International Journal of Instruction *July 2010 ● Vol.3, No.2*
e-ISSN: 1308-1470 ● www.e-iji.net *p-ISSN: 1694-609X*

POST GRADUATE STUDENTS' COMPUTING CONFIDENCE, COMPUTER AND INTERNET USAGE AT KUVEMPU UNIVERSITY-AN INDIAN STUDY

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There is a common belief that students entering Post Graduation have appropriate computing skills for study purposes and there is no longer a felt need for computer training programmes in tertiary education. First year students of Post Graduation were surveyed in 2009, they were asked about their Education and Computing backgrounds. Further, the elaboration of issues raised was gathered through focused interviews. Collected data was then analyzed through the percentage analysis. Nowadays Indian regional students have higher confidence in their Computing abilities. One clear reason as it appears, the increased access to Computers and the Internet confidence. They are also likely to contradict Knowledge and Confidence. Surprisingly, the survey results showed high usage extent of Computer Training Programmes. Therefore, the revoking of Computer Training Programmes for all P.G courses with Indian educational standards is not recommended.

Key Words: post-graduate students, computing confidence, computer and internet usage

INTRODUCTION

There is a general, common perception that first year university students appear much more computer literate than was the case seven or eight years ago. Increasingly, students are being exposed to a digital environment at younger ages than in the past. They own computers at home and at school, and they own cell-phones and MP3 players. They are used to rapid change in technology (Kline & Strickland. 2004; Bartholomew. 2004; Hoffman & Vance. 2005).

Kuvempu University is a Karnataka state, Indian University with around 2500 Post graduate students. The Computer training course has been given, in the areas like Basic Computer skills, Internet searches, Statistical packages, Programming, CD-Rom, Presentation software, information about blogs and evaluating information from the internet in some form or other, for more than eight years. During this time its content has been reviewed a couple of times. The objective is to continue to provide appropriate practical skills and background computing knowledge to enable students to complete their Post graduation (P.G.) and successfully enter the workforce. Computer training course has always been compulsory for all P.G. students. They normally complete it in the first semester of study.

There is a widespread view in the University that Computer training course should no longer be taken as compulsory. It is felt that while the course is useful, particularly for aged students, the majority of new students will be much more computer literate than in the past (Eves & Dalziel, personal communication, 23 July 2007). This is not surprising as academic groups at other Indian universities have espoused the notion that there is no need to compel students to study dedicated end-user computing (Case, MacKinnon & Dyer, 2004; Wallace & Clariana, 2005). However, the authors also concluded that Post-graduate students now require more computing skills; a greater emphasis is needed on teaching them at undergraduate courses. Some years ago, McLennan, at, al. (1998) warned of the pitfalls of not teaching end-user computing in universities. The University of Iowa has incorporated an introductory computer course into the Counselor Education Curriculum to expose masters' level students to computer technology. Yolanda, Tarrell & James (2005) assessed Iowa University students' computer competency level as an effect of a one-credit hour introductory course in computer technology.

Results have indicated that student computer competencies increased after completing the computer technology course. Cheung and Huang (2005) suggested Universities should provide students with the necessary resources and facilities; instructors need to encourage and support Internet use in their course teaching; and Internet technical support should be available and effective. All of these elements may encourage positive beliefs and attitudes in students, which in turn could result in more Internet use. Adebowale, at, al. **(**2010) found results that the students possessed high levels of interest, approval and confidence in the use of computer and its other concerns. Female students were found to develop more interest than their male counterparts. Students aged 19 to 21

appeared to perform better in approval of computer and its concerns, but no age differences were found in interest and confidence.

Yaghi and Ghaith,(2002) studied Correlates of Computing Confidence Among Teachers in an International Setting and found That participants showed much less concern about the general ideas pertaining to computer anxiety and computer attitudes. Their level of computing confidence was more affected by their practical experiences with computers; primarily using computers for general purposes and, secondly, using computers for educational purposes. Fusilier, and Durlabhji, (2008) suggested that attitude, training and university support were positively related to students' Internet use. Chinwe (2006) revealed that majority of the students in the University use the Internet for academic purposes in spite of the location of the facility. Students in the management and agricultural sciences use the Internet more than those of engineering and sciences. The distance of the Internet center to the students' residence determines the time spent and the frequency of the visit to the center.

Sanjay and Vijendrasingh (2006) studied Internet usage by research scholars and faculty in sciences; the study found that 96.55% research scholars and faculty used the internet; fifty six out of fifty eight respondents have the basic knowledge of computers and use internet. Vijayalakshmi and Durgabhavani (2003) studied the rate and purpose of internet use with the direct bearing on internet activities. The results showed that, reason for lack of internet use was found to be lack of awareness of medium. It was found that the internet has influenced personal relations ships, socialization process, education research and leisure activates of internet users in the study. Gender differences were not observed in the internet usage. It is also observed that personality traits like perception of self social behavior, emotional attitude have a direct bearing on internet activities.

Internet has the potential to transform the way education is planned and delivered besides sharing insignificant changes in interaction pattern between teachers and students as well as among the student community. Accessibility to internet is the deciding factor for the use of internet. Rajput (2008); Dhamija and Panda (2007) found, attitude of post-graduate students also plays an important role towards the usage of internet. Nowadays post graduate students are also likely to be dependent on computer with internet for collection of relevant information for learning, conducting research as well as teaching in their future life. Bebetsos and Antoniou (2009) found that majority of U.G. and P.G. Students of Greek University had a positive attitude, lot of confidence and

spend more time to use computers and internet for educational purpose. The above studies indicate that the majority of U.G. and P.G. students, research scholars and faculty members were found to have a positive attitude, good self confidence, high internet usage with good skills to use computers and internet for educational purpose. The significant difference between gender and faculties to use computers and internet was not found.

For the present study, Computing Competence and Confidence Survey instrument used, As well as the survey, select Kuvempu University P.G. students were interviewed in-depth. They were asked about their Computing backgrounds and whether studying Computing at University was beneficial. The remainder of the paper describes the surveys and interviews that were conducted. Key results and conclusions are presented and discussed.

METHOD

Quantitative data was gathered using a survey instrument administered, in the third week of Semester One, stratified random sampling technique was used to select sample of 200 post graduate students. Equal ratio was maintained for both faculty (Science-100 and Arts-100) and Gender (male-100, Female-100). Computing Competence and Confidence Survey instrument contained 14 items is given in Appendix 1. Through surveys collection of information, details about students' gender, schooling, including previous Computing Education and current Computer Usage is provided. Students were also asked to rate both their Knowledge of and Confidence in using computers. Individual students who participated in the survey cannot be identified in any way. Three knowledge-based-questions were included to provide an assessment of students' competencies in user-computing. The remaining items were related to access of Computer, owning computer, availability of internet facility, daily use of computers for different activities, usage level of computer after training, need of training programmes at university and self-grading for computer based activities.

Computer competency has been defined in a number of ways (Yoon & Lee, 2007). In this study, the author used the term 'Competency' to mean the ability level and skills required to operate. Item-wise percentage analysis was done. To gain further insights, qualitative data was collected from focused interviews with ten working Kuvempu University students. The questions asked in the interviews were based on the framework given in Appendix 2. The results are presented in the Interview section.

RESULTS

1) The average time spent on Usage of Computers and Internet for Educational and Other purpose.

A) Playing Games and E-mail

Table 1. The Computer Usage and Internet for Playing Games and E-mail

Time	*Daily time spent on Playing games*				*Daily time spent on E-Mail*			
Spent	*Arts*	*Science*	*Male*	*Female*	*Arts*	*Science*	*Male*	*Female*
None	20%	44%	24%	41%	32%	25%	19%	38%
<1Hour	71%	42%	67%	45%	50%	61%	65%	46%
2-4Hrs	9%	12%	9%	12%	17%	13%	15%	15%
>4Hrs	0%	2%	0%	2%	1%	1%	1%	1%

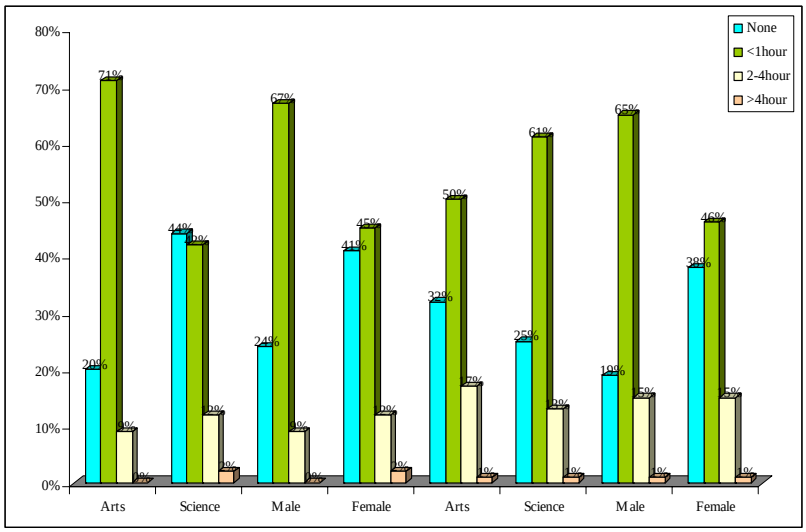
According to the responses obtained, 20% of the Arts students did not use computers for playing games, but 71% used it for less than 1 hour and only 9% used it for 2-4 hours. Similarly, 44% Science students did not use computers for playing games, 42% used it for less than 1 hour, 12% used it for 2-4 hours with a mere 2% using more than 4 hours. Arts students spent more time for playing games than the Science students.

The results indicate that 24% of male students did not use computers for playing games, 67% used less than 1 hour, and only 9% used for 2-4 hours. With respect to the female students 41% did not use Computers for playing games, 45% used less than 1 hour, 12% used 2-4 hours and only 2 % more than 4 hours per day. Male students spent more time for playing games than the female students.

Regarding the E-mail use, 32% of Arts students did not use it, 50% used less than 1 hour, 17% used 2-4 hours and mere 1% used it for more than 4 hours. About 25% of Science students did not use it, 61% used it less than 1 hour, 13% used 2-4 hours, and remaining 1% used it more than 4 hours per day. Science students spent more time with E-mail usage than Arts students.

The findings indicate that 19% of Male students did not use E-mail, 65% used it less than 1 hour, 15% used it for 2-4 hours and 1% for more than 4 hours per day. About 38% of Female students did not use computers for E-mail, 46% used it less than an hour, 15% used for 2-4 hours and only 1% for more than 4 hours per day. Male students utilized more time for E-mail usage than female students.

Graph 1. Computer usage and Internet for playing games and E-mail.



B) Educational Purpose and Chatting:

Table 2. Computer usage and Internet for Educational Purposes and Chatting

Time Spent	*Daily time spent on Educational purpose*				*Daily time spent on Chatting*			
	Arts	*Science*	*Male*	*Female*	*Arts*	*Science*	*Male*	*Female*
None	16%	7%	9%	14%	42%	52%	40%	54%
<1Hour	52%	48%	53%	47%	47%	34%	47%	34%
2-4Hrs	28%	42%	35%	35%	10%	14%	12%	12%
>4Hrs	4%	3%	3%	4%	1%	0%	1%	0%

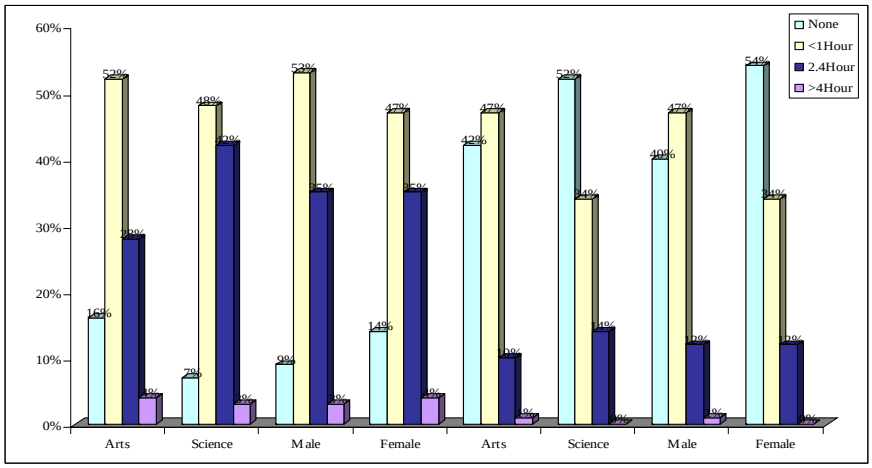
As per these responses 16% of Arts students did not use computers for Educational Purpose, 52% used it less than 1 hour, 28% of them used it for 2-4 hours and mere 4% students used more than 4 hours per day. In the similar manner 7% of Science students did not use it, 48% used it for less than 1 hour, 42% used for around 2-4 hours and hardly 3% of students used it more than 4 hours. Both Science and Arts students utilized almost same time on Computers with internet for Educational purposes.

The results showed that 9% of Male students did not use Computers related to Educational purposes, 53% used it less than 1 hour, 35% of them for 2-4 hours and only 3% for more than 4 hours daily. Similarly 14% of female students did not use Computer for Educational purposes, 47% used it less than 1 hour, 35% of them used for 2-4 hours and hardly 4 % more than 4 hours per day. Both male and female students spent almost same time on Computers with internet for Educational purposes.

The responses show that 42% of Arts students did not use Chatting, 47% of them used less than 1 hour, 10% of them used 2-4 hours and about 1% used more than 4 hour per day. 52% Science students did not use it, 34% used it for less than 1 hour, 14% used it for 2-4 hours per day. Hardly, half percent of Arts and science students spent time on Chatting.

The findings revealed that 40% of Male students did not use chatting, 47% used it for less than 1 hour, 12% used for 2-4 hours and 1% used it for more than 4 hours per day. Similarly, 54% of Female students did not use it, 34% of them used it less than 1 hour, around 12% for 2-4 hours per day. Male students gave more time than female students on Chatting.

Graph 2. Computers Usage and Internet for Educational purposes and Chatting.



C) Programming and Internet options

Table 3. Computers Usage and Internet for Programming and Internet options

Time	*Daily time spent on Programming*				*Daily time spent on Internet options*			
Spent	*Arts*	*Science*	*Male*	*Female*	*Arts*	*Science*	*Male*	*Female*
None	67%	42%	45%	64%	55%	40%	36%	60%
<1Hour	27%	45%	51%	22%	36%	46%	50%	32%
2.4Hour	5%	11%	2%	13%	8%	13%	13%	8%
>4Hour	1%	2%	2%	1%	1%	1%	1%	0%

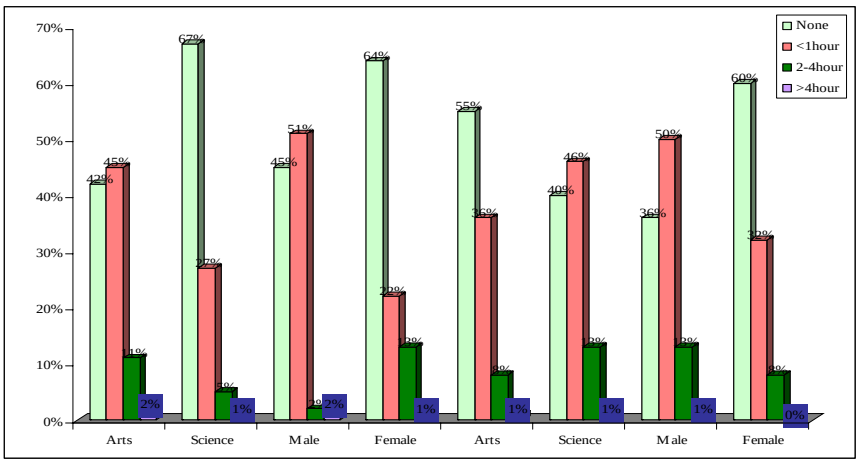
The findings indicated that, 67% of Arts students did not use Computers for programming, 27% of them used it less than 1 hour, 5% of them for 2-4 hours and only 1% of them used more than 4 hours daily. In the same way, science students about 42% of them did not use computers for programming, 45% of them used less than 1 hour,11% of them used 2-4 hours and hardly 2% used it for more than 4 hours. Science students spent more time on programming than Arts counterparts.

The results showed that 45% male students did not use computers for programming, 51% of them used less than 1 hour, 2% used it for 2-4 hours, and mere 2% used it for more than 4 hours per day. About 64% of female students did not use computer for programming, 22% used it for less than 1 hour, 13% of them used it for 2-4 hours and only 1 % for more than 4 hours per day. Male students gave more time on programming than female counterparts.

The responses indicated that 55% of Arts students did not use Computer for internet options, 36% used it less than 1 hour, 8% for 2-4 hours and only 1% used it for more than 4 hours per day. 40% of Science students did not use computer for internet options, 46% used it for less than 1 hour, 13% used it for 2-4 hours, and hardly 1% of them used it for more than 4 hours per day. Science faculty students spent more time on Internet options than their Arts counterparts.

According to the responses 36% of the Male students did not use Computers for internet options, 50% used it for less than 1 hour, 13% of them used it for 2-4 hours and mere 1% of them for more than 4 hours per day. 60% of the Female students did not use computers for internet options, 32% used it less than 1 hour, 8% used it for 2-4 hours per day. Male students spent more time on internet options than their female counterparts.

Graph 3. Computers Usage and Internet for Programming and Internet options.



2. The Computing Confidence.

a) M.S. Word and Excel

Table 4. The respondents' Confidence in using Computer among Male and Female students.

Confidence level	*M.S. word usage*		*Excel usage*	
	Male	*Female*	*Male*	*Female*
Very good	37%	36%	22%	31%
Good	47%	41%	47%	32%
Same what	11%	13%	17%	19%
Poor	05%	10%	14%	18%

The findings showed that 37% of the Male students held a Very Good level of Computing confidence in M.S.-word, 47% scored Good level, 11% of them figured at Some what level and a mere 05% scored at Poor level. About 36% of the female students figured at Very Good level of Computing Confidence, 41% of them at Good, 13% at Somewhat and 10% of them at Poor level in using M.S.-word. Both male and female students showed high Computing Confidence in M.S-Word.

The results showed that 22% of the male students scaled with Very Good computing confidence in using Excel, 47% of them at of them with Good, 17% at Somewhat and 14% scored at Poor level. In contrary, 31% of the female

students figured with Very Good level of Computing confidence, 32% of them with Good, 19% with Somewhat and 18% of them scored with Poor level. Both male and female students possessed high level of Computing Confidence in Excel.

Graph 4. The percentage of confidence level in using MS-Word & Excel.

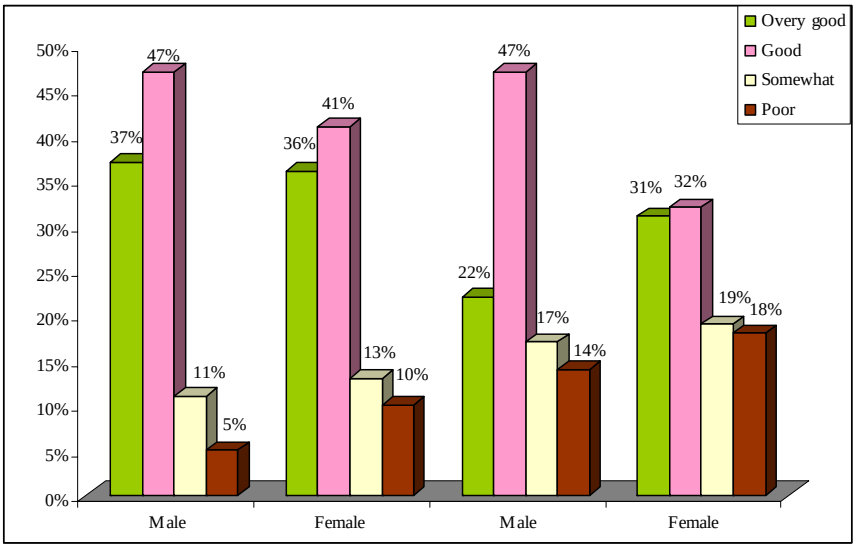


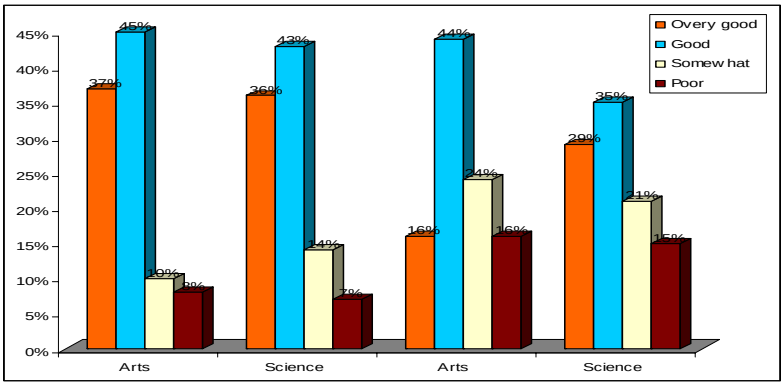
Table 5. The respondents' Confidence in using Computer among Arts and Science students.

Confidence	*M.S. word Usage*		*Excel Usage*	
	Arts	*Science*	*Arts*	*Science*
Very good	37%	36%	16%	29%
Good	45%	43%	44%	35%
Same what	10%	14%	24%	21%
Poor	8%	7%	16%	15%

The findings showed that 37% of the Arts students held Very Good level of Computing confidence, 45% of them with Good, 10% of them with Somewhat and 8% of them scored with very Poor level in using M.S.-Word. In similar manner, 36% of the Science students possessed Very Good level, 43% of them Good, 14% of them with Somewhat and 7% of them scored Poor level in using M.S.-Word. Both Arts and Science students scored high Computing Confidence in M.S.-Word.

According to the received responses 16% of the Arts students held Very Good level of Computing confidence, 44% of them with Good, 24% of them with Somewhat and 16% of them scored Poor level in using Excel. In the same way, 29% of the Science students scored Very good level of confidence, 35% of them with Good, 21% of them at Somewhat and 15% of them scored at Poor level. Both Arts and Science students obtained Good Computing Confidence in Excel.

Graph 5. The Level of Arts and Science students' Confidence in using M.S.-Word & Excel.



B) Power-point and Disc recording

Table 6. The percentage of Male and Female students' Computing Confidence in Power-point and Disc recording.

Confidence Level	*Power point Usage*		*Disc recording Usage*	
	Male	*Female*	*Male*	*Female*
Very good	26%	34%	13%	6%
Good	44%	35%	38%	31%
Same what	19%	11%	26%	21%
Poor	11%	20%	13%	42%

The findings showed that 26% of the Male students had Very Good level of computing confidence in Power point, 44% of them showed Good, 19% of them Somewhat and 11% of them performed Poor. Similarly, 34% of the female students possessed Very Good Confidence level in using power-point, 35% of them Good, 11% indicated Somewhat and 20% of them indicated Poor level.

Both male and female students held high Computing Confidence in Power-point.

The responses showed that 13% of the Male students had Very Good level of computing confidence in disc recording, 38% of them had Good, 26% in Somewhat and 13% showed Poor level. On the contrary, 6% of the female students held Very good level of confidence, 31% of them Good, 21% of them Somewhat and 42% of them with Poor level. Both male and female students scored Good Computing confidence in Disc recording, male students had slightly higher Computing Confidence than females.

Graph 6. The percentage of Confidence level for using Power-point and Disc recording.

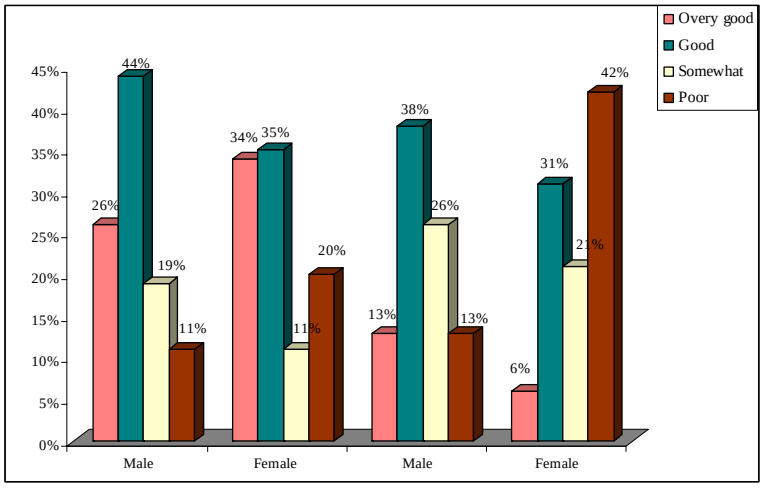


Table 7. The percentage of Arts and Science students' Computing Confidence in Power point and Disc recording.

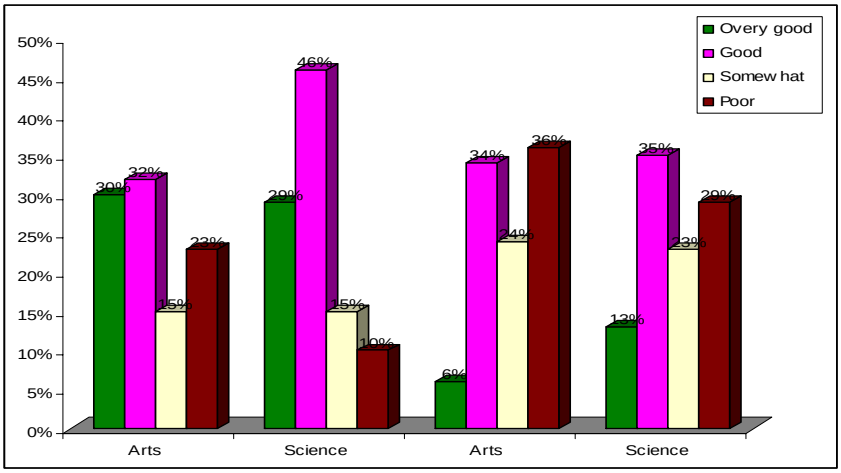
Confidence Level	*Power point usage*		*Disc recording Usage*	
	Arts	*Science*	*Arts*	*Science*
Very good	30%	29%	6%	13%
Good	32%	46%	34%	35%
Same what	15%	15%	24%	23%
Poor	23%	10%	36%	29%

The findings showed that 30% of Arts students had Very Good level of Computing Confidence in Power-point, 32% of them Good, 15% of them

Somewhat and 23% of them with Poor level. About 39% of the Science students had Very Good level of Confidence, 46% of them Good, 15% of them Somewhat and 10% of them with Poor level. Both Arts and Science students possessed high Computing Confidence in Power-point.

According to the responses 6% of the Arts students held Very Good level of Computing Confidence in using Disc recording, 34% of them at Good, 24% of them Somewhat and 36% of them with Poor level. In the same way 13% of the Science students had Very Good level of Confidence, 35% of them Good, 23% of them Somewhat and 29% of them with Poor level. Science students' Computing Competence score is slightly higher than the Arts counterparts.

Graph 7. The percentage of Arts and Science students' Confidence in using Power-point and Disc recording.



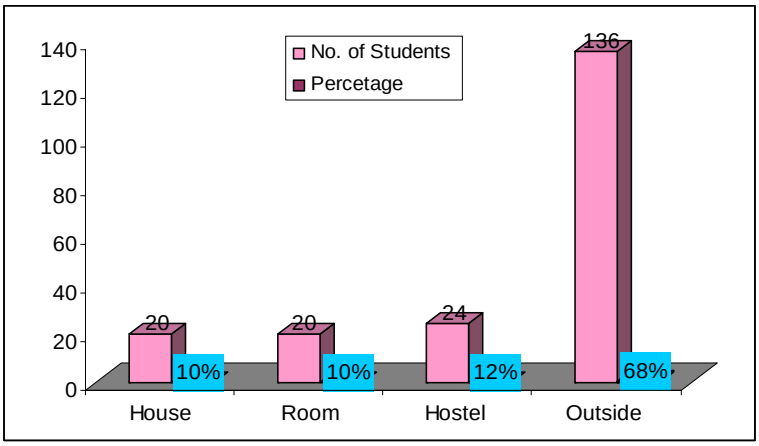
3) The Utilization of Computers and Internet facility by the P.G. students.

Table 8. The distribution of respondents according to the Computers and Internet facility.

Place of computers with Internet	*No .of students*	*Percentage*
House	20	10%
Room	20	10%
Hostel	24	12%
Outside	136	68%
Total	200	100%

The findings indicate that 10% of the students use computers with Internet in their house, 10 % of them use it in room, 12 % of them use it in hostel and 68% of students use outside. It can be inferred that Students are more dependent on cyber cafes or library internet room for internet facility.

Figure 8. Students' utilization of Computer and Internet facility.



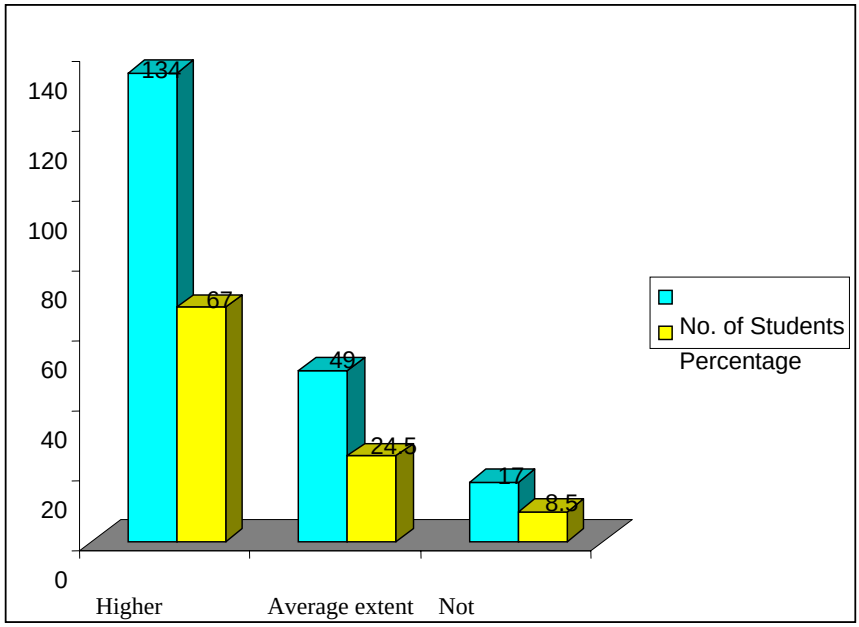
4) The Usage of Computer Training Programme.

Table 9. The Usage extent of Computer Training Programme for P.G. Students.

Training programme Usage	*No .of students*	*Percentage*
Higher extent	134	67%
Average extent	49	24.5%
Not required	17	8.5%
Total	200	100%

The findings showed that 67% of students felt, the usage of Computer training programme at Higher extent, 24.5% of them felt Average extent and also 8.5% of the students felt it was not required from the University.

Graphs 9. The possibility of Usage after attending Computer Training programme.



Interviews

The structured interviews incorporated conversations based around the questions in Appendix 2. They were conducted in Semester II, 2009. Ten students from Science and Arts backgrounds (5 male and 5 female), were interviewed and none of them had software and IT majors. The students were asked to rate their Computer ability (Questions 9) on a scale of 1 to 10. The results remained non-readily predictable. For example Student F, with no formal Computing Education, gave her a higher rating than another Student A who had studied end-user computing at the higher secondary level. Student F said, “When I came to university probably 3 or 4 but now probably 5 or 6.” Whereas more Computing educated Student A was more aware of his deficiencies, “I would have put myself at a 3 or 4 [on joining the university] now probably about 4 or 5.” Student G, enrolled in a sub-degree level introductory Computing course, who described his pre-university ability as being, “8 out of 10 at least that. Now, I would, probably say 7 out of 10. When I

started doing Computers here I discovered there were things that I didn't know how to do."

This was demonstrated on more than one occasion when a student was asked how they rated their ability on entry to university the first word spoken was confidence. Student C said, "I was pretty confident … I could do most things" and Student D said "I was confident but there was still a lot to learn". The survey identified higher use of Computers outside than home or room and most of the interviewed students had no access to Computer at home.

Student D said "I go on the cyber-cafe and Library Internet Centre quite a bit to lookup the content. Social networking was indicated by several respondents. "I use it to keep in touch with them [friends] but I don't really get into it that much" (Student B). "Face book is incredibly handy these days with all my friends having access as well" (Student G).

For any Computing some interviewed students believed that the university level effort would be easy. They had all considered themselves to be confident and competent. However, the more they thought about it, the less convinced they remained. Student D said, "I was pretty confident … I thought I could do most stuff on Excel but it just seems that there is so much more depth as you go on." We had done Excel at High School but really quite basic sorts of things." Studies elsewhere have also reported similar decline in a student's perception of their own confidence as they progress through their degree education (Johnson, Bartholomew & Miller, 2006). This type of error of omission is not uncommon in self assessment situations (Caputo & Dunning, 2005).

Student J had not taken any Computing subjects as part of her degree. On entering the university she had expected to use computers quite a lot for coursework but had assumed that she would get some instruction. "I must admit I did think that if an assignment required some form of computing that we would be told how to use it within that class but that hasn't really been the case." This student abandoned the use of the computer for an assignment as the use of the application appeared too difficult. "I had wrote the whole lot - 23 pages - whereas a lot of others did it on Excel and they only had about four pages, because, all that had to do was to change one formula … to get the next result. I thought that it would take too long to figure out how to do it with Excel so I did it all by hand."

Sadly, what often happens in these situations is that people are left to teach themselves. In some cases, this works out well, but in others it leads to

frustration, wasted time and the possibility of inaccurate work (Lim & Lee, 2000; Larres et al, 2003). This observation was well-articulated by Wallace & Clariana (2005, p. 9) when they said, "While some students may eventually pick up some Computer skills during the course of their degree program, they would most likely learn them imperfectly."

Most of the students felt that such training programmes are always useful at higher education level, which provides an opportunity to learn and inculcate Computer application knowledge and skills to each and every individual who had missed in their previous studies. Internet is a very much essential element in globalized world of learning, which provides all basic and current innovative domains of knowledge for both teaching and learning. Communication and dissemination of cognitive ability is simplified along with enhanced effectiveness as well.

CONCLUSION

This study examined that students entering university have a mediocre knowledge and confidence of Computing skills. The findings revealed that students consider themselves more knowledgeable and confident. No doubt, this confidence gets reinforced by their use of the Internet and all it has to offer. The results suggested that they are not more competent at using Office applications. While the data presented are not exhaustive, it could also mean that it may well be premature to keep computer training programme as a compulsory subject for all P.G. students at Kuvempu University. The interviews indicated that students who had previously studied Computing at high school, were surprised to find how much Computing there was still to learn. Often, little help is provided to the students when they are required to use new tools in non-Computing classes because the teachers themselves could believe that the students have the necessary knowledge, simply because they come from a generation born in a technological era. The author believes that the Indian tertiary institutions need still a place for introductory Computing subjects. The results presented here suggest that this shall remain the case in the near future. Ongoing studies are wanted to monitor the situation as Technological and Educational environments change.

ACKNOWLEDGEMENT

The author wishes to thank all the students who participated in the surveys and interview.

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APPENDIX 1
Student Background Survey
(Computing Competence and Confidence Tool)

Name:
Gender: Male/ female
Faculty: Science/Arts

Tick the box next to your answer for each question.

1. Are you really interested in using computers?
[ ] Yes [ ] No

2. Have you undergone any training courses on computers?
[ ] Yes [ ] No

3. Did you obtain any training courses in computing at high school/P.U.C./Degree level?
[ ] Yes [ ] No

4. How would you rate your competence of computers?
[ ] Absolute beginner
[ ] Some competence
[ ] Average competence
[ ] Good competence
[ ] Expert

5. How do you rate your confidence in computer use?
[ ] Not confident
[ ] A little confidence
[ ] Average
[ ] Confident
[ ] Very Confident

6. Places of access to computer with internet- Can be more than one
[ ] House
[ ] Room
[ ] Hostel
[ ] Out side

7. Do you own a computer?

[ ] Yes [ ] No

8. Do you have computer facilities in your surrounding?
[ ] Yes [ ] No

9. Do you have Internet facility where you live?
[ ] Yes [ ] No
10. Do you have Internet connection at home?
[ ] Yes [ ] No

11. For the selection below place a tick to corresponds with the average number of hours each day you use a computer outside class work for:

	None	Less than 1 Hour	2-4 Hours	More than 4 Hours
Playing games				
E-mail				
Educational Purpose				
Playing Music				
Chat				
Programming				
Contributing to blogs				
Other internet options				
Any other activity				

12.The possibility of usage after attending computer training programme
[ ] Higher extent
[ ] Average extent
[ ] Not required

13. Do you really want to have computer training from the University?
[ ] Yes [ ] No

14. Grade your self on following activity.

	Very good	Good	Some what	Poor
M.S. word				
Excel				
Power point				
Disc recording				

APPENDIX 2: Framework for Questions Asked in Student Interviews

(Note: these questions are in no particular order and depending on answers given to preceding questions may not have been asked of everyone.)

1. What are you studying at Kuvempu University?

2. At high school level did you have any kind of formal computing lessons?

3. At what level did you gain computing qualifications?

4. Did you ever think that computers would be part of your life as a university student?

5. At present computer knowledge is extremely essential for students, do you agree? Why?

6. In what ways do you use computers as a student?

7. Is computer knowledge related to your subject? Yes/no
   If yes,
8. How best computer utility is helpful?
9. What is the level of computing knowledge you hold?
   i.
   ii.
   iii.
   iv.
   v.
   vi.
   vii.
   viii.

ix.

x.

10. Do you feel that you will need any further computer training after you complete the course?

11. How best computers can be used for teaching and learning process?

12. How best internet knowledge can help in teaching and learning process?