Information and Communication Technology Competence of the University of Northern Philippines - College of Teacher Education Faculty

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ABSTRACT

This study assessed the Information and Communication Technology (JCT) competence of the faculty of the University of Northern Philippines (UNP) – College of Teacher Education (CTE) during the First Semester of School Year 2011-2012.

The study made use of the descriptive-correlational method of research. The respondents were 47 faculty members of the UNP-CTE. The data needed in the study were gathered through the use of questionnaire adopted from Basic Technology Competencies for Educators Inventory (BTCE}. Data gathered were analyzed using the frequency, percentage, mean, and correlation analysis.

Most of the CTE faculty are middle-aged, female, varied years in teaching, masters' degree holders, instructors, holding varied specialization, never attended JCT trainings or seminars, use computers frequently, and have PC at home. They are competent in the overall JCT competence. Insufficient number of computer units was claimed as main problem on the use of JCT in teaching and learning. Young respondents attended more in-service trainings and experience, with better access, and have higher competence in JCT.

JCT capacity building of the College of Teacher Education is recommended. This can be done by equipping the classrooms with more computer units and other technology devices for classroom use and providing the teachers with more computer trainings especially on databases and setup, maintenance, and troubleshooting of equipment. Another study should be conducted focusing on the /CT knowledge and skills of teachers.

Keywords: ICT competence, teacher education, word processing, databases, telecommunications, media communication

INTRODUCTION

The development of information and communication technology (ICT) in the 21st century has created unprecedented changes in all walks of life. In the school, the rapid growth of ICT has become an integral part of day to day life and has been accepted as tools to improve the classroom environment. As the facilitator of learning, a teacher essentially needs a shift in his role by utilizing ICT. Teachers should be prepared to provide technology-supported learning opportunities for their students.

In order to be prepared for further emergences of technologies in society and to foster the development of what has been termed 21 century skills, many countries have developed visions, plans, programs, and strategies for upgrading their national curricula. Most of the teacher education institutions have redesigned their curricula for their prospective teachers to become competent users of new technologies when they become teachers (Glenn, 2002).

Similarly, several studies on the importance of ICT and teachers' use revealed that the use of ICT is inherently advantageous to support and facilitate the teaching-learning process. Roschell, et al. (2002) explored the various **ways** by which computer technology can be used to improve the learning process in the classroom. Cuttance (2001) cited a range of evidence to substantiate the potential of ICT to enhance learning environments and improve student learning outcomes in both cognitive and non-cognitive domains.

In the Philippines, its ICT framework for the 21" century Filipino learners is designed to enhance, broaden, strengthen, and transform them into a person who is excellence-driven, global in perspective, innovative, ingenuous, and creative, with a deep sense of community and concern for harmony and the common good (Ir 21 Philippines, 1991). Among its Asian neighbors, the country is one of the early adaptors in ICT use in government since 1969. Unfortunately, the country has been significantly overtaken by many countries since then (Macaset, 2011).

To achieve the aforementioned projection, much attention is directed to human enhancement particularly teachers and educators who are molding the youths as "hope of the motherland." For this reason the researcher conducted this study in order to determine the ICT competence of the teachers of the College of Teacher Education of the University of Northern Philippines. Results of this study would be used as bases to identify the needed programs for faculty development to

better prepare them especially in the effective integration of ICT in classroom teaching.

This research aimed to **assess** the ICT competence of the faculty of the College of Teacher Education (CTE), University of Northern Philippines during the School **Year** 2011-2012.

This study looked into the profile of the respondents in terms of age, gender, length of teaching service, highest educational attainment, academic rank, area of specialization, in-service training related to ICT, computer experience, access to ICT, and their level of ICT competence in terms of basic computer operation skills, set-up, maintenance and trouble shooting of equipment, word processing, spreadsheets, databases, networking, telecommunications, media communication, and social, legal and ethical issues. Further, this study gathered information on the problems encountered by the teachers in the use of ICT in the classroom and determined the relationship between the profile of the respondents and their level of ICT competence.

Today's classroom teachers need to be prepared to provide technology-supported learning opportunities for their students. UNESCO's ICT Competency Framework for Teachers is an important guideline towards that goal. The objectives of this project are: to constitute a common core syllabus (defining various ICT competency skills for teachers) which can be used to develop learning materials; to provide a basic set of qualifications that allows teachers to integrate ICT into their teaching and learning; to extend teachers' professional development to advance their skills in pedagogy, collaboration, and school innovation; and to harmonize different views and vocabulary regarding the uses of ICT in teacher education.

The goal of the UNESCO ICT Competency Standards for Teachers (ICT-CST) Project 1 is to improve teachers' practice in all areas of their work. By combining ICT skills with emergent views in pedagogy, curriculum, and school organization, the standards are designed for the professional development of teachers to improve their teaching, collaboration with colleagues, and to ultimately mold them to be innovation leaders in their institutions. The overall objective of the project is not only to improve teachers' practice but also to elevate the education system and its workforce. These are the important factors in advancing the country's economic and social development.

In today's knowledge society, schools must not only ensure that learners possess the competencies to wield new information and communication tools

productively; they must equip learners with the critical and analytic tools necessary to live and flourish in an information saturated environment. Mastery of facts has become less important than the ability to contextualize these facts and derive their meaning within specific contexts. Thus, learners must develop three fundamental skills: how to find information, how to determine if what is found is relevant to the task at hand, and how to determine If the relevant information is accurate (Thornburg, 1999). He further emphasized that acquisition of these three foundational skills sets the parameters for the use of ICT in schools. The tool that in part created the demand for information literacy skills in the first place can, if used effectively, be the best tools to help learners meet these demands. The integration of ICT in the teaching and learning process is, potentially, one of the most viable interventions towards educational reform.

The implementation of ICTs in classrooms has been shown to benefit students' learning by increasing students' self-esteem and motivations (Earle, 2002; Ansari, 2007). This only shows that the developments in information technology have many influences on educational establishments.

Technology involves the generation of knowledge and processes to develop systems that solve problems and extend human capabilities. In other words, technology can change or alter how people access, gather, analyze, present, transmit, and simulate information (See, 1994). The impact of technology is one of the most critical issues in education (Webber, 2003). The use of information and communication technology creates a powerful learning environment and it transforms the learning and teaching process in which students deal with knowledge in an active, self-directed and constructive way (Volman and Van Eck, 2001).

Roschell, et al. (2002) explored the various ways by which computer technology can be used to improve the learning process of children in the classroom. Several examples of computer-based applications are highlighted to illustrate ways by which technology can enhance how children learn by supporting four fundamental characteristics of learning: active engagement, participation in groups, frequent interaction with feedback, and connections to real-world contexts.

Integrating technology into all classrooms can facilitate learning in new and meaningful ways. Because technology is interactive, it increases student's development and involvement as it meets all the student's needs and abilities and improves their learning. Therefore, ultimately, the goal is to facilitate uses of technology that lead to increased student learning.

The Cuttance Report (2001) School Innovation: Pathway to Knowledege Society, Commonwealth of Australia, cites a range of evidence to substantiate the potential of ICT to enhance learning environments and improve student learning outcomes in both cognitive and non-cognitive domains, as follows: first order effects refers to improved learning and stronger student motivation; second order effects relate to ICT creating new contexts and environments for practice – i.e. a potential; and catalyst for change of work roles, patterns, procedures, and organizational groupings compared to those adopted in traditional classrooms.

The proliferation of technologies has complicated the teaching-learning process and finding the best way of integrating technology into classroom practices is one of the challenges the 21 century teachers face. Effectively integrating ICT into learning systems is much more complicated than providing computers and securing connection to the Internet. The integration of ICT is associated with a shift from instructivist to constructivist philosophies of teaching and learning (Barker, et al., 2007).

Tabios (2008) stressed that with the widespread use of the personal computer, many authorities in the field of education pointed out the need for computer literacy. It is, then, essential that everyone acquires an understanding of what computers are and how they work. In this modern world, no one can afford to be ignorant of the important role of computers in any career or business of choice. Being computer literate will give anyone a great competitive advantage. Having a thorough knowledge, the right skills, and the right attitude on new technologies **will** certainly make educators more confident, competent, effective, and efficient.

Barker, et al. (2007) examined past research studies and reports on ICT implementation in schools and found out that there are two main factors that affect teachers' update of ICT. These are manipulative and non-manipulative school and teacher factors. Research on the implementation of ICT in schools has also shown that these school and teacher factors are interrelated. The success of the implementation of ICT is not dependent on the availability or absence of one individual factor but is dependent on the dynamic process involving a set of interrelated factors. Moreover, no single solution exists to address the immense challenges of ICT integration because different perspectives of integrating ICT can be chosen.

A number of research works have shown that the use of ICT in education can increase students' motivation, deepen their understanding, promote active, collaborative, and lifelong learning, offer shared working resources and better access

to information, and help them to think and communicate creatively (Jonassen, 2000 and Webber, 2003).

Tondeur, et al. (2008) examined the relationship between teacher classroom use of computers and computer attitudes, demographics, teacher computer experience, and teaching philosophies. Data collected showed that 18 percent of variance in their classroom use of computers was ascribed to school differences and 82 percent to teacher differences. Teacher age had little effect on classroom computer use, but males were more disposed to use computers than females. Computer experience and computer attitudes also influenced decisions to use computers professionally.

The world of computers has been described as a male domain where women are under-represented, both in IT education and the IT Industry. Other researchers suggested that women have fewer opportunities and access to computers (Gunn, et al., 2003).

Likewise the study of Tondeur, et al. (2008) and Volman & Van Eck (2001) revealed that female respondents tend to be less interested in computers, to have less positive views about the value of computing, have more computer anxiety and less confidence in their computer abilities.

The aforecited situations conform with Goktas' (2006) findings about educators' perceptions on ICT integration into teacher education programs and their courses. The results indicated that most of the participants expressed positive perceptions about the integration of ICT into teacher education programs. Generally, their ICT competency was completely sufficient. They use the internet as a supportive tool to their courses and particularly search engines.

Some of the implications of ICT for teaching and learning were studied by Ainley and Searle (2007). They revealed that the primary concerns of teachers about the use of ICT are maintenance, inequalities between students who have access to computers at home and those who do not, need for flexible mentor type training at the school, information overload, pace of change and stress, plagiarism, business involvement, more time needed to learn new software, and create new things for teaching.

METHODOLOGY

The descriptive-correlational method of research was used in this study. The researcher described the respondents' level of ICT competence and determined their relationship with the respondents' profile. Initially, the researcher gave out the questionnaires to the total population of the faculty, but due to some reasons only 47 (95.92%) of the questionnaires were retrieved. These 47 respondents are all faculty of the College of Teacher Education during the First Semester of School Year 2011-2012.

The questionnaire consists of three parts, namely: profile of the respondents in terms of age, gender, length of teaching service, highest educational attainment, academic rank, area of specialization, in-service training related to ICT, computer experience, and access to ICT, ICT competence in terms of basic computer operation skills, set-up, maintenance and trouble shooting of equipment, word processing, spreadsheets, databases, networking, telecommunications, media communication and social, legal and ethical issues; and problems on the use of ICT for teaching and learning with 23 items on the issues that may affect the utilization of ICT in education was used. The second and the final parts of the questionnaire were adopted from Basic Technology Competencies for Educators Inventory (BTCE) developed by the Texas Center for Educational Technology and the South Central Regional Technology Education Consortium.

To arrive at the ICT level of competence of the respondents the following norm was used:

Relative Value	Descriptive Equivalent	Statistical Range
4	Very Competent (VC)	3.41-4.00
3	Competent (C)	2.61-3.40
2	Somewhat Competent (SC)	1.81-2.60
1	Not Competent (NC)	1.00-1.80

To determine the problems on the use of ICT for teaching and learning, the respondents were asked to check if an item was a problem. The most frequent item was considered the main problem.

RESULTS AND DISCUSSION

Profile of the Respondents

One-third (16 or 34.04%) of the faculty are 40-49 years old, 11 (23.40%) are 50 years old and above, and 10 each (21.28%) are 20-29 years and 30-39 years old. The CTE is dominated by female faculty 36 (76.60%); only 11 (23.40%) are male. Fifteen (31.39%) of the respondents have been teaching for 0-9 years, while the least (9 or 19.15%) had 10-19 years of teaching experience. Some faculty members are in their first ten years of teaching while others are in their last few years of service.

The majority (31 or 65.96%} of the respondents are masters' degree holders; 11 (23.40%), doctorate degree holders; and only five (10.64%) are bachelors' degree holders. Almost half (20 or 42.55%} of the respondents have the rank of Instructors; 15 (31.91%) are Assistant Professors; ten (21.28%) are Associate Professors; and only two (4.26%) are Professors.

Out of the 47 respondents, eight (17.02%) each specialized in English and Industrial Technology/Education respectively; six (12.77%) in science; five (10.64%) in Filipino and Mathematics; three (6.38%) in Social Sciences and Library sciences; and two (4.26%) each specialized in general education in elementary, physical education, psychology, and home economics. Only one (2.13%) specialized in Agriculture. The majority, 27 (57.45%) never attended ICT trainings or seminars; 12 (25.53%) have only one training; six (12.77%) have three or more trainings; and two (4.26%) have two trainings.

More than one-third (17 or 36.17%) use computers frequently; 15 (31.91%) use them only to support traditional instruction; 12 (25.53%) rarely use them; and only ten (21.28%) use them as a teaching and learning tool. Majority of the respondents (35 or 74.47%) have Personal Computer (PC) at home; 33 (70.21%) have their own email account; 26 (55.32%) have an internet connection at home; 25 (53.19%) use ICT for personal purposes; 23 (48.94%) use ICT as a teaching tool; and only 20 (42.55%) use computers to support traditional instruction. These results imply that the faculty members have personal access to ICT, however, very few of them use these tools to support instruction or as teaching and learning tool.

Level of ICT Competence of the Respondents

The level of ICT competence of the respondents was measured in terms of the following: not competent (NC); somewhat competent (SC), competent (C), and very competent (VC) in basic computer operation skills, set-up, maintenance and trouble shooting of equipment, word processing, spreadsheets, databases, networking, telecommunications, media communication, and social, legal and ethical issues (Table 1).

Table 1. Item mean ratings of the respondents' level of ICT competence

ICT Competencies	Mean	DR
A. Basic Computer Operations Skills		
1. Insert and eject floppy diskette, USB and other external storage devices	3.09	C
2. Store files in a folder or subdirectory	3.00	C
3. Access information on CD-ROM, USB, and hard drive	2.91	C
4. Create and delete folders or subdirectories	3.00	C
5. Create, edit, and print various types of documents	2.84	C
Overall rating of basic computer operation skills	**2.97**	**C**
B. Setup, Maintenance, and Troubleshooting of Equipment		
1. Protection of floppy diskettes, USB and other external storage devices	2.43	SC
2. Virus protection	2.48	SC
3. Connecting peripheral devices	2.41	SC
4. Managing memory	2.20	SC
Overall rating of ability to setup, maintain, and troubleshoot equipment	**2.38**	**SC**
C. Word Processing		
1. Set margins	3.14	C
2. Change font size and type	3.25	C
3. Cut, copy, and paste In and between documents	3.23	C
4. Insert files, graphics, and tables in a document	3.14	C
Overall rating of word processing ability	**3.19**	**C**
D. Spreadsheets		
1. Enter data in cells	2.82	C
2. Move data within spreadsheet	2.64	C
3. Use formulas	2.50	SC
4. Create charts	2.45	SC
Overall rating of spreadsheet management ability	**2.60**	**SC**
E. Databases		
1. Enter data in a database	2.14	SC
2. Sort and search in a database	2.05	SC
3. Produce a report in a database	1.95	SC
4. Queries using AND and OR	1.95	SC
Overall rating of competencies using a database	**2.02**	**SC**

Table 1 continued

ICT Competencies	Mean	DR
F. Networking		
1. Logging on a network	2.77	C
2. Working in a network environment	2.68	C
3. Electronic file sharing	2.55	SC
4. Knowledge of advantages of a server	**2.45**	SC
Overall rating of networking skills	**2.61**	**C**
G. Telecommunications		
1. Send and receive e-mail	3.02	C
2. Navigate the World Wide Web	2.75	C
3. Subscribe to a list-serve	2.52	C
4. Develop programs using an authoring system or language	2.30	SC
Overall rating of telecommunications	**2.65**	**C**
H. Media Communication		
1. Use an overhead projector	2.61	C
2. Develop an electronic slide show	2.61	C
3. Develop an Interactive electronic slide show	2.45	SC
4. Develop a presentation using graphics and sound	2.52	SC
Overall rating of media communication skills	**2.55**	**SC**
I. Social, Legal, and Ethical Issues		
1. Knowledge of copyright issues	2.57	SC
2. Knowledge concerning shareware	2.41	SC
3. Knowledge of software piracy	2.43	SC
4. Knowledge of intellectual property rights	2.64	C
Overall rating of social, legal, and ethical issues	**2.51**	**SC**
Overall	**2.61**	**C**

Legend:	Relative Value	Statistical Range	Descriptive Equivalent
	4	3.41-4.00	Very Competent (VC)
	3	2.61-3.40	Competent (C)
	2	1.81-2.60	Somewhat Competent (SC)
	1	1.00-1.80	Not Competent (NC)

On the overall (Table 1) the respondents are competent in ICT (mean=2.61). They assessed themselves competent in word processing" (mean=3.19), "basic computer operation skills" (mean=2.97), "telecommunications" (mean=2.65), and "networking" (mean=2.61). However, they assessed themselves somewhat competent along "spreadsheets" (mean=2.60), "media communication" (mean =2.55), "social, legal, and ethical issues" (mean=2.51), "setup, maintenance and troubleshooting of equipment" (mean=2.38), and "databases" (mean=2.02). These findings imply that the faculty considered themselves capable in using most ICT tool such as word processing, basic computer operation skills, telecommunications, and networking, but not in working with databases, set-up, maintenance and trouble

shooting of computers, social, legal, and ethical issues, media communication, and spreadsheets.

This result conforms to Goktas' (2009) survey findings about teacher educators' perceptions on ICT integration into teacher education programs, their perceived ICT competencies and their ICT usage in their courses. The results indicated that most of the participants expressed positive perceptions about the integration of ICT into teacher education programs. Generally, their ICT Competency was completely sufficient. They use the Internet as a supportive tool to their courses and particularly search engines used by them.

Though the respondents assessed themselves competent in most of the items rated, these should be improved to its highest level for them to provide their students technology-supported learning opportunities. Likewise, the low or somewhat competence level of the respondents should be given main attention to improve teaching and learning. This can be done by equipping the classroom with more computer units and other technology devices for classroom use, and providing the teachers with more computer trainings especially on databases and setup, maintenance and troubleshooting of equipment.

On Problems on the Use of ICT for Teaching and Learning

As observed in Table 2, all (47 or 100%) the respondents perceived that "insufficient number of computer units" is the primary problem on the use of ICT in teaching and learning. Problems on "not enough technical assistance for operating and maintaining computers and/or insufficient help for solving technical problems with ICT" (39 or 83%), "lack of funds" (40 or 85%), "not enough training opportunities" (38 or 81%), teachers lack knowledge/skills in using computers/the internet for instructional purposes" (37 or 79%), and "insufficient peripherals like printers, scanners, etc." (36 or 77%), "teachers feel uncomfortable because some students are more competent in ICT than they are", "inadequate administrative support or initiative" and "absences or outdated school network/LAN" (32 or 68%) each, and "lack of interest/willingness of teachers to use computers" (28 or 60%) were also pointed out by the respondents as problems in the use of ICT for teaching and learning.

**Table 2. Overall item mean ratings showing the respondents' assessment
on the problems on the use of ICT for teaching and learning**

Problems on the use of ICT for Teaching and **Learning**	f	%	Rank
Insufficient number of computer units	47	100	1
Not enough technical assistance for operating and maintaining computers and/or insufficient help for solving technical problems with ICT	39	83	2
Not enough training opportunities	38	81	4
Not enough computer space	31	66	12
lack of funds	40	85	3
Insufficient peripherals (printers, scanners, etc.)	36	77	6
Teachers lack knowledge/skills in using computers/the Internet for Instructional purposes	37	79	5
Not enough staff for supervising computer-internet using students	27	57	20.S
No time to explore opportunities for using computers/internet	26	55	22
Not enough copies of software for educational use	29	62	17.5
Insufficient time for teachers to prepare lessons In which computers /the Internet are used	30	64	15
Weak infrastructure (telecommunication, electricity, etc.)	31	66	12
Problems in scheduling enough computers/the Internet time for different classes	30	64	16
Lack of Interest/willingness of teachers to use computers	28	60	10
Inadequate administrative support or initiative	32	68	8
insufficient plans and/or resources to prevent the theft and vandalism of computers	28	60	19
Absences or outdated school network/LAN	32	68	8
Difficulty in Integrating computers/the Internet in classroom Instruction practices	27	57	20.5
Not enough types (variety) of software	31	66	12
Lack of knowledge on what hardware/software to buy	30	64	15
Lack of skills/knowledge in handling computers	29	62	17.5
Software too complicated for teachers and/or students to use	24	51	23
Teachers feel uncomfortable because some students are more competent with ICT than they are.	32	68	8

The above findings proved that the respondents perceived several problems on the use of ICT in teaching and learning. Hence, there is a need to provide more computer units, technical assistance for operating and maintaining computers to the college, and supplementary training opportunities to the faculty members for them to be more comfortable and willing to use ICT in teaching and learning.

This result is similar to the findings of Ainley and Searle (2007) who found out that teachers recognized that there were some concerns and problems with

integrating the use of information and communication technology and they thought it was beneficial to the educational process and should be continued.

Significant Relationship Between the Profile of the Respondents and their Level of ICT competence

Age. Table 3 shows that the relationship between the respondents ICT competence and age yielded an inverse significant result on overall level of ICT competence (r=-.46), "basic computer operation skills" (r=-.41), "set-up, maintenance and trouble shooting of equipment" (r=-.37), "word processing" (r= .45), "spreadsheets" (r=-48), "databases" (r=-.35), "networking" (r=-.35)," telecommunications" (r=-.43), "media communication" (r=-.40) and "social, legal and ethical issues" (r=-.34). This means that the younger respondents tend to assess themselves more competent in the use of ICT in teaching than the older respondents. This is in contrary to Tondeur, et al., (2008) who found that teacher's age had little effect on classroom computer use.

Table 3.Correlation Coefficients Showing the Relationship between the
Level of ICT Competence and Profile of the Respondents

Competencies	Age	Sex	Years In Teaching	Acad. Rank	Area of Special-ization	Highest Educational Attainment	In Service Training in ICT	Computer Expe-rience	Access To ICT
Basic Computer Operations Skills	-0.41..	-0.05	-0.41..	-0.10	-0.27°	-0.02	0.37"	0.35"	-0.39"°
Setup, Maintenance, and Trouble-shooting of Equipment	-0.37"	-0.11	**-0.41..**	-0.14	-0.09	-0.16	0.25	0.44..	0.46"
Word Processing	0.45	0.07	**0,44"**	-0.04	-0.34	-0.10	0.27°	0.29°	0.47°
Spreadsheets	0.48"	-0.08	-0.47"	-0.25	-0.15	-0.15	0.42"	0.35"	0.40"°
Databases	-0.35..	-0.25	0,43"°	-0.22	0.00	-0.22	0.07	0.03	0.34°
Networking	0.35"	-0.04	-0.34°	-0.06	-0.17	-0.19	0.19	0.36"	0.46
Telecommu-nications	0.43"	-0.06	-0.39"°	-0.09	**0.24**	-0.14	0.25	0.30°	**0.48**
Media Communication	0.40"°	-0.1	0.16	-0.06	-0.20	-0.09	0.31°	0.43"	0.43"
Social, Legal, and Ethical Issues	0.34	-0.12	0.33°	-0.12	-0.07	-0.05	0.31°	0.31°	0.25
Overall	0.46"	-0.10	-0.46"	-0.14	0.20	-0.14	0.31°	0.37"	0.50"

ˈ correlation is significant at 0.05 level of significance (2-tailed)
" correlation is signifcant at the 0.01 level (2 tailed)

Sex. The respondents' overall ICT competence in all the skills assessed is not related to sex. This suggests that the male and the female teachers have more or less the same evaluation on their level of ICT competence. The findings do not support to Volman & Van Eck (2001) who found out that female respondents tend to be less interested in computers, to have less positive views about the value of computing, and to report more computer anxiety and less confidence in their computer abilities. Tondeur, et al (2008) also found out that males were more disposed to use computers than females.

Years in **Teaching.** Generally, the relationship between the level of ICT competence of the respondents and their years of teaching experience is highly significant (r=-.46). This is supported by the highly significant relationship obtained between years of teaching and majority of the competency indicators. It is worth noting that the relationship obtained is inverse. This means that respondents with less years of teaching experience assess themselves more competent in the use of ICT in teaching. This result is consistent with the finding on the relationship between their age and level of ICT competence.

Academic Rank. The relationship between the respondents' ICT competencies and academic rank is not statistically significant. Probably, the respondents tend to have the same judgment on their level of ICT competence though their academic ranks vary. This negates the findings of Tondeur, et al. (2008) that computer experience also influenced decisions to use computers professionally.

Area of Specialization. The respondents' area of specialization is significantly related with basic computer operation skills (r=-.27), and word processing (r=-.34). On the other hand, their area of specialization has no significant relationship with their overall ICT competence, and in the other competency indicators.

Highest Educational Attainment. The highest educational attainment of the respondents does not have a bearing on their level of ICT competence and in all the competency indicators. This implies that highest educational attainment is not related with their level of ICT competence.

In Service Trainings in ICT. The number of ICT-related in-service trainings attended by the respondents and their overall ICT attained a significant relationship(r=.31). In addition, a significant relationship was obtained in most of the competency indicators. This means that respondents who have attended more in-service trainings related to ICT tend to be more confident in the use of ICT. This is the reason why they assessed themselves competent in the use of ICT in the classroom.

Computer Experience. There is a significant relationship between the respondents' computer experience and their overall ICT competence (r=.37). This is also true along basic computer operation, set-up, maintenance and trouble shooting of equipment, word processing, spreadsheets, networking, telecommunications, media communication, and social, legal and ethical issues. This suggests that the more ICT experience the respondents have, the higher is their level of ICT competence. Contrary to this, their competence on databases did not show correlation on their computer experience. This is a fact because the respondents are not competent on databases and most likely they do not use this program.

Access to ICT. The access to ICT of the teachers is significantly correlated to their overall level of ICT competence (r=.50). Likewise, it is significantly related to competency on basic computer operation skills, set-up, maintenance and trouble shooting of equipment, word processing, spreadsheets, databases, networking, telecommunications, and media communication. This indicates that the respondents who have more access to computers tend to have higher level of ICT competence. Looking further at Table 3, however, one can see that there is no correlation between the access to ICT and the competence of the respondents on social, legal, and ethical issues.

CONCLUSIONS

On the basis of the findings, the researcher forwarded the following conclusions: most of the CTE faculty are middle aged, female, varied years in teaching , Masters' degree holders, Instructors, holding varied specializations never attended ICT trainings or seminars, use computers frequently, and have PC at home; the respondents considered themselves competent in the overall use of ICT, word processing, basic computer operation skills, telecommunications, networking, and spreadsheets, but they are somewhat competent in media communication, social, legal, and ethical issues, setup, maintenance and troubleshooting of equipment, and databases; insufficient number of computer units, not enough technical assistance for operating and maintaining computers and/or insufficient help for solving technical problems with ICT, not enough training opportunities, insufficient peripherals like printers, scanners, etc., and lack of funds were the major problems claimed by the respondents on the use of ICT in teaching and learning; and the CTE faculty who are younger and have fewer years in teaching and those who have more computer experiences, have better access to ICT, and have attended more trainings in ICT are more likely to have higher competence in using ICT.

RECOMMENDATIONS

ICT capacity building of the College of Teacher Education is recommended. can be done by equipping the classroom with more computer units and other :hnology devices for classroom use and providing the teachers with more mnputer trainings especially on databases, setup, maintenance and troubleshooting equipment. Another study should be conducted focusing on the ICT knowledge skills of teachers.

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