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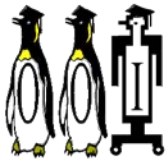

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KEYNOTE SPEECH

FACULTY AND TEACHING EVALUATION

Gregory A. Schaper
Assistant Fellow of ooi Senior Academy
Associate Professor of Computer Science
Hawai'i Pacific University, Honolulu, Hawaii, U.S.A.

Abstract for Keynote Address

The process of accreditation by organizations such as the Western Association of Schools and Colleges (WASC) has undergone significant changes. Institutions no longer need to adhere to mission objectives that are imposed upon them by the accrediting body. Instead each individual institution is now expected to define its unique mission and the emphasis is placed on how effective the institution is in achieving it. An area of primary interest is how effectively the institution and its faculty are at achieving the educational mission. Leaning outcomes must be defined for all courses that align with the mission of the institution. Program review provides the mechanism for assessing how well learning outcomes are achieved. Recommendations for improvement evolve the institution toward the achievement of its mission. This cycle of evolution is continuous. This presentation will examine how these accreditation requirements can be applied to define faculty expectations and improved methods of teaching assessment.

At most institutions, faculty are required to contribute to teaching excellence, scholarship and service. During contract renewal, tenure, and promotion reviews each of these are assessed in order to determine overall job performance. The relative weight that each area contributes in the overall assessment is generally related to the mission of the institution. Teaching colleges tend to weigh teaching excellence heavier than research. Research institutions likely regard research and grant productivity more heavily. Service is expected of all faculty and is usually not considered as important as teaching or research. Determining the appropriate weight that each category should count toward overall faculty performance can be difficult. One way to address this issue is to require individual faculty to specify a percentage for each category that will be used to assess their performance. These percentages must be within an acceptable range that reflects the overall mission of the institution. Such a scheme used to define faculty performance expectations creates and infinite track system that allows faculty to contribute to the overall mission of the institution as they are individually best suited. In this presentation a means by which such a system of evaluation can be implemented will be demonstrated.

One of the most challenging areas of faculty performance to assess is teaching excellence. Evaluation methods that consider only static measures of teaching performance, such as peer review and student course evaluations, are inadequate. A more comprehensive evaluation method should include how faculty assess themselves and the processes used to continuously improve their instructional methods. Requiring faculty to produce strong evidence of a process of continuous improvement will keep even excellent instructors from becoming complacent. In this presentation a certification program that can be implemented to support and encourage faculty to create processes that result in continuous improvement of instructional methods will be described.

ACCOUNTING STUDENTS' OPINION OF THE USE OF WEB-BASED STUDY MATERIALS IN A MULTI-CAMPUS ENVIRONMENT

Abdel K. Halabi
Assistant Fellow of ooi Senior Academy
Paul de Lange
Robyn E. Dyt
and
Les Hardy
Monash University, Victoria, AUSTRALIA

ABSTRACT

This paper provides the results of an exploratory attitudinal evaluation of web use by students enrolled in an introductory accounting unit. Student responses were sought on the usefulness of a variety of on-line course materials and interactive opportunities. The web-based subject information was used by on-campus and off-campus students, and by students overseas. The evaluation found that students (n = 361) overwhelmingly felt that the web based learning materials were satisfactory and useful, though they considered that some aspects were more useful than others. This research is important particularly as tertiary institutions are making wider use of online learning resources.

Key Words: Accounting Education, Web- based materials, Technology

INTRODUCTION AND LITERATURE REVIEW

Universities throughout the world have made large monetary and time investments in information technology. These technological developments have led to the creation of world wide communities. Nelson (2002) noted that the demand for the services of universities is no longer restricted to the surrounding area but is coming from a much more extended constituency, and these demands will require universities to develop new service delivery systems and create virtual places in which they can operate. An important aspect of the increase in technologies and communications has been the development of the Internet. Marginson (2000) noted that the Internet is a combination of world library, world communications systems, and world bulletin board. In an educational environment, the Internet and e-mail together link every corner of the world into a common data set, reaching simultaneously into the minds of many students.

In response to the growth of technologies at universities and the use of the Internet, this paper describes student responses to the use of web based learning materials and activities provided via the WebCT (web course tools) learning management system in an introductory accounting unit. Research that examines the influence of using technology in the classroom is not new in terms of accounting education and while the impact of technology has moved through stages of evolution so too has the research (Bryant and Hunton 2000; Lymer, Sangster, and Baldwin, 1997). The motivation for this research however stems from the fact that there is little systematic data on students' use of, and perceptions of WebCT in a multi-campus environment for accounting students.

The rest of the paper continues …….

TRANSACTIONS ON BIOCHEMISTRY

MICROBIOLOGY PAST AND PRESENT AS TEACHING TECHNIQUES

Victoria Hritonenko
University of Houston, Texas, U.S.A.

ABSTRACT

The paper describes a few activities that complement lectures and facilitate the process of learning. Among them are short class activities, discussion of microbiology past and current events.

1. INTRODUCTION

Microbiology is an important science, the knowledge of which is required by practically all areas of biological sciences. Everyone from a nurse to an environmental studies student has to learn microbiology to become proficient in their own fields. The role of instructors is to introduce students to the captivating, cruel, and yet beautiful world of microbiology, explain the power and relevance of microbiology, and persuade students to appreciate and respect it. It is important to reveal all aspects of this incredibly rich science, demonstrate both versatility and benefits of microbes and, at the same time, warn students of possible threats these small but powerful creatures carry. Informative classes full of adventure encourage students to study microbiology. Effective teaching techniques contribute to a better understanding of microbiology. When students are looking forward to their classes, they are motivated to master this science and receive higher grades. Currently, many innovative methods of teaching are available (Buxeda & Moore, 1999; Turco & Byrd, 2001). This paper focuses on a few of them, which have shown the biggest success in classes. These methods are simple to apply and they are not time-consuming.

2. CURRENT EVENTS IN TEACHING

Students go from class to class the whole day long, sometimes attending as many as five different classes in a single day. Short class activities help them to switch their mind to microbiology, review previous material, and enrich lectures. They also prepare students to a new topic. Such activities can be discussions of current events or applications of microbes.

A short discussion of current events from a microbiology viewpoint encourages students to analyze information, increases awareness of microbes around them, and promotes interest in microbiology. Media-covered events supply numerous topics for such discussions such as the issue of the anthrax-laid letters, emergence of SARS, spread of West Nile virus, rise in methicillin-resstant *Staphylococcus aureus*, finding of multi-drug resistant HIV strains, a possibility of bioterrorism and how it presses our nation to consider preventable measures (see examples in Rappuoli, 2004). The list of microbial applications is still growing. For example, the microbes help to clean up oil spills in the environment, extract copper and uranium from ores (Maruyama et al., 2003; Romero et al., 2003). Intestinal flora provides us with vitamins, stimulates proper development of our digestive muscles (Mayo Clinic Health Letter, 2003).

The rest of the paper continues …….

TRANSACTIONS ON BUSINESS

WORKING WITH EDUCATIONAL PARTNERS IN CHINA: OBSERVATIONS FROM TWENTY YEARS AND SIX HUNDRED GRADUATES IN ASIA

Eric J. Munshower
University of Dubuque, Iowa, U.S.A.

ABSTRACT

This paper looks at the practical difficulties in developing business education programs in China. The author's university has been providing business education in Asia for over twenty years and this paper informs new entrants what to expect as well as recommendations on how to deliver business education in the region.

Key Words: MBA Education, China, Asia, Joint Partnerships

INTRODUCTION

The purpose of this paper is to make a few, brief observations about the nature of Chinese educational markets, especially in MBA education. The comments included within apply most closely to China and Chinese expatriate populations in Taiwan, Malaysia, Indonesia, Hong Kong and Singapore with which the author and the author's current employer have the most extensive experience. By extension, many of these comments can apply to other areas of Asia and the world as well.

The potential size of the Chinese Business Education market is staggering. It is estimated that China needs 300,000 MBA graduates a year to adequately prepare Chinese firms for entry into the World Trade Organization (WTO). In 2000, there was approximately one-tenth the needed students actually enrolled (Zeck, 1999). Obviously, a large number of both public and private western universities are looking at entry into Chinese educational markets. For both the public and private American universities, the typical partnership model is to develop a relationship with a public college in China. Around 30 US universities have formal Ministry of Education approval to work in China; however, the actual number educating is several times larger (Background Notes, 1999).

This paper addresses practical issues of teaching business in China as well as among the Chinese expectorate populations. For brevity and clarity I have broken this article into two sections. The first section is a tool kit guide of practical issues which one often be misunderstood by American educational institutions working in China. The second section looks at practical teaching issues.

A PRACTICAL GUIDE TO WORKING IN CHINA

Postgraduate education is one of the highest revenue generating businesses in the joint partnerships market of China and which in near term has the highest growth potential in the market. Presently, MBA education is a business with around $100 million in annual revenue. Following education markets, it is believed by this author that healthcare in general and plastic surgery in particular will be the next rapid growth areas of public firms working with private hospitals in Asia in general and China in particular. One needs to be careful to navigate the various obstacles and minefields that could lead to substantial financial losses and legal exposures to the individual and the university. I will rank the critical issues that need attention in order to ensure that your university's strategic interests are not being compromised.

The rest of the paper continues …….

TRANSACTIONS ON COMPUTER SCIENCE

INTEGRATING OO CONCEPTS INTO A CS 0 COURSE

Charles Pheatt
Emporia State University, Kansas, U.S.A.

ABSTRACT

This paper describes the use of field programmable integrated circuits (FPIC) in introducing object oriented (OO) programming concepts into a CS0 Course. Using a low cost device known as the OOPIC (Object-Oriented Programmable Integrated Circuits), students can easily control hardware circuitry while being exposed to OO programming concepts. The OOPIC device simplifies hardware programming by allowing students to use common programming languages (Visual Basic, Java, or C) and a simple development environment to create and test programs. In addition to introducing the use of an OO approach to problem solving, the device provides students an opportunity to deal with simple circuits.

1. INTRODUCTION

There has been considerable discussion on the approach to be taken (breadth versus depth) as well as numerous proposals for languages that can be used in presenting a CS0 course (Denning, et al., 1988; Reed, 2001). Such courses, in general, emphasize problem-solving techniques in addition to building rudimentary programming skills. The Association for Computing Machinery's Computing Curricula 2001 (ACM, 2001) includes requirements incorporated by many such courses.

OO programming is central to the curriculum in most CS programs, and is specifically mentioned in the Computing Curricula 2001, Overview of the CS Body of Knowledge (PL6. Object-oriented programming). Integrating OO thinking and problem solving as early as possible into the curriculum benefits students when taking CS1 and CS2 courses. Early understanding and integrating OO techniques into problem solving builds a foundation that can be used throughout the computing curriculum.

The author, having taught CS0 courses a number of times and using various texts (Bergin, Et al., 1996; Decker & Hirshfield, 1998), has incorporated OO concepts as part of the curriculum. However, discussing OO techniques in the abstract or using an artificial environment (Decker & Hirshfield, 1998), generally leaves students without a context in which to internalize the paradigm. It was felt that if students could use objects in actual problem solving, their understanding and retention of the concept would be improved. A recent technical opinion article (Templeton, 2003) suggested a possible solution to the OO in CS0 quandary. The approach involves using a low cost device known as the OOPIC (Object-Oriented Programmable Integrated Circuits).

Introducing the OOPIC into a CS0 curriculum allows students to experience coding in an event-driven environment beyond those normally encountered. In a traditional or procedural application, the application itself rather than an event controls the portions of code that execute. The exposure to a true OO, event-driven programming environment affords students insights into issues involved in highly interactive or web-based programs.

2. OOPIC

The rest of the paper continues …….

LONG-DISTANCE COLLABORATION BETWEEN STUDENTS AND A REMOTE COMPANY: PRELIMINARY LESSONS LEARNED

Curt N. Powley
Andres Vergara
Jun Racca
and
Gregory Schaper
Assistant Fellow of ooi Senior Academy
Hawai'i Pacific University, Honolulu, Hawaii, U.S.A.
and
Daniel R. Greening
BigTribe Corporation, San Francisco, California, U.S.A.

ABSTRACT

This paper discusses our initial experience with several projects and internships structured as a long-distance collaboration between students in Hawaii, and a high-tech software company based in San Francisco, California. The authors discuss the methodologies by which the authors have been able to achieve a closely managed and effective collaboration across the Pacific Ocean, and consider whether these techniques are extensible to other domains, such as non-technical internships. The authors also discuss the limitations of such a collaboration, and further research needed.

Keywords and phrases: internship, collaboration, project management, long-distance collaboration, distributed collaboration, long-distance internship

INTRODUCTION

Hawaii Pacific University (HPU) is located on the island of Oahu in Hawaii, and is the state's largest private university with 9,000 students from more than 100 countries. Like many schools, HPU encourages student projects and internships with companies because the experience can be of enormous educational benefit to students, and help to distinguish them from their peers during job searches. Additionally, the collaboration provides employers with a means to accomplish additional work at a relatively low cost, while possibly identifying prospective employees. Moreover, such internships help foster beneficial ties between the school and the business community.

This paper discusses collaboration between computer-science students at HPU and BigTribe Corporation in San Francisco. BigTribe builds personalized software for person-to-person location-based services. These applications allow groups of people to arrange social and business events. BigTribe has a strong academic bent: most of its employees have a Ph.D. in computer science, it has affiliation with professors at Berkeley, Stanford, and HPU, and part of its work is funded by the National Science Foundation (NSF) under a Small Business Innovation Research (SBIR) grant. Dr. Dan Greening is the CEO of BigTribe Corporation in San Francisco, California, and is the BigTribe supervisor for the HPU projects. Dr. Curt Powley is one of HPU's computer science instructors, and is the faculty supervisor of the students that have collaborated with BigTribe. Prior to moving to Hawaii in 2002 to teach at HPU, Curt worked with Dan at BigTribe, and was the author and principal investigator for one of the funded NSF SBIR proposals. Besides being colleagues, Curt and Dan were classmates at UCLA while working on their Ph.D.s in computer science. This a priori relationship is relevant because it has helped facilitate the remote collaboration.

The rest of the paper continues …….

THE DESIGN OF A CS 0 COURSE

Greg A. Schaper
Assistant Fellow of ooi Senior Academy
Hawai'i Pacific University, Hawaii, U.S.A.

ABSTRACT

This paper describes the design of a CS 0 course to be offered at Hawaii Pacific University. Student characteristics and other motivating factors that influence the course design are presented. Course objectives and teaching methodologies are described.

Keywords and phrases: Computer Science 0, Computer Science 1, syllabus, prerequisites.

1. INTRODUCTION

Computer Science 1 (CS 1) is the first required course for Computer Science and Computer Information Systems degree seeking students at Hawaii Pacific University. Student performance in CS 1 has generally been below expectations. Being that Hawaii Pacific University prides itself on being first and foremost a teaching university, our faculty have endeavored to improve student performance in CS 1 by creating a prerequisite course CS 0. In this paper I will present a proposed set of student learning outcomes for CS 0 aimed at improving student performance in CS 1. The student learning outcomes for CS 0 are motivated by observed deficiencies in skills possessed by students.

2. WHY STUDENT UNDER PERFORM IN CS 1

In my experience teaching CS 1 courses, I have found that students who struggle do so for a variety of reasons.

- They are confronted with an overwhelming amount of vocabulary related to computer science, problem solving, basic file management, compiler environment (.NET environment, Java JDK), and programming languages (C++, Java, etc.). It is difficult for students to learn more advanced concepts when they have yet to master the vocabulary these concepts are expressed with.
- Poor math skills. This is due to either not having completed enough mathematics courses prior to the CS 1, or it having been a long time since their last mathematics course (as is typical of adult students).
- Very few students have a formal education background in logic and Boolean algebra prior to CS 1 at HPU. Logic and Boolean expressions are a large part of all high-level programming languages.
- Dealing with word problems is challenging for most students. Most programming exercises are stated as word problems. Students need to learn how to solve problems with paper and pencil first and then worry about specifying solutions in programming languages.
- Learning how to read programs is every bit as important, if not more so, than learning how to write programs. Most CS 1 textbooks focus on teaching students how to write programs. I believe it would be better to concentrate on teaching students how to read program code first. Once mastery of reading is accomplished, writing will be a natural consequence.

3. DESIRABLE CS 1 PREREQUISITES

The rest of the paper continues …….

TRANSACTIONS ON EDUCATION

ACTIVE LEARNING FOR PROSPECTIVE TEACHERS

Jeffrey Jay
Northern State University, South Dakota, U.S.A.
and
Jordan Jay
Lincoln University, Missouri, U.S.A

ABSTRACT

The processes within a K-8 science methods course were revised from primarily a format of hands-on, small group work with many instructor demonstrations, to a format that required much more active and individual student involvement. The revision was implemented in order to try to help prospective teachers more readily realize how they might use what they were learning in class. In addition, assignments that included products and presentations that were directly related to state content standards were infused in order to alleviate prospective teacher concerns regarding subject matter mastery and No Child Left Behind legislation. Data obtained showed that participants' academic achievement was not affected by the course revision, yet attitudes of participants have become much more positive; these prospective teachers now consistently acknowledge that the course, "has provided me with direct experience and practice relevant to my field."

ACTIVE LEARNING

Educators and researchers have defined active learning as: an instructional approach that engages learners by matching instruction to the learner's interests and understanding; learning from doing, performing, and taking action; and, learning which requires students to participate in relevant exercises and apply their knowledge (Bonwell & Eison, 2005). Brooks and Brooks (1999) noted that active learning provides an instructor more opportunities for facilitation, interaction, assessment of students' conceptions, and questioning. In considering most of these definitions it would seem that the "core" of active learning is that the *learner* has become the principle driving force for curriculum decisions, with the instructor indeed acting as a facilitator of the learning process. Flick (1993, p. 5) believes that a teacher "may create an environment for learning but does not cause learning to occur." We believe that our revised assignments and methods discussed in this paper may cause learning to occur—because students are more actively and independently involved, and because they see how they might use what they are learning.

Our Model of Active Learning.

We teach a college-level course for prospective teachers entitled "Teaching and Science Methods." The course is designed to provide participants with ample opportunities to be engaged in hands-on science activities, and ample opportunities for they themselves to teach concepts and lessons to their peers within the class. For example, one of the activities that we require challenges our students to go in-depth studying the geology and/or earth science features of one state.

The rest of the paper continues …….

Authors: Dr. Jeffrey Jay is a former middle school and high school science teacher and currently works within the School of Education at Northern State University in Aberdeen, South Dakota. Dr. Jordan Jay is a former middle school social science teacher and currently works within the College of Education at Lincoln University in Jefferson City, Missouri.

AUTHOR INDEX

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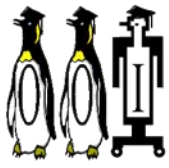

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