the mindset of the student is one of a leader because students recognize that they not only have the ability to change the outcome of their academics but how they relate to others. They can be leaders to fellow peers and help to bring about necessary change. In reality, the academic and social development work together. If students are confident in their ability to achieve academically, they are also likely to be confident in their ability to inspire others.

All in all, because the goal of writing tutors continues to be that of helping students to improve in their writing, we are successful in guiding the student to improve in his or writing. As researcher Marilyn Cooper (1994) notes, writing tutors are to be considered “radical intellectuals” with the ability to empower students. She says that writing tutors occupy a marginal space, for though we represent our institutions, the one-on-one setting allows us to be more sensitive to students’ needs and more flexible in our work with them. We intend to help students realize the need to be their biggest advocates, striving to develop in various ways, particularly academically and socially. Students learn from writing tutors that their confidence and ability to take charge of their learning helps to pave the way for other opportunities for them.

A brief analysis of our student surveys show that students do feel more empowered after receiving our services. At the end of each tutorial session, our students are to complete a satisfaction survey. A review of approximately 1/3 of our surveys from the Fall 2011 semester, or 200 surveys, found that 99% felt that their tutor was knowledgeable and helpful and 99.5% were satisfied with their services. We hope that satisfaction translate into improved attitudes as students continue writing in their courses. For when we as writing tutors have shown students how to tap into new learning opportunities, we indeed have proven successful in our craft.

### **Results**

**(Dr. Karen Keaton Jackson)**

The results of these collaborative efforts between faculty, writing tutors, and students have been leadership development across the board. As a faculty member, I was thrust into a leadership role my second year on campus and given the opportunity to reshape and develop a new writing program. My leadership position here made me eligible to run and ultimately be elected onto the executive board of the Southeastern Writing Center Association (SWCA) and the International Writing Center Association (IWCA). I even was selected by the IWCA leadership to serve as a facilitator for the 2009 Writing Center Directors’ Summer Institute in Philadelphia,

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PA. My leadership opportunities on campus led me to leadership opportunities in my professional organization, and I am thankful, as a faculty member, to have been given access to those opportunities. In addition, I've been able to see the Writing Studio grow from a place that serviced approximately 200 students per semester the year before I became director to a place that serviced nearly 1,100 students in the fall of 2011 via one-on-one and group tutorials, classroom presentations, and campus workshops. Moreover, I have been able to watch my graduate student tutors go on to great leadership opportunities as current Ph.D. students, law school graduates, and leaders both on other campuses and even right here at NCCU. I have been able to watch some of our undergraduate tutees go on to be honors' students, class officers, and even SGA Presidents on our campus. Those aspects of being leader, the ability to help others, is the most rewarding.

## Conclusion

In looking forward, universities need to continue to provide leadership opportunities for faculty members, and units on campus need to continue sharing ideas and collaborating with each other so that each unit becomes stronger. In my dual role, each position informed the other, thus making collaborations between the Writing Studio and academic departments inescapable. But, I do believe that my being able to lead gave me the drive to help students ---graduate and undergraduate—learn to lead in their own ways.

## References

- Brooks, J. (1991). Minimalist tutoring: Making the tutor do all the work. *The Allyn and Bacon Guide to Writing Center Theory and Practice*. Ed. Robert Barnett and Jacob Blumner. Boston, 219-224.
- Bruffee, K. (1984). Collaborative learning and the 'conversation of mankind.' *College English*, 46(1), 635-52.
- Cooper, M. (1994). Really useful knowledge: A cultural studies agenda for writing Centers. *The Writing Center Journal*, 14(2), 97-111.
- Murray, D. (1979). The listening eye: Reflections on the writing conference. *College English*, 41, 13-18.

**PARADIGM SHIFTS FROM THEORY TO THE CRIMINAL EVENT THROUGH  
GEO-SPATIAL ANALYSIS OF CRIME: A NEW TECHNOLOGY FOR  
THE 21<sup>ST</sup>-CENTURY CRIMINOLOGY LEARNER**

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**Abstract**

This session provides attendees with the applicability of spatial analysis in criminological theory classes through an interactive demonstration of the use of geographic information systems (GIS) in understanding the “why” of crime. Criminologists have long studied the “what” of crime but haven’t fully delved into the “why” which is critical to understanding and preventing criminal acts. The use of spatial analysis to glean insights to crime causation is a growing trend in law enforcement and affords 21<sup>st</sup> Century learners opportunities to move from theory to practice while in the classroom thus enhancing their knowledge base and passion for the subject matter. Using the ArcGIS 9.3 software, crime data from two western neighborhoods in Baltimore City (Coppin Heights and Sandtown-Winchester) are analyzed to ascertain the relationship of the ‘what’ and ‘why’ of particular crime typologies. Variables to be illuminated include population density, educational level, age, drug and alcohol abuse, and number of bars in each neighborhood.

**Introduction**

“Everything, every person, and every event on earth exists or happens somewhere. If the location of this somewhere can be fixed, then information about anything can be placed on a map, and this map then used to organize, search, and analyze the information” (Clarke, 2011, pg. 2). As a primary source of demographic data in the United States, the U.S. Census plays an essential role in charting and analyzing changes in demographic patterns. “Without reliable, consistent, and spatially comparable census data, our ability to invent creative solutions to complex urban challenges would be far more limited” (MacDonald and Peters, 2011). “Exponential improvements in computer hardware and software over the past decades have enabled a wider range of analysis (even those with quite limited technical ability) to answer the questions that should shape intelligent public policy” (Peters and MacDonald, 2004). Many researchers use Census data to glean insights to urban and regional factors. “For this group of users, the spatial analysis capabilities we have at the beginning of the twenty-first century offer an exciting way to enrich our understanding of the implications of the bald numbers of the census files” (Peters, et al, pg. 2).

Within the criminal justice fields, crime mapping utilizing the U.S. Census, state and local databases have become integral to understanding not only events but place and time of such in attempts to prevent crimes. “Crime mapping and spatial aspects of crime deals with the theoretical and practical aspects of crime mapping and spatial analysis of crime” (Paulsen, et al, 2009, p. xvi). Utilization of this technology has been proven useful to law enforcement agencies at the federal, state and local levels. “Most visibly, this support has been through the National Institute of Justice (NIJ) Maps Office and Community Oriented Policing (MORE) grants, which

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seek to improve the effective implementation of GIS and crime mapping within the criminal justice system” (ibid). Furthermore, it has been used in education and demonstrates how well this technology reaches across diverse fields of human service. This increased need has led to the demand for crime mapping education and training at the community college and university levels of academe.

All students majoring in criminal justice are required to take criminological theory. “Theory in criminal justice represents an attempt to develop plausible explanations of reality, which in this case is crime and the criminal justice system” (Hagan, 2007, p. 9). “Much criminological theory possesses a global or sensitizing quality that alerts us to critical issues, but often lacks the quality of formally testable, scientifically verifiable propositions” (ibid).

Through the use of spatial analysis, faculty can move away from just explaining what motivates people to commit criminal acts to explaining the criminal event in its entirety hence providing a useful deterrence mechanism that can be utilized by law enforcement. For the student who is able to utilize such technology, he/she is able to visually depict observations by place and time of the criminal act. By mapping social facts along with crime events, we can assess relationships between these variables.

### **Spatial Analysis in Action**

The case for use of spatial analysis of crime can be demonstrated in the 2002 DC, Maryland, Virginia, sniper attacks when a dozen people were shot from a parked car. “Criminological theories typically aim to explain why people become motivated to commit such horrific acts...but rarely explain why this motivation manifests itself through the particular behavior it does” (Paulsen, 2009, p. 3). Queries such as the following must be raised:

1. Why did the offender choose the victims he did?
2. Were the attacks random or did they follow some pattern?
3. Why did he shoot at people at particular gas stations, stores, and some isolated areas?
4. Did he have some purpose in mind?
5. Did the placement of the shooting attacks that were plotted on maps by virtually every media institution have some meaning?

Through the use of spatial analysis law enforcement officials are able to ascertain why some places are more prone to criminal victimization than others and what a would-be criminal is most likely to target. In addition, spatial analysis allows law-enforcement to “visually depict observations by place and time” (Paulsen, 2009, p.5). Furthermore, social facts can be mapped along with individual crime events or crime rates in order to assess relationships between these facts and crime.

Additionally, spatial analysis can be used across disciplines in the social and behavioral sciences. For example, there has been a recent push in Maryland spearheaded by the Maryland Department of Health and Mental Hygiene to expand the use of GIS in human services arenas. Most students are aware of the use of GIS in navigation but have no idea how pertinent it is to understanding multiple variables in other areas/fields.

Through the use of computerized crime maps, criminologists can “analyze and correlate a wide array of data to create immediate, detailed visuals of crime patterns” (Siegel, 2012, pg. 41). Such uses can yield displays of crime locations to help law enforcement agencies enhance their effectiveness or provide more complex maps to chart trends in criminal activity. Two western neighborhoods in Baltimore City that appear to have significantly higher crime rates than others in that region are analyzed using a variety of spatial analysis methods to ascertain time and place predictions of crime.

### **Types of Spatial Analysis**

Three types of crime mapping and analysis techniques are: 1.) Geographic profiling analysis which helps to determine where the offender most likely resides; 2.) Next-event forecasting which ‘looks at where previous crimes occurred to predict where the next crime will happen’ (Seigel, 2012, p. 43); and 3.) Movement-analysis technique which helps to assess the probable locations where an offender targeted his/her victim and possible solutions to thwart such events.

An example of a program which utilizes all three techniques is the CATCH (the Crime Analysis Tactical Clearing House) in Savanna-Chatham Police Department of Georgia. The program supports local law enforcement agencies in analyzing crime series and patterns. CATCH has successfully projected probable locations where the offenders had targeted victims allowing for policy and paradigm shifts within the police department.

A myriad of factors influence crime including age, structure, immigration, gangs, drug use, media, medical technology, justice policy as well as social and cultural changes. By examining these factors theoretically in concert with spatially analyzing where, when and how these trends are present, likely to occur and by what means, criminologists will get a more accurate picture of the etiology of crime thereby enabling them to assist local law enforcement agencies prevent and reduce crime.

### **Methodology**

This presentation demonstrates the use of spatial analysis in crime mapping. Using the ArcGIS 9.3 software, crime data from two western neighborhoods in Baltimore City (Coppin Heights and Sandtown-Winchester) are analyzed to ascertain the relationship of the ‘what’ and ‘why’ of particular crime typologies.

“The Greater Coppin Heights Community is an established working-class neighborhood featuring tree-lined streets and many brick porch-front row homes with garden areas. It is a predominantly residential community with commercial and industrial uses concentrated along its northern border, while public land uses (e.g., Coppin State University and Carver Vocational High School) are located on its northern and southeastern border.”

<http://www.livebaltimore.com/neighborhoods/list/coppinheights/>, retrieved 2/15/12.

See Figure 1.1 for a map of Coppin Heights.

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**Figure 1.1: Coppin Heights Map**



Sandtown-Winchester is a [72 square block](http://www.livebaltimore.com/neighborhoods/list/sandtownwinchester/) community in West Baltimore. Known locally as "Sandtown" it is home to over 10,300 residents. The name Sandtown is derived from the trails of sand that dropped from wagons leaving town after filling up at the local sand and gravel quarry back in the day" (<http://www.livebaltimore.com/neighborhoods/list/sandtownwinchester/>, Retrieved, 2/15/12).

See Figure 1.2 for a map of Sandtown-Winchester.

"By 1990, Sandtown had become a neighborhood challenged by virtually every urban ill: poverty, unemployment, poor health, low student achievement, illiteracy, teen pregnancy, substance abuse, grime, and most significantly, Sandtown suffered an almost paralyzing lack of hope" (<http://www.livebaltimore.com/neighborhoods/list/sandtownwinchester/>, Retrieved, 2/15/12). However, beginning in 1994, neighborhood revitalization began as partnerships were formed with the Mayor and City Council, local foundations and non-profits to transform the neighborhood.

**Figure 1.2: Sandtown-Winchester Map**



## Conclusion

Through a visual presentation participants will observe GIS and its spatial aspects of crime as well as have opportunities to ask questions, query data and begin to think about possible theory formulation and policy solutions to real crime events. Variables to be illuminated include population density, educational level, age, drug and alcohol abuse, and number of bars in each neighborhood. The utilization of such technologies will increase interest in the use of technology to formulate theory and the applicability of theory formulation in student-centered learning. Typically, 21<sup>st</sup> Century students tend to be visual learners. In a field of criminology which is steeped in theory, visually demonstrating their applicability will not only enhance learning but demonstrate new areas of study available to students.

### References

- Clarke, K.C. (2011). *Getting Started with Geographic Information Systems*, 5<sup>th</sup> edition. New Jersey: Pearson.
- Greene, R.W. (2000). *GIS in Public Policy: Using Geographic Information for More Effective Government*. California: Environmental Systems Research Institute, Inc.
- Hagan, F.E. (2007). *Essentials of research methods in criminal justice and criminology*, 2<sup>nd</sup> edition. Boston: Pearson.
- MacDonald, H. and Peters, A. (2011). *Urban Policy and the Census*. California: ESRI Press.
- Paulsen, D.J. and Robinson, M.B. (2009). *Crime mapping and spatial aspects of crime*. 2<sup>nd</sup> edition. New Jersey: Prentice Hall.
- Peters, A. and MacDonald, H. (2011). *Unlocking the Census with GIS*. California: ESRI Press
- Siegel, L.J. (2012). *Criminology*, 11<sup>th</sup> edition. California: Wadsworth. Cengage Learning
- <http://www.livebaltimore.com/neighborhoods/list/sandtownwinchester/>, Retrieved, 2/15/12.
- <http://www.livebaltimore.com/neighborhoods/list/coppinheights/>, Retrieved, 2/15/12.

## USING TECHNOLOGY TO ENHANCE TEACHING AND LEARNING FOR THE MILLENNIAL STUDENT: A COMPARATIVE ANALYSIS

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### Abstract

According to the Partnership for 21<sup>st</sup> Century Skills (P21) (2009), “Students today need access to the digital tools and media-rich resources that will help them explore, understand, and express themselves in the world they will inherit tomorrow.” P21 also suggests that not only do students and teachers need access to these digital tools, but they also require support to use these tools effectively. The goal of this quantitative study was to conduct a comparative analysis of the use of technology to enhance teaching and learning for the millennial student and faculty between 2010 and 2012 at Virginia State University (VSU). In 2010, only faculty were surveyed. But in 2012, both faculty and students were surveyed. This provided greater insight into the use of instructional technologies at VSU. Results from the study indicate that faculty and students are taking advantage of new instructional technologies, and that the noted increase in the use of technology appears to be enhancing teaching and learning at Virginia State University.

### Introduction

Echo Boomers, Generation Y, Millennial Generation or Millennials are descriptors for individuals born between 1981 and 2000. They are the digital generation and they use technology to its fullest. Millennials are fascinated by new technologies and they grew up with computers. As ardent consumers of technology, they use technology in ways that previous generations barely understand, and do so in most aspects of their lives. The challenges that this group of students presents related to teaching and learning is unique (Junco and Mastrodicasa, 2007). It is therefore imperative that: (1) institutions of learning create a technological environment, and (2) faculty members skillfully integrate new technologies into their instructional activities. These actions will assist in meeting the expectations of millennials and promoting effective teaching and learning. According to the Partnership for 21<sup>st</sup> Century Skills (P21) (2009), “Students today need access to the digital tools and media-rich resources that will help them explore, understand, and express themselves in the world they will inherit tomorrow.” P21 also suggests that not only do students and teachers need access to these digital tools, but they also require support to use these tools effectively. Proponents of the use of such digital tools contend that not only does the use of instructional technology help to improve student achievement, communication and collaboration, but it also helps to prepare students for the workforce of the 21<sup>st</sup> century (Partnership for 21<sup>st</sup> Century Skills, 2009).

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Therefore, the general objective of this study is to examine the use of technology to enhance teaching and learning of the millennial student.

The specific objectives are to:

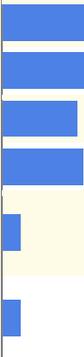
1. Examine changes in the use of technology for instructional delivery at Virginia State University (VSU)
2. Examine student expectations for instructional delivery using technology
3. Identify factors limiting the use of technology in instructional delivery in VSU classrooms.
4. Investigate factors that enhance the use of technology for instructional delivery in the classroom.

### Methodology and Procedures

Using Qualtrics software, an online survey software program, two structured survey instruments were developed and administered online in 2011 at VSU. Both surveys provide valuable information from the perspectives of faculty members, who deliver educational instruction using technology, and the student recipients of educational instruction. The first survey was a follow-up of a previous (2010) study on faculty use of technology at VSU. The survey was specifically designed to examine changes in the types and use of available instructional technologies since the last survey was conducted, and faculty perceptions of how technologies enhance teaching and learning. Unlike the first survey, the second survey examined students' expectations in terms of technology used in classrooms for instructional delivery. A pilot test was conducted among a representative sample of faculty members and students using the two survey instruments to establish their reliability and validity. Once the surveys were emailed to faculty and students campus-wide, follow-up reminders were sent periodically to ensure maximum participation and data integrity.

### Results

**Fig 1: Student Classification**

#	Answer		Response	%
1	Freshman		27	23%
2	Sophomore		28	24%
3	Junior		24	21%
4	Senior		26	22%
5	Graduate (M.S., M.A. or M.Ed.)		6	5%
6	Graduate (Ed.D., Ph.D.)		6	5%
	Total		117	100%

An online survey was conducted to examine students' expectation on the use of technology at Virginia State University. The survey was completed by 117 respondents, with 23, 24, 21, 22, and 10 percent freshmen, sophomore, junior and graduate students respectively. African-

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American/Black constitutes 86 percent of the respondents, 4 percent are Hispanic/Latino, 5 percent are Caucasian/White, 1 percent are Asian, and others (4%). Out of the student respondents, 21 percent believed that VSU instructors use technology very effectively, while 31 and 39 percent respectively felt that the instructors were effective and somewhat effective in technology use. The remaining 10 percent were of a contrary opinion. Similarly, 38 percent of the students indicated that their instructors very often used technology in the classroom, while others stated that instructors used technology quite often (37%), sometimes (20%), rarely (4%) and never (2%).

**Fig 2: How often do your Instructors use technology in classrooms?**

#	Answer		Response	%
1	Very Often		44	38%
2	Quite Often		43	37%
3	Sometimes		23	20%
4	Rarely		5	4%
5	Never		2	2%
	Total		117	100%

On the effect of technology on learning, 46 percent of the respondents “strongly agree” that the use of technology will enhance learning, 38 percent “agree” and 14 percent “Neither agree nor disagree”. Only 2 percent “disagree” and 1 percent “strongly disagree”. Respondents suggested the following as ways in which VSU instructors can use technology to promote learning among students: hands-on activities (85%), classroom activities (85%), online homework (67%) and computer delivery of instruction (49%).

**Fig 3: How can instructors use technology to promote learning among students?**

#	Answer		Response	%
1	Hands-on activities		94	85%
2	Computer delivery of instruction		54	49%
3	Online homework		74	67%
4	Classroom activities		93	85%
5	Others (Specify)		2	2%

Furthermore, while 62 percent of the students indicated that the use of technology has increased among students since they came to VSU, 75 percent observed an increase in the use of technology among instructors. Significant areas of use include online tests, quizzes, exams,

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ebooks, videos, smartboards, and use of blackboard. Some of the students cited the innovative effort of the VSU Reginald F. Lewis School of business of encouraging the use of digital textbooks by working with publishers as one major reason for the observed increase in technology use. The installation of wireless fidelity (Wi-Fi) protocol in classroom buildings has, in no small scale, enhanced the use of technology use among students and faculty members. Specifically, the students cited lecture presentation (96%), Homework/Assignments (88%), Emails (71%), test/exams (53%) and online classroom activities (49%) as ways in which instructors use technology in classes. Others include self-paced learning systems such as Element K (16%), Teleconference (5%) and movies/discussion boards (2%).

The study examined the challenges that students face in the use of technology. The challenges, among others, include the inability of a sizeable percentage of students to afford needed technology and devices (60%), lack of technical support (52%), non-availability of needed technology (47%) and inadequate training (38%). The survey result also showed that the following factors make leaning to use technology easy for students: adequate technical support (66%), Training students on how to use technology (77%), availability of technology (72%) and, clear directions from instructors and students interests (2%). Respondents also indicated that students can be encouraged to use technology in their learning by providing efficient technology support during the semester (79%), teaching students how to use technology at the beginning of the semester (69%), assigning projects that involve the use of technology (63%) and provision of online course materials (49%).

Fig 4: In what ways can students be encouraged to use technology to enhance learning?

#	Answer	Response	%
1	Teaching students how to use the technology at the beginning of the semester	79	69%
2	Providing efficient technology support during the semester	91	79%
3	Assigning projects that involve the use of technology	73	63%
4	Provision of online course materials	56	49%
5	Others (specify)	1	1%

The second survey in the study provides a comparative evaluation of technology use among faculty members in Virginia State University, as a follow up on a similar survey conducted in 2010. Survey results suggest that the use of technology for instructional delivery has increased over the study period and that 47 percent of the responding faculty members are willing to allow their classes to be observed or audio- or video-taped as they use technology for instructional delivery. However, a lower percentage (37%) offered to serve as workshop facilitator.

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The study also showed an increase in the variety of courses in which respondents reported the use of technology for instructional delivery. This trend appears to be widespread across the four major disciplines on campus and the graduate school. One of the possible explanations for this development could be the university's institutional commitment to improving the technology infrastructure and providing hand-held devices like ipads to all faculty members for instructional delivery.

Faculty still reported that students are most comfortable with PowerPoints (72%), videos (53%) technology media such as blackboard (69%), social media platforms like Facebook (63%), twitter (50%) MySpace (22%) and others, such as blogs (13%), wiki (6%) and Wimba (3%). Devices such as ipods (34%), whiteboards (13%). As shown in Fig 5, the result suggests that faculty experienced a general improvement in students ability to use Powerpoint, Facebook, twitter and videos, with the exception of blackboard, with which a slight decrease from 73% to 69% from 2010 to 2012 respectively.

Fig 5: Faculty Perception of Students' Level of Comfort with Technology

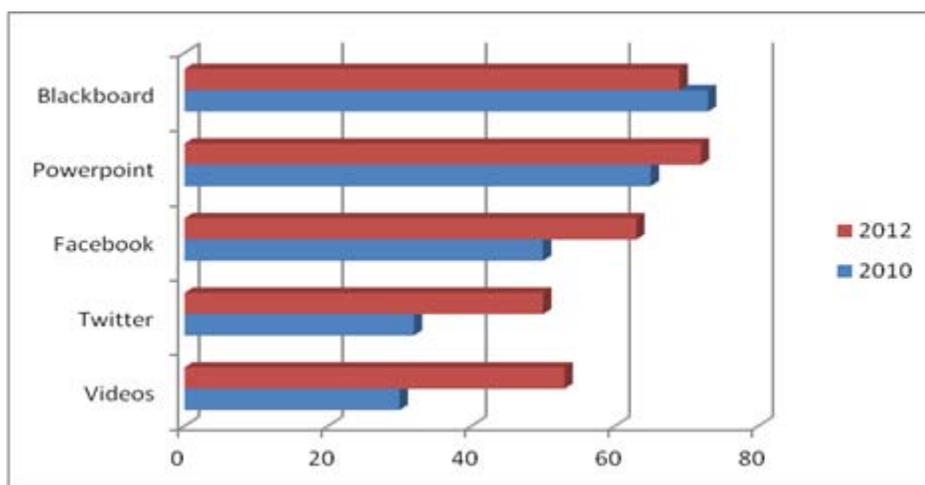
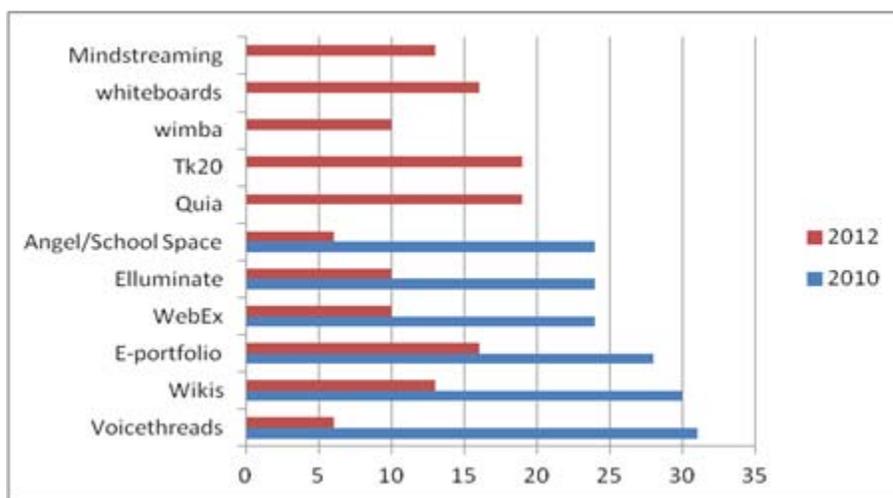


Fig 6: Faculty Perception of Students' Level of Discomfort with Technology



### **Conclusion**

Faculty use of instructional technologies has enhanced teaching and learning at Virginia State University. Results from the study show that faculty and students take advantage of new instructional technologies. Some of the strategies that have fostered the use of technology include: adequate technical support and training for faculty and students; and relatively easy access to needed hardware and software. The adoption of digital text books by some departments and the wireless fidelity protocol in the buildings have also contributed to the increased level of comfort with technology among students. These favorable factors could explain the increase in the use of technology by faculty including online and hybrid courses from 2010 to 2012. Further research may be able to show the relationship between the use of technology and the recruitment, retention, and graduation of students.

### **References**

- Junco, R., and Mastrodicasa, J. (2007). Connecting to the net.generation: What higher education professionals need to know about today's students. [Washington, DC]: NASPA, Student Affairs Administrators in Higher Education.
- Partnership for 21st Century Skills. (website). 21st century learning environments white paper. Retrieved from [http://www.21stcenturyskills.org/documents/le\\_white\\_paper-1.pdf](http://www.21stcenturyskills.org/documents/le_white_paper-1.pdf).

## **PRAGMATISM IN DISTANCE LEARNING THROUGH TEAM PROJECTS**

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### **Abstract**

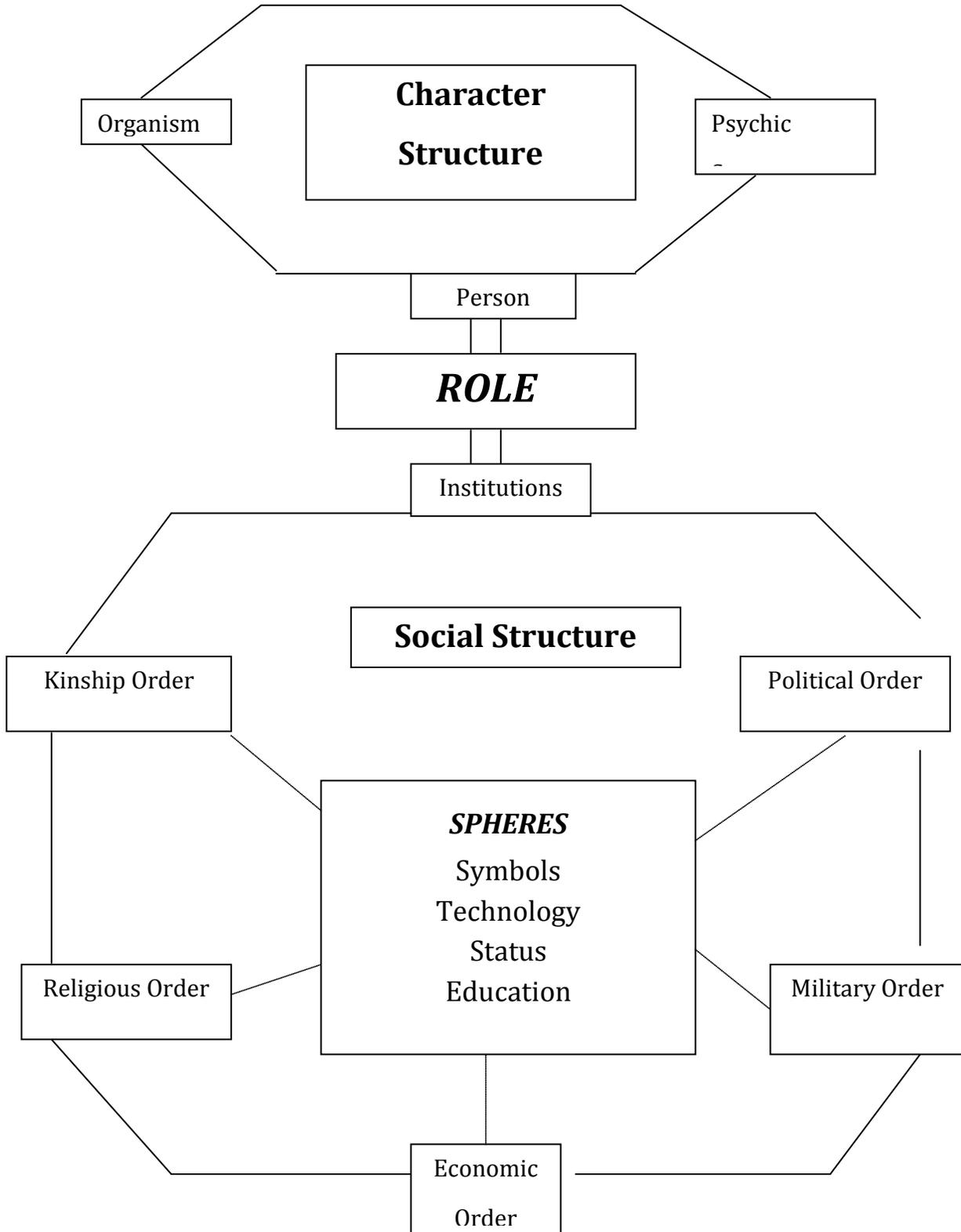
A pragmatic, philosophical approach to inter-linked information delivery in 21<sup>st</sup> century education starts with the same issues John Dewey proposed in the 19<sup>th</sup> century: hands on experience underscores learning or functional psychology. In this presentation, attendees will explore aspects of pragmatism and discuss how team projects and hands-on activities or experiments with project assignments support an effective online pedagogy based on collaboration and communication. Discussion will include ways for instructors to recognize the contextual background or social self of the individual student's learning experience and to apply this knowledge to online assignments, team projects, class communications, and both individual and group activities to engage learners and promote long-term understanding.

### **Models from History and Philosophy**

At the end of the 20<sup>th</sup> century, this author worked on a role-based model of hypermedia systems and links for information systems derived from pragmatic theory (Gerth and Mills, 1953). Pragmatists, such as John Dewey, Charles Sanders Peirce, Max Weber, and C. Wright Mills, had provided a philosophical background to the construction of an information-access model. Their models of communication helped explain history and the social "self." For example, there are five institutional orders in the social structure (Gerth and Mills, 1953):

1. Political (government-based departments and services)
2. Economic (businesses and financial institutions)
3. Military (army, navy, and other defense-related places and organizations)
4. Kinship (family-based relationships and social groups)
5. Religion (churches, synagogues, and other groups that worship together)

C. Wright Mills (1960) expanded and illustrated the contextual social structure into a model of context:



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Thus, the Mills' model applied Weber's class concept as four spheres of communication or social interaction: status, symbols, technology, and education. The figure illustrates the model and shows how role connects the individual with the institution. Although Mills' model (Mills, 1951) is based on his studies of the role of the "white collar" worker in businesses and institutions circa 1950, his analytical model provides a conceptual framework relevant today for analyzing how individual students use information in an institutional environment.

In the context of an educational institution, the individual brings many "selves" to a collaborative team working on a class project. The challenge in traditional and online classrooms for teachers and instructional designers is to understand from a philosophical view the social roles and life experiences of users that affect their view of information and to develop tools that support these views. Mills' theoretic models of historical changes in institutions and the roles of individual characters provide such a philosophical framework for understanding the user of an information system in a corporate environment (Mills, 1960). However, that is just theory. What can teachers do? Mills suggests that models precede theories and seem to state the elements and relations among elements that provide an understanding of how society works. Thus, philosophy may provide a conceptual framework for understanding and designing online courses, but instructors need to provide a collaborative environment and plan to make it work.

### Collaboration

Instructors in traditional classes as well as online environments can build on the social structure model to engage students in college or graduate school to participate and learn. However, the first step is to *see learning as collaboration*, especially with adult learners. Collaboration depends on the creation and dissemination of information. A communication model for *when*, *what*, and *who* communicates using different forms of information on a project team is suggested in the workshop as one way to enhance collaboration and pragmatic learning.

Collaboration seems to require discussion, presentation and delegation. One model of collaboration that has been proposed for expository writing and adapted for team work is shown in the following table (Smith, 1994) adapted for this paper.

Mode	Variation	Goal	Product	Process	Constraint	Situation	Mediating Device
<b>Discussion</b>	Discussion	externalize information	-group-level awareness of information	-dialog -analysis	-take turns talking	- conference room -same time	-forum  - email, text message, Twitter
	Conflict Resolution	-externalize information	-group-level awareness of information  -resolving a conflict	- dialog -analysis	-take turns talking  -one topic addressed  -subset of group involved	- conference room -same time	-forum or Elluminate

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<b>Mode</b>	<b>Variation</b>	<b>Goal</b>	<b>Product</b>	<b>Process</b>	<b>Constraint</b>	<b>Situation</b>	<b>Mediating Device</b>
					-different opinion encouraged		
	Brainstorm	-externalize information	-group-level awareness of information  -generating ideas	- dialog  -analysis	-take turns talking	- conference room  -same time	-forum or Elluminate  - email, text message, Twitter
Presentation	Presentation	-introduce information	-group-level understanding of information	-teach and inform  -listen, learn, question, evaluate	-one individual controls	- conference room  -same time	-whiteboard; PowerPoint
	Summary	-introduce information  -receive same message	-group-level understanding of information	-teach and inform  -listen, learn, question, evaluate	-one individual controls  -carried out by leader	- conference room  -same time	-whiteboard; PowerPoint; website
	Demo	-introduce information	-group-level understanding of information	-teach and inform  -listen, learn, question, evaluate	-one individual controls	-lab  -same time	-website or Elluminate
<b>Delegation</b>		-assign task	understanding of work responsibility	-delegate and explain  -listen and evaluate	-senior member delegate	- conference room  -same time	-forum, email, text message, Twitter

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In the discussion, new approaches to collaboration for the 21st century student will be suggested and introduced as part of the presentation and discussion. Ideas that might be covered include:

- Establishing the social self in a forum
- Providing individual activities to assure hands-on, pragmatic learning
- Determining a team (role based)
- Assigning a project (real world example from social structure)
- Covering the phases of collaboration during project assignment.

Using experience from teaching in classrooms and online for over 20 years and from doing project management work, this presentation and discussion is intended to explore with the attendees ideas and techniques for making online experiences in distance learning or blended classes more effective by being more pragmatic and collaborative.

## References

- Gerth, H. and Mills, C. (1953). *Character and Social Structure*. New York: Harcourt, Brace, & World, Inc.
- Mills, C. (1951). *White Collar*. New York: Oxford University Press.
- Mills, C. (1960). *Images of Man*. New York: George Braziller, Inc.
- Smith, J. (1994). *Collective Intelligence in Computer-Based Collaboration*. Hillsdale, NJ: Lawrence Erlbaum Associates, Publishers.

## THE REPETITION OF IMAGES IN LEARNING VOCABULARY OF ANOTHER LANGUAGE

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### Abstract

It is the hypothesis of this investigation that the presence of a repetitive visual element through the presentation of video to the experimental group will demonstrate a higher rate of comprehension of new vocabulary than that of the group that does not have access to the images for the entire duration of the presentation (control group). This investigation took place at Georgia State University. The participants included thirty-nine (39) students enrolled in an Elementary Spanish II (1002) course and was composed of men and women. One group viewed a PowerPoint© presentation with the repetition of the images of the numbers one to five and heard the pronunciation of these numbers in Korean three times. Another group viewed the PowerPoint© presentation with the images of the numbers only one time and heard the repetition of the audio track. After seeing the PowerPoint© presentation, the participants in each group completed the second part of a questionnaire composed of a short quiz. With regard to the identification of the numbers in Korea, the experimental group demonstrated a tendency to correctly select the appropriate numbers more frequently than the control group.

*Key words:* Visual, comprehension, vocabulary, Korean, identification.

### Introduction

The usage of images in teaching another language can prove to be beneficial to the foreign language student since images have the capacity to express ideas, lower student anxiety levels, and familiarize students with concepts that could otherwise be considered abstract. This medium permits the student to utilize another perspective in order to approach a concept that typically has a tendency to be very complex or intimidating. Nevertheless, although there are many benefits in the utilization of images in foreign language curriculum, we have a responsibility as facilitators of education to select and incorporate images and activities that support the processing of new information by the student. According to Wright (1989), there are five questions that must be taken into consideration when we use images in the classroom in order to teach a foreign language:

1. Are they difficult to prepare?
2. Are they easy to organize?
3. Are they interesting?
4. Do they have meaning and are they authentic?
5. Is there a sufficient quantity of language?

Considering these questions is essential in the establishment of a language course because it requires the instructor to evaluate the tools employed therein. Such an evaluation sheds light on the benefits and the hindrances of this medium. For example, the application of the five aforementioned questions in an activity that employs the presentation of fifty photographs of

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various plants with their scientific taxonomy in the maternal language reveals that this activity is not appropriate for the foreign language class. The activity seems difficult to prepare and organize, and the quantity of language would be overwhelming if intended for the purpose of learning new vocabulary. Additionally, although there is the presence of visual support, for many students, the topic would hardly be considered interesting.

Nevertheless, the incorporation of useful images permits students to obtain the meaning of new words. As Wright (1989) explains, human beings always search for the meaning of new information, and it is “an essential aspect of the learning and development of language.” For this reason, any method that supports the learning process and the establishment of meaning warrants more investigation as to the benefits of its implementation. In like manner, Stevick (1976) states that, “things that are stored together tend to be recovered together.” This is to say, students seize these images and the meaning that they receive simultaneously and place them in their long-term memory in order to recall them when necessary. With such a benefit, it is evident that the employment of visual support should have a role in the foreign language classroom.

### **Images as a Debilitating Medium in Learning**

Although the importance of the usage of images in teaching another language has been verified in various studies (Goldstein, 2008; Mazoyer et al., 2002; Swaffer & Vlatten, 1997), there are still contradictory ideas about this method of instruction with regard to other idiomatic aspects of language. Such opposition is proposed in the study conducted by Boers, Piquer Píriz, Stengers, and Eyckmans (2009). In their investigation of the role of images in the memorization of idioms the researchers found that,

...the addition of pictorial elucidation contributes little to learners' retention of linguistic form. Distraction by pictures may even have a detrimental effect when it comes to retaining unfamiliar and difficult words...

The study was conducted in an English as a Second Language class with Dutch university students. They received a list of one hundred English idioms and photographs that corresponded to the origins of thirty of them. The other thirty idioms had verbal descriptions of their origins. It was predicted that the idioms accompanied by the images would be easier for the students to reproduce. Nevertheless, the conclusions revealed that,

...when verbal input has to compete for the learner's attention with pictorial elucidation, it is the latter that is likely to be best retained by the learner and possibly so at the expense of the former.

According to this analysis, the verbatim reproduction of idioms by the students was hindered as a result of the distraction presented by the image. They concluded that, although photographs may assist students in remembering certain characteristics of the idiom, they do not facilitate the acquisition of the linguistic structure.

### **Hypothesis**

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Taking into consideration the conclusions of Boers, Piquer Píriz, Stengers, and Eyckmans (2009), an investigation into the efficacy of images should have specific parameters. Some of these important restrictions could include the limitation of ambiguous images and a reduction in the number of new words that are to be introduced. One manner in which this goal may be achieved is through the utilization of images that undoubtedly pertain to the meaning of the words employed and the selection of only a small quantity of words.

In order to determine the influence that the repetition of images has on the attainment of language, the following study uses the concept of “sound off, vision on,” or more precisely “sound on, vision off,” proposed by Lonergan (1984). Lonergan explains that the act of listening to the sound of a video without the presence of images “gives emphasis to the importance of the contribution of that visual element to the understanding and the context” of the video. This is to say, the absence of images should influence the capacity of the students to learn new vocabulary in the foreign language. Similarly, the repetition of images should augment the possibility of acquiring new vocabulary in a language. It is the author’s hypothesis that the repetitive presence of the visual element of the video to the experimental group will illustrate a greater comprehension of new vocabulary than that of the group that does not have access to the images for the entire duration of the presentation (control group).

### **Methods and Procedures**

The purpose of the study is to determine if the repetition of images assists the acquisition of new vocabulary in the Korean language. The study was conducted at Georgia State University in a classroom equipped with a projector and a sound system. The use of the projector and the sound system permitted a transition without technical distractions between the demonstration of the presentations and the administration of the comprehension quiz.

The participants included thirty-nine students enrolled in an Elementary Spanish II class. This group was composed of women and men. Although some of the participants already had knowledge of other languages, none had previous knowledge of the Korean language. As it pertained to the procedure, the thirty-nine (39) students were divided into two groups. The experimental group had twenty-three (23) students, and the control group was composed of sixteen (16) students. Before listening to the audio track, each participant completed the first part of the questionnaire describing their level of experience with the Korean language. The participants in the experimental group viewed a PowerPoint© presentation with the repetition of the images of the numbers one to five and heard the pronunciation of these numbers in Korean three times. Every member of this group heard the pronunciation of the numbers in Korean simultaneously with the images. After each presentation of the number five (5), they experienced a pause lasting three seconds.

The control group saw a PowerPoint© presentation with the images of the numbers only one time and heard the repetition of the audio track. The participants in this group heard the pronunciation of the numbers one to five in Korean at the same moment they saw the images only the first time. Afterward, the members of the group heard the pronunciation of the numbers one to five in Korean two additional times. At the end of each pronunciation of the number five (5), they experienced a pause lasting three seconds. In each group, the PowerPoint© presentation

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had a duration of fifty-four (54) seconds, equating to three seconds per pronunciation. Following the PowerPoint© presentation, the participants in each group completed the second part of the questionnaire composed of a short quiz. They listened to a speaker say the same five (5) numbers in Korean in random order. The students had the task of placing a circle around the number that they believed they had heard. They heard the pronunciation of the number twice. The duration of this quiz was one minute and five seconds. They had twelve (12) seconds to evaluate each number.

### Results

At the end of the investigation, we asked ourselves if the repetition of images supports the learning of vocabulary. With regard to the identifications of the numbers in Korean, the experimental group exhibited a tendency to correctly select the appropriate numbers more frequently than those in the control group (See Tables 1 & 2).

Number in Korean	Positive Identifications	Negative Identifications	Percentage of Positive Identifications
1	21	2	91.3%
2	23	0	100.0%
3	22	1	95.7%
4	22	1	95.7%
5	21	2	91.3%

**Table 1:** Identification of number in Korean. Experimental group.

Number in Korean	Positive Identifications	Negative Identifications	Percentage of Positive Identifications
1	15	1	93.8%
2	16	0	100.0%
3	12	4	75.0%
4	12	4	75.0%
5	15	1	93.8%

**Table 2:** Identification of number in Korean. Control group.

As indicated by the tables, the students in the experimental group had less difficulty identifying the numbers *three* and *four*. However, the students in the control group experienced fewer impediments with the identification of the numbers *one* and *five*. Both groups identified the number *two* without error. Through the observation these tables, it is obvious that there is a

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marked difference between the performance of the experimental group that obtained a percentage of more than 91.3 with regard to the positive identification of any number and that of the control group with 75.0% positively identifying numbers three and four.

It is evident that the participants of the control group had more difficulty with the identification of the numbers *three* and *four* than their colleagues in the experimental group. It is possible that this error occurred because in the Korean language, the two numbers have very similar sounds. There was also confusion with the identification of the numbers *one* and *five*. This confusion possibly arose from the similar characteristic of these numbers to be the only ones with two syllables. Interestingly, each error with each pair of numbers presented an incorrect identification with the other number in the pair. If this prediction is correct, it indicates why the participants of both groups identified the numbers incorrectly. The greater frequency of this inaccuracy within the control group implies that the absence of the repetition of images can augment the tendency to confuse the numbers. Interestingly, the number *two* in Korean has a similar sound as the same number in English with the closed vocalic and posterior /u/ and in Spanish with the fricative dental /ð/ (Poutain, 2003). It is possible that the similar sounds had permitted the participants to identify this number without any problems.

As a definitive comparison between the performances of each group, an average score has been calculated for both. The average score for all of the participants in the experimental group was 94.78%. For the students who participated in the control group, the average score was 87.50%. These scores represent a variation between the ability of the participants in the two groups to identify the new vocabulary. It was discovered that the experimental group and the control group have high standard deviations (18.31 and 22.95, respectively). Nevertheless, the standard deviation is greater in the control group that did not view the repetition of images. The aforementioned facts demonstrate that there is a greater discordance between the scores received by each participant and the average score within the control group than in the experimental group.

## Conclusion

Although there were similarities with regard to the erroneously selected numbers in both groups, the higher frequency of the positive identification of numbers in the experimental group than in the control group exhibits that the repetition of images at the moment of introduction of new words has an impact in the effectiveness of the activity in question. It is worthwhile to mention that it is possible that other factors could have influenced the data obtained. Since the students were required to complete a multiple choice questionnaire, it is possible that some selected the correct answers without knowing that they were, indeed, accurate. Additionally, for some students, the repetition of images could not have been pertinent in their acquisition of new words. Nevertheless, according to the results obtained from this field study, it is evident that the distinction between the two groups is significant and merits recognition. This study supports the idea that the repetition of images does, in fact, positively influence the acquisition of new vocabulary in a foreign language.

### References

- Boers, F., Piquer, A. M., Stengers, H., and Eyckmans, J. (2009). Does pictorial elucidation foster recollection of idioms? *Language Teaching Research*, 13 (4), 367-382.
- Goldstein, B. (2008). *Working with Images: A resource book for the language classroom*. Cambridge: Cambridge University Press.
- Lonergan, J. (1984) *Video in Language Teaching*. Cambridge: Cambridge University Press.
- Mazoyer, B., Tzourio-Mazoyer, N., Mazard, A., Denis, M., and Mellet, E. (2002). Neural bases of image and language interactions. *International Journal of Psychology*. 37 (4), 204-208.
- Pountain, C. (2003). *Exploring the Spanish Language*. London: Hodder Arnold.
- Stevick, E. W. (1976). *Memory, Meaning & Method: Some Psychological Perspectives on Language Learning*. Rowley, Massachusetts: Newbury House Publishers, Inc.
- Swaffer, J. and Vlatten, A. (2007). A sequential model for video viewing in the foreign language curriculum. *The Modern Language Journal*, 81 ii. 175-188.
- Thornbury, S., ed. (2008). *Working with Images: A Resource Book for the Language Classroom*. Cambridge: Cambridge University Press.
- Wright, A. (1989). *Pictures for Language Learning*. Cambridge: Cambridge University Press.

## **KNOWLEDGE ECONOMY, COROLLARIES, AND THE EXPANDING ROLE OF THE INTERMEDIARIES**

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### **Abstract**

Contemporary “knowledge,” a fundamental source of economic advantage, is being shaped by three defining occurrences of the 21<sup>st</sup> Century: the continuous proliferation of technological advancements, the declining global economy, and the growing competition among world communities. The key to sustaining economic growth therefore depends on how well the knowledge intermediaries—the academic community in particular—adapt to evolving changes. On the other hand, the academe, besides having to maneuver the vulnerabilities of mission, resources, priorities, policies, character, size, talent pool, and institutional culture, is also dominated by a distinct phenomenon called the “center-periphery” hierarchy. The *center* institutions, owing to their resources (endowments in particular) are able to strengthen their research prowess and reputation for excellence, which helps attract talent from around the globe. However, this reality only adds to the smaller academic institutions’ difficulties in finding creative ways to support innovation, maintain influence in shaping the knowledge societies, and meet the academic obligations to graduate market-ready students. As one of the potential recourses, this theoretical discussion offers a basic understanding of the knowledge economy and its key corollaries to illuminate how academic institutions; particularly the smaller ones, can employ creative strategies in influencing teaching and learning in the 21<sup>st</sup> Century.

### **Introduction**

Knowledge, in the simplest terms, involves familiarity with information, facts, descriptions, or skills acquired through experience or education. Knowledge contributes to global competitiveness and furthers social welfare. Davenport & Prusak (1998) offer this definition, “Knowledge is a fluid mix of framed experience, values, contextual information, expert insight, and grounded intuition that provides an environment and framework for evaluating and incorporating new experiences and information” (p. 5). Whether in the form of innovation, technologies, goods, services, or processes, knowledge is central to the knowledge economy in its numerous outcomes and influences.

### **What Is Knowledge Economy?**

Depending upon the context, knowledge economy (KE) can have different connotations. In general, KE refers to a system of information focused on the production and management of knowledge. However, the term also refers to the use of knowledge technologies, which now involves a plethora of mediums including the social media’s web-based and mobile technologies, instant communication, robotics, the Internet, artificial intelligence and virtual reality. To maintain the *status-quo* let alone a competitive edge in today’s complex world, every aspect of KE, from learning, expertise, research and development (R&D) to designing, manufacturing,

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marketing, supply and communication, must keep pace with the continually emerging informational and technological changes.

Contemporary scholars (Mansfield & Lee 1996; Salter & Martin 2001; Mowery & Sampat 2005) describe KE as a rather elusive concept with multiple narratives. These include descriptions of economy and society that contribute to the modern industrial and industrializing nations' Economies; applied research ideas and activities; and those producing 'knowledge workers.'

The two widely-accepted dimensions of knowledge are tacit and explicit (Polanyi 1966, 2009). Although a bit hard to define, tacit knowledge is referred to as intuitive, experience-based *know-how* (Brown & Duguid 1998). It is also difficult to communicate and is deeply rooted in action, commitment, and involvement (Nonaka 1994). On the other hand, explicit knowledge is more precise and formally articulated. Although more abstract, it can be more easily codified, documented, transferred and shared (Romer 1995; Nonaka 1994). For this discussion however, knowledge is a reference to the overall mechanism that eventually shapes our economy and not any single or combination of theoretical explanations.

### Key Corollaries

A context-dependent system, KE characteristically generates numerous corollaries and influences. Although the very advancement of the human race can arguably be tied to some aspect of knowledge economy, this discussion will focus on three key corollaries: knowledge-based economy, knowledge transfer, and knowledge management.

#### Knowledge-based Economy

First introduced by Foray and Lundvall (1996) at the Organization for Economic Cooperation and Development (OECD) conference, the term "knowledge-based economy" (KBE) is rooted in the economic growth concept called "new growth theory" (Romer 1994; Cortright 2001), which places innovation and technological change into a more central role. The traditional production functions focus on four elements: labor, capital, materials and energy with knowledge and technology being considered as external influences on production. However, the new growth theory confers importance to technological change as the key driver of economic growth. In KBE, the system must balance not only its roles of knowledge production (research) and knowledge transmission (education and training), but also the transferring of knowledge to economic and social actors, especially enterprises, whose role is to exploit such knowledge (OECD, 1996). Thus KBE is directly centered on production, distribution and use of knowledge and information through focused perusal of new innovations and technologies.

#### Knowledge Transfer

In both KE and KBE, transfer and diffusion of knowledge are just as important as its creation. Knowledge transfer requires innovation and a focused perusal of new innovations and technologies. It can simply be described as a process where one unit is affected by the experience of another (Argote & Ingram 2000) to organize, create, capture or distribute knowledge, and ensures its availability to current and future users. Globally, governments are increasingly recognizing "knowledge" and "innovation" as significant driving forces of economic growth, social development, and job creation. Consequently, promotion of knowledge transfer is gaining

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significance as a subject of public and economic policy. This requires increased attention to transfer agents and structures that support and advance the use of knowledge in the economy. Effective distribution of knowledge also depends upon investing in the skills for finding and adapting knowledge for use, and in developing connecting units or centers. In the case of higher education, university-industry collaborations offer opportunities to increase and stimulate new research. Together, they provide not only an efficient way to transfer useful knowledge but also advance skills required by the industry.

Historically, the latter part of the 20<sup>th</sup> Century, particularly the post-World War II era, signaled an ascendancy of innovation through corporate research and development (R&D) that integrated knowledge workers with knowledge management. The United States was among the first nations to formally acknowledge the potential for increased collaboration between industry and universities as a crucial link for innovation. Following the recommendations of *Science, The Endless Frontier (The Bush Report, 1945)*, the American system of higher education underwent a major overhaul. Instead of building separate research institutes, the *Bush Report* recommended federal government's renewed support for a partnership among government, universities and industry (what Etzkowitz termed "the triple helix"), implementing a competitive system for faculty to conduct basic research. It also extended contracts to industrial R&D laboratories to expand applied research with specific goals, channeled through various governmental research agencies such as the National Science Foundation and the National Institutes of Health, which continues to this day.

## Knowledge Management

Yet another significant corollary of the knowledge economy, "knowledge management" (KM) refers to the organizational ability to attain economic value from its collective knowledge assets. This involves information, production, distribution, and development of the affiliated knowledge infrastructure including insights, experiences, technology and organizational structure. KM is commonly associated with knowledge engineering as well, which in itself is a field within artificial intelligence to advance the knowledge-based systems as decision support or expert systems (Jianqiang et al. 2005; Olszak & Ziemba, 2006).

## Emerging Knowledge Economy Trends

How does one measure a society's KBE? Although there are no internationally-agreed-upon indicators, individual countries and international organizations including OECD, Asia Pacific Development Center (APCD), and WBI have created different frameworks. In general, five measurement categories offer a realistic composite. These are: (a) overall performance of the economy; (b) economic incentive and institutional regime; (c) education and human resources; (d) innovation system; and (e) information infrastructure.

Using university-industry research co-publication output as an indicator to measure the world's top 500 universities (collected by the Center for Science and Technology Studies in 2011 at Leiden University, the Netherlands), the findings rank the four Nordic nations; Sweden, Finland, the Netherlands and Norway, along with Japan as the highest-ranking achievers. Also, while only one U.S. university scores in the highest range for the aggregate 'All Sciences' category; two others, Stanford University and University of California (San Francisco), tie for the highest overall publication output for the engineering science University Industry Co-publication (UIC)

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percentage intensity. The overall UIC indicators include: (a) University Industry Co-publication output; (b) the aggregate UIC intensity percentage (or, share of UICs within each university's total publication output for all five disciplines: natural sciences, engineering sciences, life sciences, medical sciences, and social sciences and humanities); and, (c) UIC intensity percentage in engineering sciences.

Similarly, an analysis of the most recent data (2010 and 2011) reported by the leading world institutions, including, the U.S. National Science Foundation (NSF); the Center for Science and Technology Studies (WCTS) at Leiden University, the Netherlands; the World Bank Institute (WBI); and the OECD also reveal three interesting patterns. First, that globalization of the world economy and the vigorous pursuit of national innovation policies are creating new centers of high-technology manufacturing and knowledge-intensive societies, such as, Denmark, Switzerland, Sweden, Japan, and South Korea. Second, that science and technology remains the main driver of industrial, economic and social development and innovation (however, all educational disciplines and “soft” sciences can be treated and cultivated as business, educational, or intellectual products and disseminated for a higher-value return); and third, that given the global competition and fast-emerging knowledge societies, the United States must maintain its lead among the global ‘knowledge’ community.

### **The Expanding Role of the Intermediaries**

Traditionally, academic institutions and industry R&D departments are considered the key intermediaries of KE. Moreover, innovation has been viewed as a ‘linear’ process where the basic R&D provides the foundational knowledge for applied R&D. This in turn provides the foundational knowledge for innovation, which then is diffused to users (Cowen, 2005). However, recent empirical studies suggest that although it was difficult to find examples in which “pure” basic research led directly to products, it was easy to find examples where most of the innovations in an industry were made by the users involving little or no science at all (von Hippel, 1976). Contemporary viewpoints emphasize a contextualized understanding of the actual role that academic institutions can play in regional economic development. One such perspective suggests that universities are not restricted to generating only new knowledge through primary research, but also provide technical support and specialized expertise and facilities for on-going R&D activities (Grossman et al. 2001; Nelles, Bramwell & Wolfe 2005).

Another viewpoint notes the academic institution's role as that of a *catalyst* of technological innovation rather than *driver* (Doutriaux 2003). Citing a detailed case study of the University of Waterloo, in Waterloo, Ontario, Canada, Bramwell and Wolfe (2008) identify several roles for academic institutions. Among the key one are: creation of an academic institution that capitalizes on its consulting and R&D support through its faculty; launching educational programs that teach business skills critical to identifying, exploiting, and establishing new commercial opportunities with an emphasis on innovative technologies; being institutional enablers of culture that is explicitly stated in vision and goal statements; and, establishing boundary spanning structures and systems for the purposes of managing university-industry collaboration.

### **University-Industry Collaboration**

Of the above-stated viewpoints, the idea of university-industry collaboration offers a promising option for the smaller academic institutions in particular. Learning from case studies over two decades for a social model of multi-partner engagement, Carlson et.al (2011) propose a practical undertaking through *common* (shared) objectives using these three steps: (a) begin with an assessment of what is happening in the region, (b) develop a common, shared understanding of what the key issues are, and (c) develop a common plan of how to address the issues. Together these steps provide a structure to support collective action while allowing each organization to take initiative within its own sphere of influence. In such a plan, each entity is connected to other organizations through a network of collaborative relationships, managed by a core group of leaders to stay on course by tracking whether or not their collective efforts are making a difference. However, the stakeholder leaders need to figure out on their own how to collaborate. The key is to avoid creating a fragmented structure among potential partners.

For the academe, the process of knowledge transfer offers an excellent opportunity for collaboration toward shared strengths, joint exploration and redirection of knowledge. Some of such examples include allowing the mutual use of specialized equipment, laboratory facilities and discoveries; assigning internal experts for patenting and licensing of intellectual property; serving as a public forum to sponsor discussion about the regional innovation processes for social and industrial transformation occurring within the regional economy; negotiating collaborative mentoring programs, start-up clinics and incubators; engaging and providing networking opportunities to share best practices, social and industry trends; and identifying feasible opportunities for collaboration to achieve common, targeted goals.

#### **Caveats**

A collaborative engagement is dictated by various dynamics, including, availability of regional assets such as industry, manufacturing, and professional firms as willing collaborators, and a core group of leaders to provide continuous and sustained leadership. Further, any collaborative effort, particularly one involving academic and non-academic partners, warrants an enduring commitment to the following values:

- Individual excellence – collaborators having shared value and goals
- Importance – collaborators' mutual support of major strategic objectives
- Interdependence – collaborators' mutual need of complementary assets and skills
- Investment – collaborators' investment of mutual resources
- Information – open communication among all collaborators
- Integration – building of mutual networks and shared ways of working
- Institutionalization – ensuring that partnerships exist beyond the involved individuals
- Integrity – collaborators having mutual trust

#### **Conclusion**

With the changing dynamics of today's world, new paradigms of knowledge transfer are critically needed to sustain innovation and entrepreneurial activities among dwindling resources. Although not new, collaborative partnerships among academic, industrial and non-academic shareholders offer a feasible option to expand capabilities and capacities through pooling of

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resources, talent, and other commodities for achievement of the common goals. Smaller academic institutions can begin with an assessment of internal and regional assets, particularly in industry, manufacturing, and/or professional firms to secure willing collaborators, along with a core group of dedicated leaders for continuous and sustained direction and support.

### References

- Argote, L. & Ingram, P. (2000). Knowledge transfer: A Basis for Competitive Advantage in Firms. *Organizational Behavior and Human Decision Processes* 82 (1): 150–169.
- Brown, J. S. & Duguid P. (1991). Organizational Learning and Communities of Practice: Towards a Unified View of Working, Learning, and Innovation. *Organization Science*, 2(1)40-57.
- Bush, V. (1945). *Science, the Endless Frontier. A Report to the President on a Program for Postwar Scientific Research*. Office of Scientific Research and Development. Washington, DC. Reprinted in 1990 by the National Science Foundation.
- Carlson, P., Holm R. & Uhalde, R. 2011. Building Regional Partnerships for Economic Growth and Opportunity. Boston. *Jobs for the Future*. <http://www.info@jff.org>
- Cortright, J. (2001). New Growth Theory, Technology, and Learning: A Practitioners Guide: US Economic Development Administration. *Reviews of Economic Literature and Practice* (4).
- Cowen, R. (2005). *Universities and the Knowledge Economy*. Paper for the Conference Advancing Knowledge and the Knowledge Economy. National Academies, Washington, D.C.
- Davenport, T. H. & Prusack, L. (1998). *Working Knowledge: How Organizations Manage What They Know*. Boston: Harvard Business School Press.
- Dunowski, J. P., Schultz, C., Kock, A., Gemünden H. G., & Salomo, S. (2010). Implementing university collaboration strategies through portfolio *innovation: Strategy, Organization and Technology*. London. Imperial College.
- Doutriaux, J. 2003. University-Industry Linkages and the Development of Knowledge Clusters in Canada. *Local Economy* 18(1): 63-79.
- Etzkowitz, H. (1993). Technology Access. A Triple Helix of Academic-Industry-Government, Henry Etzkowitz and Loet Leydesdorff, *Current Science*, 1996.
- Foray, D., & Lundvall, B. (1996). The Knowledge-Based Economy: From the Economics of Knowledge to the Learning Economy. *Employment and Growth in the Knowledge-Based Economy* (pp. 11-32). Paris: OECD.
- Jianqiang, L., O’Riain, S., O’Sullivan, D. & Wang, Q. (2005). *A Framework of Context Aware Knowledge Management*. Digital Enterprise Research Unit, National Institute of Ireland. Science Foundation Ireland.
- Leung, S. K. C. (2004). Asia Pacific Technical Meeting on Information and Communication Technology Statistics, Wellington.
- Mansfield, E. & Lee, J. Y. (1996). The modern university: contributor to industrial innovation and recipient of industrial R&D support. *Research Policy*, 25(7)1047-1058.
- Mowery, D., & Sampat, B.N. (2005). Universities in National Innovation Systems. In *The Oxford Handbook of Innovation*, eds. Jan Fagerberg, David C. Mowery, Richard R. Nelson. Oxford: Oxford University Press.

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- Nelles, J., Bramwell, A. & Wolfe, D.A. (2005). History, Culture and Path Dependency: Origins of the Waterloo ICT Cluster. *Global Networks and Local Linkages: The Paradox of Cluster Development in an Open Economy*. Montreal. McGill-Queens University Press. 228-251.
- Nonaka, I. (1994). A Dynamic Theory of Organizational Knowledge Creation. *Organizations Science* 5(1)14-37.
- Olszak, C. M. & Ziemba, E. (2006). Business Intelligence Systems in the Holistic Infrastructure Development Supporting Decision-Making in Organisations. *Interdisciplinary Journal of Information, Knowledge, and Management* 1(1) 47-57.
- Polyani, M. (1966). *The Tacit Dimension*. New York: Doubleday.
- Raisch, S., Birkinshaw, J. Probst, G. & Tushman, M. (2009). Organizational ambidexterity: Balancing exploitation and exploration for sustained performance. *Organization Science*, 20(4) 685-695.
- Romer, P. (1995). Beyond the Knowledge Worker. *World Link*. January/February 1995: 56-60.
- Salter, A. J. & Martin, B. R. (2001). The economic benefits of publicly funded basic research: a critical review. *Research Policy*, 30(3): 509-532.
- von Hippel, E. (1976). The Dominant Role of Users in the Scientific Instrument Innovation Process, *Research Policy* 5(3): 212-39.

**BLENDED LEARNING:  
USING WEB 2.0S TO ENHANCE CLASSROOM INSTRUCTION**

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**Abstract**

Technology is a great way to enhance teaching and learning with digital natives in the classroom. Using Web 2.0 tools to help enhance instruction can be advantageous for both teachers and students. Using Web 2.0 tools enables students to work interactively with graphics, be creative, use decision making and critical thinking skills, conduct research and analyze information, collaborate with others, communicate globally, learn online and develop organizational and problem solving skills. While Web 2.0s are a highly successful and widely utilized by school-age students for social networking, the acceptance and effectiveness of Web 2.0s as an educational resource has not been determined. This article gives guidance for using web 2.0 technologies as a tool to create a blended learning experience for school age students by serving as an extension of the traditional classroom instruction. The web 2.0 technologies discussed in this article include Facebook, wikis, Edmodo, and Glogster. Through the use of the web 2.0 technologies listed above, students were able to discuss problems with their teacher and with fellow students. The 2.0 technologies created conditions to support a collaborative learning experience.

**Introduction**

Educators are constantly striving to meet the needs of their students. In modern education, meeting needs of students usually involves the use 21<sup>st</sup> century tools. When making efforts to meet the needs of students, educators should consider the characteristics of today's school aged students. Today's school aged children are referred to as "Generation-Z" or "digital natives". The terminology Gen-Z and digital natives refers to the group of individuals whose oldest members were born in the latter part of the twentieth century (Urban Dictionary, 2010). Digital natives have grown up knowing and using the Internet. Digital natives are a highly networked group often using social networking sites to maintain their connections.

**Review of Literature**

Successful and effective educators in today's society understand how digital natives learn. Niess and Walker (2010) conclude that with the capabilities of digital tools students should not be expected to learn only through traditional lecture style teaching. A recent study revealed that middle school math students prefer learning through the use of video podcast rather than textbooks (Kay and Edwards, 2010). The same study concluded that students find video

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podcasting valuable in facilitating their understanding of mathematics concepts. Test scores of the students involved in the research reflect their perceptions by showing a 64% average rate of improvement. The gains in the study reported by Kay and Edwards were reflected in both regular education and special education students.

Web 2.0 technologies offer many functions that appeal to educators who are looking to extend learning beyond the classroom. Web 2.0 technologies promote sharing, collaboration and authorship among groups of participants in a common virtual setting (Wikipedia, 2010). In addition, Web 2.0 technologies revolve around communication and interaction while traditional websites only allow “passive viewing”.

While existing research suggests that Web 2.0 technologies are positive and useful for students, further research should examine the educational value of specific Web 2.0 technologies in specific discipline settings in order to strengthen existing research findings (Hazari, North, & Moreland, 2009). Many people have doubts about the educational value of Web 2.0s. Karpinski and Duberstein (2009) conducted a research study that suggests a link between Facebook users and lower grades. Karpinski and Duberstein conclude that Facebook users have lower GPAs than non-Facebook users. The authors also mention that there are likely unknown variables that could be responsible for the difference in GPAs. Other doubts that teachers have about incorporating technology to fill gaps in education may be rooted in their belief that students do not have equitable access to computers and/or the Internet; however, a recent study found that students’ perceptions of the educational benefits of Facebook was not affected by students’ access to home computers and/or broadband Internet access (Tan & Low, 2010).

The purpose of this article is to provide examples of blended learning using Web 2.0 technologies in an effort to extend learning opportunities for students beyond the traditional classroom walls and foster an environment that encourages students to take greater responsibility for their own learning.

### **Using Facebook to Enhance Classroom Instruction Procedure**

The students involved in this study met in the precalculus class five times per week for 50 minutes of face-to-face instruction. A single Facebook page was created for the 3 precalculus classes. In the creation of the Facebook page, a teacher Facebook account was first established. The account was created strictly for educational purposes and it was not associated in any way with the teacher’s personal life. The teacher’s picture was the profile picture for the account. Next, a Facebook page for the precalculus class was created. The settings chosen offered little to no privacy in an effort to make the page easy to access. The settings were such that anyone with Internet access was allowed to access the page and the content posted; however, only Facebook members were able to post on the wall of the page. Next, and once again in an effort to make the Facebook page easy to access, a link to the Facebook page was posted on the teacher’s school website. Students, parents and/or persons who chose to “like” the page would then have quick access to the page through their own Facebook account. Regular/daily postings to the Facebook page included test and quiz dates and homework assignments. Students were encouraged to use the page to post questions when they were having trouble with their homework assignments. In addition the following were posted on an as needed basis, usually occurring three times weekly

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in some combination: copies of class notes, videos teaching precalculus concepts and solution sets.

SMART Board, SMART Notebook, Google Docs, and YouTube were at the center of the creation of the class notes and videos. The teacher exported notes to a pdf file at the end of class and uploaded the notes to Google Docs. From there, the teacher changed the sharing setting to allowing anyone with the link to access the document and posted the link to the notes on the class Facebook page. For videos, the teacher used the record feature in SMART Notebook to record a lesson. The recording was saved and then uploaded to YouTube. From YouTube, the teacher chose to share the video on the class Facebook page.

## Results

Qualitative research collected from 80 students revealed more information about how students are using Facebook and what improvements are needed.

<b>How are students' using Facebook/What do they like?</b>	<b>Number of Responses</b>
To check the homework assignment	43
To access support materials including videos and notes	65
Communication	50
Ease of Use	14

Table 1: How are Students Using Facebook and What do they Like?

## Discussion

Web 2.0 technologies such as Facebook clearly play an important social role in the lives of digital natives. Findings of this study suggest that students are interested and willing to use Facebook to extended learning beyond the classroom. Using Facebook as an extension of the classroom has the potential to provide additional support to students, engage students beyond the classroom and increase communication between students and their peers and teachers. Findings of this study suggest that even though students use Facebook as a social tool, most students in this study (average age 16) prefer and place more value on traditional classroom instruction. One reason for this could be that traditional classroom instruction has been the primary delivery mode for them throughout their school career. Perhaps this will change as elementary and middle school students' learning experiences begin to reflect the incorporation of 21<sup>st</sup> century learning technologies. There was a greater gain in students' perceptions of the academic value of Facebook than in students' perceptions of using Facebook to extend learning beyond the classroom than any other area studied in this report.

## Using WIKIS to Enhance Classroom Instruction

Several Wiki tools are available from different vendors. Some of these include Curriki (2009), MediaWiki (2009), and PBWorks (2009). For this study, a Wiki service called Wikispaces (2009) was used. Wikispaces was chosen because it was free and prior knowledge of student's

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use of the Wikispaces in other middle school classes would help them to understand the layout of the Wiki and building knowledge of the navigational tools of the site would be less cumbersome.

### Procedure

Participants for this study were a group or heterogeneous grouped sophomores and juniors in an Integrated Math 3 class. The Wiki account was set-up through [www.wikispaces.com](http://www.wikispaces.com). Students had to become patient with each other knowing what was previously posted could be deleted in the next minute by another user. This is where the discussion page helped to give students a sense of ownership to the activities. No discussion posts were deleted until all activities or homework as an example had been check on the day after posts had been made. The main page housed all of the addition and deletion of entries to the page. The page was set-up to aid students in working out homework problems and studying for test and quizzes. Students were asked to edit an existing page and save their additions or deletions. Students were encouraged to participate in discussions about the page where everyone could see their entries and actually carry on a conversation about the posts that had been made. The Wiki page was totally controlled by the teacher or administrator of the account. Therefore through close monitoring the teacher could make comments and help students see the correct way a problem should be solved. The teacher could also stop any problems with negative comments and encourage students to work together as a team to solve the assignments. The instructor would use these postings as a teaching aid in class to determine the knowledge of the learner.

### Measurement

The instruments used to determine the effect of using Wiki pages to determine the understanding of mathematics concepts was a pre and post survey using the five point Likert scale.

### Results

To answer the question, How does the use of wiki help students understand mathematics concepts? A paired sample t test was conducted to evaluate the means between the Pre and the Post test. An alpha level of .05 was set incorporating a two-tailed significance level. The analyses showed a significant positive change from the Pre to the Post test for students using the Wiki page to help students understand mathematical concepts. The results indicated that the mean score of the Posttest ( $M = 54.96$ ,  $SD = 9.74$ ) was significantly greater than the mean of the Pretest ( $M = 50.21$ ,  $SD = 9.29$ )  $t(24) = 2.57$  with a Significance (2-tailed) = .017. See the table and graph below.

### Discussion

The data indicates that the twenty-four students as a whole benefitted from using the Wiki page to help them learn mathematical concepts. This is in line with the Hazari, North, and Moreland's research that was conducted in 2009. The study has offered a way to help students with mathematical concepts beyond the classroom. With the increase of Web 2.0 tools available, the use of the Wiki page is just one way a teacher can provide help outside the classroom. In future work, the researcher plans to investigate other forms of online tutorial tools that can be used to

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help students in Math class. Researchers will continue to test and report their findings of which tools work best to engage students with a scaffolding approach and to build on their existing knowledge. They will also need to help address the problem for some students that do not have access to technology away from school. While many schools have incorporated one to one laptops for all students, many school districts still battle the digital divide. The main focus of this continued research is to make educators aware of the need to use Web 2.0 tools with their teaching to give students the help they need to become 21<sup>st</sup> century learners.

### **Helping Teachers Get on Board with Web 2.0 Technologies**

The emergence of new technologies such as the Web 2.0 technologies pushes educators to learn to harness their benefits for classroom use, yet at the same time it is difficult to actually implement these technologies into classroom activities and instruction. Even though some in education continue to teach content in a manner that is traditional and probably outdated in terms of preparing students for 21<sup>st</sup> century life. It is important for educators to get on board with the new way of conveying content and skills to students. Educators should meet students on their playing field which is “digital” and learn the technologies they are using, the technologies they will be expected to use and learn to incorporate them into daily class activities as they are used in the workplace or for personal use. Web 2.0 tools are such an example of new technological tools that provide new means of educating out students.

### **Research Questions**

The purpose of this study was to investigate the reasons that k-12 teachers are not utilizing the Web 2.0 tools to promote course content and to determine possible solutions to this problem.

This research was guided by the following questions:

1. What is the reason many teachers still do not embrace web technologies in classroom instruction?
2. What is needed to help teachers “get on board” with the technological changes of the 21<sup>st</sup> century classroom?
3. How many teachers actually know what current technological tools and resources, such as web 2.0, are available to them?

### **Method**

Participants were Twenty-five educators within a rural k-12 public school system were selected for this research project. There were 10 males and 15 females involved in this study. The ethnic background of this group is as follows: six African-Americans and nineteen Caucasian participants. The age levels range from 23 through 58 years with varying years of teaching experience as well. The range for experience was from first year to thirty-four years. The grade levels taught vary from First Grade through Twelfth Grade. The teachers involved also teach various subjects. All participants were at various levels of technology use. A mixed method research design was used for this study. Five interviews were conducted that used a semi-structured interview format to collect the data.

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## **Measurement**

The instrument used to determine the probable causes of teachers not using Web 2.0 tools in their classroom activities and lessons was a 10-question survey, using a Likert scale which was created through the Survey Monkey online survey program in addition to conducting five interviews of teachers. One question was qualitative in format in that it allows for educators to provide a comment, whereas the remaining questions are quantitative and use forced-choice questions. This resulted in a mixed method research design.

## **Procedure**

All teachers received a pre-survey for which they were to respond accurately regarding their use of Web 2.0 tools. The first survey was administered before formal training was provided on Web 2.0 tools. The second survey was administered after a professional development training session in which these teachers were provided additional training in select Web 2.0 tools such as Edmodo, Brainpop, Glogster, Animoto, and Symbaloo. The survey was presented using the Survey Monkey online survey tool. In this survey teachers were asked similar questions relating to technology use and integration. An area for comments was also provided to ascertain more detailed information from participants however because this was formatted as optional no one bothered to take the extra time and provide comments. The survey was sent to 25 participants and only 20 responded. This is why there was the need to conduct additional research using the interview process. There were five persons used for the interviews and they were not given the survey to complete.

The survey had 10 questions that were based upon a Likert scale rating and was administered twice to see if there was a change in the teachers' views and knowledge after having some training on the use of specific web 2.0s. Five interviews were conducted. The interviewees consisted of a first year social studies teacher, a second year English teacher, and two veteran Consumer Science teachers and a veteran English teacher. Interviews were transcribed and analyzed using the triangulation techniques to develop themes and categories.

## **Results**

Based upon the interviews conducted with the teachers and the survey results it is evident that more professional development is needed in order to make teachers more comfortable with the use of web 2.0 technologies. Teachers need to learn how to use these valuable tools as well as how to implement their use into class lessons and activities. The veteran teachers that I interviewed felt that they also needed time during the training to practice these skills while the trainer was there to provide immediate feedback and assistance.

After reviewing the interviews I noticed some dominant themes and commonalities and based upon their responses to the same set of questions, the dominant theme indicated there seemed to be the need for more time to practice and integrate what they learn in professional development in order to become more comfortable with the new tools and resources. Current research indicates that there are surveys that indicate that only about half of U.S. teachers use technology in classroom instruction (Starr, 2009). The interviews I conducted seem to support the fact that

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there is a disproportionate number of teachers that use technologies in the classroom. It also suggests that teachers do not utilize technology in their class instruction because of understanding, discomfort in using applications, and the need for practice and support.

This brought forth another commonality amongst the interviewees, time. Even though they received professional development regularly, it appears that in addition to being able to practice new skills and technologies during professional development was not the only problem...but just having the time to practice independently in addition to regular educational-administrative duties.

It would seem to be a simple solution. Provide more practice time during professional development, thereby allowing technology educators to matriculate and assist those who need extra help and support, provide continued support and ongoing assistance to those teachers that need that additional support. Show teachers how to integrate the technology learned effectively into lessons.

In terms of “time”, I don’t know that the technology director or educators can do much about that problem. That seems to be one that should fall onto the teacher. Just as educators make time to plan lessons, they should care enough about students using 21st century tools to incorporate the time into their schedule when planning their lessons and activities. This should be a part of the planning process, not a part of staff development.

As stated previously the common theme that stood out was that teachers wanted more time in the professional development to practice the skills they were learning while the instructor was present to assist and provide support. With all of these steps followed in conducting good professional development technology training, educators will feel more empowered to “get on board” with the new web 2.0 technology tools and engage their students.

## References

- Burbary (2011). *Facebook Demographics Revisited – 2011 Statistics*. Retrieved September 10, 2011, from <http://www.kenburbary.com/2011/03/facebook-demographics-revisited-2011-statistics-2/>
- Caudill, J. (2011). Media-rich Social Networks: Open Source Solutions to Media Creation. In M. Koehler & P. Mishra (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference 2011* (pp. 187-194). Chesapeake, VA: AACE. Retrieved September 10, 2011 from <http://www.editlib.org/p/36256>.
- Collaborative authorship (2011, October). Web 2.0. *Wikipedia, The Free Encyclopedia*. Retrieved October 8, 2011, from [http://en.wikipedia.org/wiki/Web\\_2.0](http://en.wikipedia.org/wiki/Web_2.0)
- Hazari, S., North, A., & Moreland, D. (2009). Investigating pedagogical value of Wiki technology. *Journal of Information Systems Education*, 20(2), 187-198.
- Karpinski, A. & Duberstein, A. (2009). A description of Facebook use and academic performance among undergraduate and graduate students. Poster presentation at the 2009 American Educational Research Association Annual Meeting, San Diego, CA.
- Kay, R. & Edwards, J. (2010). Evaluating the Use of Instructional Video Podcasts for Middle School Mathematics Students. In *Proceedings of World Conference on Educational*

## Interlink Alliance

- Multimedia, Hypermedia and Telecommunications 2010 (pp. 3626-3629). Chesapeake, VA: AACE. September 10, 2011 from <http://www.editlib.org/p/35163>.
- Niess, M.L. & Walker, J.M. (2010). Guest Editorial: Digital Videos as Tools for Learning Mathematics. *Contemporary Issues in Technology and Teacher Education*, 10(1), 100-105. AACE. Retrieved September 10, 2011 from <http://www.editlib.org/p/34122>.
- Pollara, P. & Zhu, J. (2011). Social Networking and Education: Using Facebook as an Edusocial Space. In M. Koehler & P. Mishra (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference 2011* (pp. 3330-3338). Chesapeake, VA: AACE. Retrieved October 8, 2011 from <http://www.editlib.org/p/36833>.
- Public Schools of North Carolina, State Board of Education, Department of Public Instruction. (2011, August) Education First NC School Report Cards. Retrieved October 8, 2011 from <http://www.ncreportcards.org/src/schDetails.jsp?Page=2&pSchCode=308&pLEACode=681&pYear=2010-2011>
- Starr, L. (2009). Encouraging teacher technology use. *Education World*, Retrieved from [http://www.educationworld.com/a\\_tech/tech159.shtml](http://www.educationworld.com/a_tech/tech159.shtml)
- Tan, E.X. & Low, Y.C. (2010). The Perception and Acceptance of Students towards using Social Networking Sites in Teaching and Learning. In Z. Abas et al. (Eds.), *Proceedings of Global Learn Asia Pacific 2010* (pp. 247-252). AACE.
- Turner, K. & George, M. (2011). Hybrid Teaching and Learning in Contemporary English Teacher Education. In M. Koehler & P. Mishra (Eds.), *Proceedings of Society for Information Technology & Teacher Education International Conference 2011* (pp. 796-801). Chesapeake, VA: AACE. Retrieved October 8, 2011 from <http://www.editlib.org/p/36374>.
- Urban Dictionary. (2010). *Generation Z*. Retrieved September 7, 2011, from <http://www.urbandictionary.com/author.php?author=xSpartan117x>
- Zahidi, Z., Mat Sin, N. & Jamal, J.I. (2011). Facebook Features: Enhancing Student Engagement in Self-Regulated Learning. In S. Barton et al. (Eds.), *Proceedings of Global Learn Asia Pacific 2011* (pp. 268-277). AACE. Retrieved October 8, 2011 from <http://www.editlib.org/p/37184>.

## **ASYNCHRONOUS AND SYNCHRONOUS LEARNING IN GLOBALLY NETWORKED LEARNING ENVIRONMENTS**

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### **Abstract**

A team of three North Carolina Central University (NCCU) faculty, Lenora Helm Hammonds, Dan Reis and Emmanuel Oritsejafor, shares research from the creation of a new course for a National Endowment of the Humanities project, Collaborative Online Institute for Learning (COIL). The implementation of the course results in globally networked learning environments amongst two international partners and North Carolina Central University. The course, structured for blended delivery (online and face-to-face classroom) and slated for implementation in Fall 2012, features asynchronous and synchronous learning tools, and required coordination of new media designers, faculty, IT specialists and international program administrators on three continents. The NCCU Fellows have demonstrated leadership, and are on the “front lines” of establishing new paradigms in distance education. The NCCU Fellows’ award winning course design, chosen from an international pool of courses, is examined through this interactive session, revealing strategies and techniques incorporated in their COIL course. Participants receive hands-on experience with tools in new media, collaborative planning techniques and course development for sustainable, multicultural syllabi.

### **Introduction**

Asynchronous and Synchronous Learning in Globally Networked Learning Environments, is an “Ask the Expert” style session of the Distance Education conference track of Interlink Alliance 2012 Faculty Development Conference. In a 50-minute roundtable discussion, a course will be examined titled: JAZZ: BORN IN AMERICA, CREATED INTERNATIONALLY. For this session, team leader Lenora Helm Hammonds will be joined by her NCCU COIL Fellows to discuss the course and share their research and findings, and be available to interact and answer questions for the session participants. The JAZZ: BORN IN AMERICA, CREATED INTERNATIONALLY course culminates the work of a 12-member team establishing new paradigms in multicultural online learning environments. The NCCU led COIL team -- comprising Jazz educators, IT specialists, new media consultants and International Programs staff from the US, South Africa, and Scandinavia -- holds the shared vision of the timeliness of developing a course which embodies Jazz music appreciation, Jazz performance, and the multicultural influences of politics, language and commerce on the lives of Jazz artists. The courses commence in Fall 2012 at University of South Africa, Pretoria (UNISA), Royal Academy of Music, Aarhus, Denmark, and North Carolina Central University. The “Ask The Expert” session content will allow participants to examine the planning tools used by the COIL team members and learn directly from the NCCU COIL fellows. The walk-away’s for session [participants are student centered, multi-culturally designed tools, comprising information about technology, software, trends in student engagement in 21st century classrooms, team building activities and assessment rubrics.

### **Defining Globally Networked Learning Environments**

A globally networked learning environment (GNLE) refers to an environment for learning where students and faculty connect and engage who are in different parts of the world. The course subject in GNLEs is a *vehicle* to the students' gaining reflective learning and collaborative knowledge creation skills. The hope is that attainment of these skills engenders global awareness and understanding of the participants' cultures. Thus, though the focus of the NCCU COIL Fellows' course is on Jazz, any subject could create avenues for multicultural exploration. Typically GNLEs take place online, such as course websites or Skype, but may also take place in a face-to-face classroom. What is necessary is the establishment of cohorts of students from at least two cultures, with teachers actively present from these cultures. A blended approach to learning may be incorporated, with tools from both online resources and traditional syllabi, with particular emphasis on the integrity of content, intellectual sharing and cultural representation by each cohort. The distinction that is critical is that GNLEs are *not* like online courses, in which students may be enrolled in the course from different parts of the world, learning the course content according to the syllabus together. Rather, GNLE student participants *geographically* apart from one another learn the course content through their own unique cultural lens and then exchange with other students in the course. This sharing is done in synchronous and asynchronous pathways, each cohort of students sharing their cultural and experiential lens as they move together through the course content. The cohorts share individually and in teams (or performance ensembles), within and across the group, from their own perspective.

#### **Goals and Challenges in Developing Globally Networked Learning Environments in Asynchronous and Synchronous Learning**

In creating this course, the NCCU Fellows and their international counterparts a) navigated barriers and challenges to success in cultivation of institutional support, b) accessed technological and funding resources and, c) cultivated access to professional development tools for participating faculty. The team encountered an additional layer of challenges in that the structure of the Humanities course offerings for each campus was starkly different. The University of South Africa, Pretoria (UNISA) is an entirely online campus, with no face-to-face instruction, and had just begun planning jazz education syllabi. Royal Academy of Music, Aarhus is a music university offering jazz and contemporary music coursework and degrees at the undergraduate and graduate level, and some experience in offering online courses. North Carolina Central University, a liberal arts institution offering doctoral, post graduate and undergraduate degrees, has both distance education courses, and a renowned Jazz Studies program with a long history. The collaboration between the three universities was three tiered: a) administrative planning, b) curriculum development, and c) implementation, and each tier gleaned avenues to discover cultural connections in the Humanities for distance education syllabi.

Our course content goals also were multi-tiered, and included a pedagogical approach where multiple and different cultural perspectives inform learning and understanding of course content. In identifying areas of assessment, the team focused on factors that could indicate success in creating an authentic setting for multicultural learning. If successful, the research could elucidate

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how the involvement of international students may energize a classroom --gleaning distinct learning experiences for students and faculty.

Finally, the COIL initiative required, and both the international partner universities and NCCU were committed to, a student-centered focus for the course. We agreed on the provocative research about the characteristics of who our students would be - millennial learners. Consensus in academia is that millennial learners are changing the academic landscape, requiring educators to rethink their approaches. The research about the characteristics of millennial learners, coupled with the rapid growth and daily use of social media, the internet and use of technology, impacts all educators around the globe. Initial findings suggest asynchronous and synchronous learning environments are a tool by which the educator can bridge the generational gap between faculty and student, and maintain relevance to, and for, the millennial learner. The millennial learner's world is a virtual world! Our goal in the COIL project is to achieve immersion of technological tools and new media throughout the course content for maximum student engagement.

### Conclusion

Educators in higher education have many trepidations around distance education, and are often reticent to make the shift to creating courses for strictly online or blended delivery. Additionally, in online course delivery, synchronous and asynchronous activities can be difficult to manage and control, and educators grow wary of their inability to meet course objectives and predict learning outcomes. Lastly, technology is often a dirty word to many educators and students, and some are closed to the idea of distance education in any form. In *ASYNCHRONOUS AND SYNCHRONOUS LEARNING IN GLOBALLY NETWORKED LEARNING ENVIRONMENTS* we will discuss these trepidations, and the conversations from the field of the pros and cons of teaching and learning in blended courses in the 21st century academic classroom. Examples of successful synchronous and asynchronous teaching and learning will be shared and discussed in this session. Participants can expect the following outcomes from the session: a) distinctions between synchronous and asynchronous tools; b) technological platforms necessary for synchronous tools; c) applications of asynchronous and synchronous tools within course syllabi; d) strategies to prepare faculty to infuse asynchronous and synchronous tools in course syllabi; e) effectively planning and implementing coursework in globally networked learning environments; and f) educating students and faculty on GNLEs, synchronous and asynchronous tools in coursework.

At NCCU, our 2020 Strategic Plan for globalization of academic curricula includes aggressive cultivation of international engagement to foster student interest in study abroad. The COIL project represents a meeting of all of these goals in action in the classroom, adopted through synchronous and asynchronous modalities, globally networking learning environments.

### References

Bennett, J.M., & Bennett, M.J. (2004). Developing intercultural sensitivity: An integrative approach to global and domestic diversity. In D. Landis, J. Bennett Y& M. Bennett (Eds.), *Handbook of intercultural training*. (3rd ed., pp. 147-165). Thousand Oaks: Sage Publications

## Interlink Alliance

- Dunscomb, J. R. & Hill, Jr., W. L. (2002). *Jazz Pedagogy: The Jazz Educator's Handbook and Resource Guide*. Van Nuys, CA, Alfred Publishing Co., Inc.
- Prouty, K. (2012). *Knowing Jazz: Community, Pedagogy, and Canon in the Information Age*. Jackson, MS, University Press of Mississippi.
- Southern, E. (1971). *The Music of Black Americans: A History*. New York, NY, W.W. Norton.
- Starke-Meyerring, D. & Wilson, M. (Eds.), (2008). *Designing Globally Networked Learning Environments: Visionary Partnerships, Policies, and Pedagogies*. (pp. 1-17). Rotterdam, Sense Publishers.