

CHAPTER 4: ICT KNOWLEDGE, ATTITUDE AND PRACTICE

4.1 Exposure to ICT

When asked when they were first exposed to information and communication technology (ICT), 60.2% of the respondents mentioned that they were exposed to ICT in secondary school [Table 4.1]. This finding seems reasonable as the introduction of ICT into primary schools is fairly recent and would not have affected most of the respondents in this study. However, 15 students claimed that they were exposed to ICT before going to school.

Table 4.1: First exposure to ICT

Time	Number	Percentage
Preschool	15	2.3
Primary school	160	24.8
Secondary school	389	60.2
Tertiary education	82	12.7
Total	646³	100

Table 4.2 shows that respondents were exposed to ICT through various sources. Friends and schools are the two most important sources, being mentioned by 54% and 52% respectively. Media is the next important source (44.4%). In this survey, only 17.4% had learned about ICT from their parents.

³ 7 did not respond

Table 4.2: Sources of knowledge on ICT

Sources of ICT knowledge	Number	Percentage ⁴
Media	288	44.4
Friends	350	54.0
Parents	113	17.4
School or teachers	337	52.0

Most students (94.6%) had used a computer before entering university. However, 60.0% reported having minimal knowledge of computer before entering university, while approximately one third reported intermediate knowledge. Very few respondents in this study had prior advanced ICT knowledge [Table 4.3].

Table 4.3: Level of computer knowledge before entering university

Level of knowledge	Number	Percentage
None	22	3.4
Minimal – enough to operate	386	60.0
Intermediate – able to troubleshoot	211	32.8
Advanced – able to write programs	18	2.8
Super advanced – able to administer systems	6	0.9
Total	643⁵	100

4.2 Computer ownership and usage

In this survey, 366 out of 653 students or 56.0% reported owning a personal computer. Desktops were the most popular type of computer owned by 345 students or 52.8%. Only 44 students or 6.7% owned laptops or notebooks [Table 4.4]. Very few (11 students) had palmtops (personal digital assistants). There is some overlap here as some students had more than one type of computer. Of the students who own

⁴ Only valid answers taken into account.

⁵ 10 students did not respond

computers, 279 (out of 366) or 76.2% reported owning one with a modem and access to the Internet.

Table 4.4: Percentage of respondents who own various types of computer

Type of computer	Number	Percentage of all respondents
Any type	366	56.0
Desktop	345	52.8
Notebook	44	6.7
Palmtop	11	1.7

All respondents used the Windows operating system, except one who reported using Linux. This finding is to be expected given the dominance of Windows as an operating system for personal computers.

Overall, 14.1% of the respondents reported that they have not spent time on the computer. This finding is rather startling in this age of ICT. Even among those who spent time on the computer, the majority did so for only 1-4 hours a week, probably due to their busy study schedule. Table 4.5 shows that close to 60% of the respondents spent 1-4 hours on the computer weekly, while only 4.3% spent more than 14 hours a week.

Table 4.5: Time spent using the computer

Time	Number	Percentage
Did not use the computer	88	14.1
1-4 hours per week	372	59.6
5-9 hours per week	97	15.5
10-14 hours per week	40	6.4
>14 hours per week	27	4.3
Total	624 ⁶	100

⁶ 29 did not respond

Table 4.6 shows that 85.3% of the respondents have used the Internet, and this means that the majority who spent some time on the computer have accessed the Internet. Word-processing is the second most commonly used computer application, as reported by 80.3% of respondents. Presentation using PowerPoint was next, being used by 30.9% of the respondents. The use of spreadsheets was confined to only 14.4% of the respondents. Given their relatively low level of computer skill and the wide availability of software packages, very few (5.2%) reported that they have done programming with computers.

Table 4.6: Number and percent of respondents who have used various applications

Computer applications	Number	Percentage⁷
Word-processing	522	80.3
Spreadsheet	94	14.4
Presentation	201	30.9
Programming	34	5.2
Internet (Web, e-mail, IRC etc)	557	85.3

Out of 653 respondents to this survey, 557 (85.3%) have used the Internet. For many students, the Internet is the main source of information, entertainment and communication. Table 4.7 shows that more than 80% of the students have used the Internet for information seeking and communication, and about three quarters have used it for entertainment.

Table 4.7: Number and percent of respondents who have used the Internet

Use of the Internet	Number	Percentage (of all students)
Information	557	85.3
Entertainment	489	74.9
Communication	540	82.7

⁷ 2 non-respondents. Overlapping numbers cause total percentage to exceed 100%

Most students do not spend too much time on the Internet. Of the 557 who have used the Internet, 69.7% spent between 1-4 hours per week. Table 4.8 shows that only 2.0% were spending more than 14 hours a week on the Internet.

Table 4.8: Time spent on the Internet (among those who access the Internet)

Time spent	Number	Percent
1-4 hours per week	388	75.3
5-9 hours per week	90	17.5
10-14 hours per week	26	5.1
>14 hours per week	11	2.1
Total	515⁸	100.0

Lack of time was quoted by 411 (73.8% of those using the Internet) as restricting the use of the Internet. Other factors that explain the non-use of the Internet include "lack of knowledge (16.3%) and fear of computers (2.0%).

4.3 Self-reported computer skills

Students were asked to rate their own skills on a scale of 0-5, with 0 the lowest and 5 the highest. Rating is assumed to be equally-spaced so the mean is used to compare the relative score of the different measures of ICT literacy. Table 4.9 shows that the highest mean score was for e-mail, followed by surfing the World Wide Web and word-processing. Most students had low self-rating of their own skills in using spreadsheet, database and statistical software, reflecting some unease with the use of computers for such purposes. In this sample, only 3 students have the highest maximum score of 30.

⁸ 32 did not indicate any answer despite claiming to use the Internet

Table 4.9: Self-reported rating of computer skills

Computer skill	Self-reported ranking mean⁹	Standard deviation
Word-processing	3.56	1.16
Spreadsheet	2.13	1.24
Database	1.73	1.04
Statistics	1.60	1.00
E-mail	3.89	1.15
Web surfing	3.69	1.36

Students were also tested on their knowledge on 9 terms commonly used in ICT. Some terms are very commonly used, while others are used less frequently. The terms were PC, LAN, LCD, modem, FDDI, UTP, RAM, ROM, and BIOS. Overall, only 8 respondents managed to identify all the terms asked of them [Table 4.10]. Rather surprisingly, a quarter of the respondents did not manage to identify even a single term. The mean score was 2.17 (SD 2.21) out of a maximum of 9.

Table 4.10: Respondents who have knowledge of commonly used ICT terms

Score	Number	Percentage
0	162	24.8
1	184	28.2
2	79	12.1
3	76	11.6
4	41	6.3
5	48	7.4
6	26	4.0
7	14	2.1
8	15	2.3
9	8	1.2
Total	653	10000.00%

4.4 Computing facilities and ICT usage by academic staff

In this survey, 73.7% of the respondents felt that the computer facilities in the faculty were inadequate (note that 14 did not provide an answer). Printing facilities too were

⁹ Rating is assumed to be equally-spaced.

considered inadequate by 509 (80.8%) of 630 respondents who provided an answer. When asked on the ideal student to computer ratio, there were a variety of answers, with a mean ratio of 1:10.3. Among the respondents, 76.8% recommended the incorporation of ICT in their courses.

Students were asked on the use of ICT by academic staff and fellow students. This use was assessed on a scale of 1-5 for both students and staff. The rating was assumed to be equally-spaced so the mean is used as the measure of central tendency. The mean rating for students was 3.13 (SD 0.849) while the mean rating for academic staff was slightly higher at 3.28 (SD 0.885). Electronic presentation by lecturers was rated by students on a scale of 1-5, with 5 being the highest. Table 4.11 summarizes the mean ratings in terms of understanding, knowledge and the opportunity to take down notes.

Table 4.11: Students' rating of electronic presentation by lecturers

Category	Mean	Standard deviation
Understanding	3.52	0.82
Knowledge	3.45	0.78
Opportunity to take down notes	2.92	2.06