TEACHER'S COMPETENCY IN TECHNOLOGY INTEGRATION IN BACHELOR OF SCIENCE IN ACCOUNTANCY PROGRAM AT THE UNIVERSITY OF SANTO TOMAS (UST)

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ABSTRACT

The University of Santo Tomas Alfredo M. Velayo College of Accountancy is the business school specialized in Accountancy and Management Accounting. The accountancy program was started in 1993 and a consistent top performing accountancy school in the Philippine Certified Public Accountants (CPA) licensure examinations. This research was conducted to evaluate the level of Information Technology Integration in the Bachelor of Science in Accountancy program specifically on the following aspects: basic computer operations skills, computer usage, motivation, confidence, goals and ethical use. Descriptive research was used as the research methodology and convenience sampling applied in the data gathering. The findings have implications for the maintenance and improvement of the program.

INTRODUCTION

True enough the advent of Information and Communication Technology (ICT) "have reshaped the educational landscape by transforming the content and modes of delivery and acquisition of learning as well as how the educational institutions operate." As a matter of fact one visible change in the educational system is the introduction of computer technology in all school levels which implies that as change occurs, educational reforms like the integration of new technologies into the curriculum must be instituted.

Indeed, curriculum improvement is a crucial responsibility for schools if they are to respond head on to actual realities and situations, the bottom line of which is curricular redirection that this time and age of new learning demands, for just as Mark (Prensky 2006) asserts:

"Educators have slid into the 21st century and the digital age, still doing many things the old way. It is now high time for education leaders to raise their heads above the daily grind and observe the new landscape that has emerged. Recognizing and analyzing its` characteristics can help define the education leadership with which we should be providing our students, both now and in the coming decades."

Undoubtedly, with technology integration ongoing in schools, dramatic changes have been seen to have happened which appears to be a growing interest of teachers and students in the use of technology tools or "educational technology machines" that can help students develop the necessary technology skills to become globally competitive. Nonetheless, this ongoing transformation in the teaching-learning process poses an enormous challenge for the academe to continuously upgrade teaching-learning standards, approaches, and strategies that fit the needs of technological advancement and demands.

However, despite schools' educational efforts to optimize technology integration levels nationwide and to make learning highly meaningful and effective, it cannot be denied that problems and other constraints abound in the system which needs to be properly addressed. Through this evaluation study, the rate of success, as well as the program's strengths and weaknesses, can be determined. Consequently, program revisions can be effected and a more enhanced curricular program evolved.

Today, it is believed that growing awareness of ICT use in the classroom has largely contributed to improving teacher performance and teaching effectiveness as well as lessened teachers' workload. Familiar with these glaring realities in the school arena for long years of teaching ICT subjects, the researcher conducted an evaluative investigation on the status of teacher's competency in technology integration in the BSA curriculum, to determine program flaws and shortfalls that can serve as baseline data for future program enhancement. This effort could redound to the benefit of the students, the larger community, and country.

Statement of the Problem

The study aimed to evaluate the Teacher's Competency in Information Technology Integration in BSA program at UST. The results of which shall be the basis for program enhancement.

Specifically; the study sought answers to the following questions:

1. What is the level of teachers' teaching competency in technology integration as perceived by the teachers themselves and student-participants in terms of the following:
    1.1 Basic Computer Operation Skills;
    1.2 Computer Usage;
    1.3 Motivation;
    1.4 Confidence;
    1.5 Goals; and
    1.6 Ethical Standards?

METHODOLOGY, RESULTS AND DISCUSSION

Statistical Analysis

Weighted Means on Teachers' Competency in Basic Computer Operation Skills as Rated by Both Teacher and Student-Participants

On file management, participants' responses got a weighted mean of 4.55 with a verbal interpretation of "very much knowledgeable", on manipulation and navigation of operating system like Microsoft Windows the respondents responses got a weighted mean of 4.31 with a verbal "very knowledgeable", On item number 3, manipulation and navigation of web browser like Internet Explorer, Mozilla Firefox etc. the respondents' responses got a weighted mean of 4.30 with a verbal interpretation of "very knowledgeable, as to item number 4 on manipulation of electronic mail the respondents' responses got a weighted mean of 4.39 with a verbal interpretation of "Very Knowledgeable", on item number 5, creation of electronic presentation the students rating got a weighted mean of 4.37 with a verbal interpretation of "very knowledgeable, as to item number 6 on knowledge in Microsoft office application like word processor and electronic spreadsheet, the students rating weighted mean is 4.14 with a verbal interpretation of "Very Knowledgeable" and

teacher-responses got a rating of 4.33 with a verbal interpretation of "Very Knowledgeable". The general weighted mean for participants' responses is 4.37 with a verbal interpretation of "Very Knowledgeable."

Based on the data gathered, teachers teaching computer subjects in BSA programs are very much knowledgeable in file management while very knowledgeable in manipulation and operation of the operating system, manipulation, and navigation of web browsers, creation of electronic presentation and knowledge in word processing and electronic spreadsheet.

On the study of Aureus (2005) entitled "Validity of Power Point Presentation in Techniques of Integration" educators are encouraged to use or apply technology like PowerPoint presentation in teaching especially during lecture classes for clear discussion of the topics. Findings of the study also showed that technology integration into teaching enhances the skills and intellect of the students based on the post-test.

Weighted Means on Teachers' Competency in Computer Usage as Rated by both Teacher and Student- Participants

On item number 1 assigns daily or weekly computer-related tasks that support the curriculum, participants' responses got a weighted mean of 3.39 with a verbal interpretation of "Rarely." On provides short-term assignments using the classroom computer(s) that emphasize the use of different software applications the respondents' responses got a weighted mean of 3.27 with a verbal interpretation of "Rarely." On item number 3, uses and surfs the Internet for accounting topics and researches the respondents' responses got a weighted mean of 3.15 with a verbal interpretation of "Rarely." As to item number 4 on uses basic software applications for laboratory exercises in accounting the respondents' responses got a weighted mean of 3.58 with a verbal interpretation of "Frequently." As to item number 5, encourages students to use the Internet for collaboration with others especially students from other school or other members of the organization the participants' response rating got a weighted mean of 3.13 with a verbal interpretation of "Rarely." As to item number 6 on integrates the most current research

on teaching when using the computer laboratory respondents' responses rating with a weighted mean is 3.50 with a verbal interpretation of "Frequently ." On item no 7, actively participates in online collaboration and discussion on accounting issues, respondents responses got a weighted mean of 3.02 with a verbal interpretation of "Rarely." On item number 8, allows students to eagerly pursue the use of computers at the computer laboratory the respondents' responses got a weighted mean of 3.68 with a verbal interpretation of "Frequently." As to item number nine on allows students to use the Internet for collaboration, with others part joint publishing, communicating and undertaking research to solve authentic problems the respondents' responses of got a weighted mean of 3.20 with a verbal interpretation of "Rarely." On item number 10, allows students to have access to all forms of technology and computers at any given time during the instructional days, respondents' responses got a weighted mean of 3.33 with a verbal interpretation of "Rarely." The general weighted mean on students' responses from item 1 to 10 on Table 2 is 3.32 with a verbal interpretation of "Rarely."

As to item 1 (assigns daily or weekly computer related tasks that support the curriculum), 2 (provides short-term assignments using the classroom computer(s) that emphasize the use of different software applications) and 3 (uses and surf the Internet for accounting topics and researches) with a verbal interpretation of "Rarely".

Perhaps it is much better if the teachers would add extra effort to give students assignments like, guided activities using the Internet and additional exposure in using Microsoft Office because these include productivity tools like word processing and electronic spreadsheet that are designed to make people more effective and efficient while performing daily activities.

It is also stated in the Journal of Computer Information Systems(2004) that "Developing and teaching a class with multiple Web-based technologies has a great respect for knowledge that comes from a variety of sources, more sophisticated views on issues, and a greater awareness on how to monitor one's learning."

As to item number 5, encourages students to use the Internet for collaboration with others especially students from other school or other members of their organization the weighted mean is 3.13 with a verbal interpretation of "Rarely" which is also similar to Bolotaolo's study (1999) on the "Integration Use of Computers in Teaching in Selected State Higher Learning Institutions in Metro Manila: An Assessment" which revealed that students rated the use of e-mail by the members of the campus as means of communication with colleagues both on and off the campus is of little extent. Perhaps there are schools where no Internet connection is an obsolete or has limited access to the Internet.

In order to know the importance or effect of the Internet in the school one of the studies in the literature by Duffy et. al. (2008) study in the College of Business of Illinois State University stated that "The Internet provides the most effective and efficient set of tools to implement a learning community. Surveyed results confirmed that students had very positive attitudes towards the Web-based support technologies."

According to the recommendation of Ferdido's (2005), students should be given the opportunity to be exposed to the use of ICT tools in teaching and learning process to enhance under the supervision of teachers to enhance their skills and abilities.

It is also stated on Machnaiks (2002) study on "Investigating the Effect(s) of Technology Integration on Teaching Practices That May Lead to the Development of a Community of Learners" that technologies afford the students the tools to explore, experiment, construct, converse and reflect on what they are doing, so that they may learn from their experiences.

According to ISTE NETS "Integrating a curriculum with technology involves making technology into a tool to enhance learning in a content area of multidisciplinary setting. The technology should become an integral part of how the classroom functions, as accessible as all other classroom tools. Even counting the number of classes set in a computer-intensive "laboratory" setting may be inadequate as a measure of integration, since only technology –specific skills may be taught there. Instead, the measurement should be based on observing actual access and usage.

Weighted Means on Teachers' Competency According to Motivation as Rated by both Teacher and Student-Participants

As to item number 1, uses computer(s) in the classroom for lectures, respondents' responses got a weighted mean of 3.83 with a verbal interpretation of "Frequently." On seeks professional development that maximizes the use of computers and technology available on students the respondents' responses got a weighted mean of 3.40 with a verbal interpretation of "Rarely." On item number 3, seeks out activities that promote increased problem solving and critical thinking analysis using the classroom computer(s) the respondent s' responses got a weighted mean of 3.50 with a verbal interpretation of "Frequently." As to item number 4 on uses, IT-enhanced curriculum units for integration in classroom instruction for authentic assessment and student relevancy the respondents' responses got a weighted mean of 3.37 with a verbal interpretation of "Rarely." As to item number 5, integrates students' interests, experiences, and desires to solve authentic problems when planning computer-related activities in the classroom the respondents' responses rating got a weighted mean of 2.88 with a verbal interpretation of "Rarely." Item number 6 on uses laboratory computer(s) primarily to answer email respondents' responses rating with a weighted mean of 2.84 with a verbal interpretation of "Rarely." On item no 7, relies on others (student assistant, close friend) to do computer related task for the classroom , respondents' responses got a weighted mean of 3.45 with a verbal interpretation of "Rarely." On item number 8, uses the computer for their continuing education the respondents' responses got a weighted mean of 3.41 with a verbal interpretation of "Rarely,"

The general weighted mean on respondents' responses from item 1 to 8 on Table 3 is 3.33 with a verbal interpretation of "Rarely."

Item number 6, (uses laboratory computer(s) primarily to answer email) got a verbal interpretation of "Rarely" from the groups of respondents, factors like a.) Availability of the computer laboratories and b) availability and access to the Internet connections of the school like Wi-Fi maybe the reason for the interpretation.

According to the National Technology Standards (NETS) one of the cited literature of the study, teachers need to meet certain standards in the successful integration like Educational Technology Operations and Concepts wherein teachers used to develop introductory information and technology literacy knowledge and skills and extend information and educational technology skills and knowledge to increase the learning productivity which conflicts on the result of items number 2 seek professional development that maximizes the use of computers and technology available on students, number 3 seek out activities that promote increased problem solving and critical thinking analysis using the classroom computer(s), and number 5 integrate students' interests, experiences, and desires to solve authentic problems when planning computer-related activities in the classroom.

Another concept from NETS is to Plan and Design Learning Environment and Experiences, wherein teachers need to plan and design effective learning environment and experiences supported by technology in order to design developmentally appropriate learning opportunities matching effective instructional strategies and technology use with the diverse needs of learners which also conflicts on the output of item number 4 uses IT-enhanced curriculum units for integration in classroom instruction for authentic assessment and student relevancy rather than building my units from scratch and item number 6 uses laboratory computer(s) primarily to answer e-mail.

Weighted Means on Teachers' Competency According to Confidence as Rated by both Teacher and Student-Participants

As to item number 1 alters the instructional use of the classroom computer(s) to gain new knowledge of software applications and research on teaching and learning, respondents' responses got a weighted mean of 3.61 with a verbal interpretation of "Frequently." On item number 2, merges IT technology with integrated curricula, respondents' responses got a weighted mean of 3.53 with a verbal interpretation of "Frequently." On item number 3, comfortable using a computer in teaching accounting subjects with laboratory, respondents' responses got a weighted mean of 3.84 with a verbal interpretation of "Frequently." The general weighted mean on student's responses from item 1 to 3 on Table 4 is 3.66 with a verbal interpretation of "Frequently."

According to different studies cited training, exposure and use of Information Technology may increase the confidence level of the user.

Ferido (2005) study entitled "A Comparative Assessment of the Use and Non-Use of Information and Communication Technology in Mathematics: Implication to Curriculum Enhancement" stated in the findings that " The students, especially the third and fourth year, gained more self-confidence in the use of ICT tools because of their exposure. The study shows that the use of ICT integration in Mathematics can improve the different skills of students in the cognitive and non-cognitive aspect of learning."

It was also stated on the recommendation that "Teachers must harness their skills with more confidence through practice to keep themselves abreast of the present times and they must realize that students are exposed to a more technologically advanced environment that captured their curiosity."

On the Australian Journal of Educational Technology topic about "Assessing Technology Integration: its Validity and Value for Classroom Practice and Teacher Accountability" stated that "Teachers are expected to employ technology, as well as to demonstrate their competence using behaviors that are extensive. They are the judge in terms of how much they know about instructional technology, the skills they use, and how well they apply their knowledge and skills. Thus, they must demonstrate a variety of abilities in a variety of context. They are also expected to engage students as willing partners in technology in the classroom. Teachers are expected to integrate productivity tools with instruction, and also integrate the Internet, email, the use of mobile devices, educational software and more. They are expected to create learning environments in which students are actively engaged and where students demonstrate their competence using technology.

It is evident based on the output of the survey that teachers teaching in IT subjects are confident in teaching the subjects.

Weighted Mean on Teachers' Competency According to Goal as Rated by both Teacher and Student-Participants

As to item number 1 students to be able to use the computer as another tool for learning, respondents' responses got a weighted mean of 3.84 with a verbal interpretation of "Frequently." On item number 2, use the computer laboratory a priority this school year, respondents' responses got a weighted mean of 3.18 with a verbal interpretation of "Rarely." On item number 3, more professional development in order to design student-centered, integrated curriculum that maximizes the use of the computer laboratory, respondents' responses got a weighted mean of 3.56 with a verbal interpretation of "Frequently." The general weighted mean on students' responses from item 1 to 3 is 3.52 with a verbal interpretation of "Frequently."

On the website nces.ed.gov/ pubs2003, it was stated that "Integrating technology is what comes next after making the technology available and accessible. It is in a goal process, not an end-state. "It was also stated that "The goal of placing technology in the classroom is to provide new ways for students to learn. Proper integration of technology will make the technology, support these new ways of learning transparently."

On the book Integrating Technology into the Curriculum by SEIR-TEC, it was stated that "Information Technology such as computers, software applications, video, audio/visual multimedia, and telecommunications can be integrated into virtually any classroom situation. The key is to start with your curriculum goals and then to match them with appropriate technology tools."

On the same book integration defined as the use of technology by students and teachers to enhance teaching and learning and to support existing curricular goals and objectives.

Perhaps the respondents know the importance of goal in integrating IT in BSA programs. The table shows that respondents frequently give importance in terms of the goals in IT integration. Literature also supports the idea that facilities and pieces of equipment are not enough; there must be goals to purchase in order to obtain proper Integration.

Weighted Means on Teachers' Competency According to Ethical Use as Rated by both Teacher and Student-Respondents

As to item number 1, recognizes the ethical use of technology, respondents' responses got a weighted mean of 3.93 with a verbal interpretation of "Frequently." On item number 2, models the use of ethical technology, respondents' responses got a weighted mean of 3.94 with a verbal interpretation of "Frequently." The weighted mean of respondents' responses from item 1 to 2 on Table 6 is 3.93 with a verbal interpretation of "Frequently."

[13]The study entitled "Effect of Technology Integration and Human Values in Teaching Problem Solving in Mathematics Among Fourth-Year Students in St.Mary's Academy of Nagcarlan, Nagcarlan Laguna", much sought to determine the status of technology integration in teaching and problem solving the rating was "very satisfactory", the same rating was given on the level of integrating human values. Likewise, the result of this study in terms of ethical use is similar to the result of Lucido's study which gave a positive output. Data show that teachers' practice professional ethics in using the technology.

CONCLUSIONS

Based on the findings of the study, the following conclusions are made:

Those teachers' are very much knowledgeable in terms of basic computer operation skills. They rarely integrate IT in terms of computer usage. The participants "rarely" motivate students in doing IT integration. That they show their confidence in teaching IT subjects frequently. They frequently prioritize IT integration in reaching the goal or objective of the subject. The participants frequently applied the ethical standards in using IT.

RECOMMENDATIONS

1. Always motivate students to use Information Technology in their respective subjects.

2. Always motivate teachers to use Information Technology in teaching BSA subjects.

3. There must be faculty development program about IT integration into BSA curriculum.

4. Continue to maintain and improve the IT integration in the BSA program at UST to produce more and more IT literate CPAs in the future.

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