CHAPTER 4

ANALYSES OF DATA

4.1 Introduction

This chapter explains the responses gathered from the questionnaires and interviews. It includes data summarised from the information on ICT and information of ICT awareness from the respondents, as well as summaries of responses gained through the interview. All the data presented here follows the order of the questionnaire and interview and the findings, appropriately answers the purpose of the present study.

4.2 Respondents Information

Table 4.1 presents the data pertaining to the number of participants involved in the study. These data show the distribution and return of the questionnaires according to the two schools, and their respective forms. It include the total number of questionnaire respondent of Sekolah Menengah Kebangsaan Bandar Sunway and Sekolah Menengah Kebangsaan Seafield. Of the 300 questionnaires, both schools received 150 each and it was further

distributed 50 each to Form One, Two and Three. A total of 3 participants were involved in the interview. Table 4.2 presents the number of participants according to the schools and forms.

Table 4.1 Distribution of participants who were asked to respond to the Questionnaire

Class	S.M.Bandar Sunway	S.M. Seafield
Form 1	50	50
Form 2	50	50
Form 3	50	50
Total	150	150

Table 4.2 Distribution of participants who responded to the interview

	S.M. Bandar Sunway	S.M. Seafield
Form 1	1	1
Form 2	2	
Form 3		2
Total	3	3

4.3 Information on ICT Knowledge

The data shown in Table 4.3 identify the respondents' knowledge of using computers. It presents the number and percentage of each school. About 96 percent of the respondents from S.M. Seafield reported having used computer compared to only 76 percent of the respondent from S.M. Bandar Sunway .

Table 4.3 Distribution of the subjects with respect to knowledge of using computers

Responses	S.M.Bandar Sunway	%	S.M.Seafield	%
Yes	114	76	144	96
No	36	24	6	4
Total	150	100	150	100

A review of Table 4.4 allows some interesting observation. An extremely high percentage of all respondents 56 percent indicated that computers were used for surfing the Internet. This is followed by video games (54%) and homework (21%). A total of twelve percent indicated that they regularly used their computers for programming and others activities.

When the responses from S.M. Bandar Sunway and S.M. Seafield were combined it became apparent that only 12 percent actually attended computer classes at school. This obviously reflects a high percentage of the respondent had never have attended computer classes. Comparatively, the proportions of computer class attendance in S.M. Bandar Sunway in much higher that S.M. Seafield. Table 4.5 presents these data in summary form.

Table 4.4 Distribution of the subjects (n=300) with respect to activities regularly performed using the computer

Activities	Number of responses	% of Total Responses
Home work	63	21
Video games	162	54
Access the Internet	168	56
Programming	24	8
Others	12	4

(total number of respondents is shown as n=300)

Table 4.5 Distribution of the subjects with respect to computer class attendance at school

Responses	S.M.Bandar Sunway	%	S.M.Seafield	%
Yes	18	12	0	0
No	132	88	144	100
Total	150	100	144	100

Next, the respondent indicated that most of computer classes at schools were conducted after school hours. A total of twelve of respondents from S.M. Bandar Sunway reported attending computer classes after school hours. This data is presented in Table 4.6.

Table 4.6 Distribution of the subjects with respect to school computer class time.

School	During school hours	After school hours
S.M. Bandar Sunway	-	12
S.M. Seafield	-	-
Total	-	12

A review of Table 4.7 revealed that about 2 percent of the respondents from S.M. Bandar Sunway have attended or followed computer classes at computer centres. Comparatively, 8 percent of S.M. Seafield respondents reported having studied at computer centres. The data in this table also reveal that out of 285 responses, only 15 students indicated having attended computer classes outside of the school.

Table 4.7 Distribution of the subjects with respect to attendance of computer classes outside of school

Responses	S.M.Bandar Sunway	%	S.M.Seafield	%
Yes	3	2.22	12	8
No	132	97.78	138	92
Total	135	100	150	100

Table 4.8 presents data analysis of the number of respondents who have had experience in surfing the Internet. A total of 34.78% of the respondents from S.M. Bandar Sunway indicated that they have no experience of surfing the Internet compared to only 14 percent in S.M. Seafield. Interestingly, 86 percent of

S.M. Seafield respondents indicated having surfed the Internet compared to 65 percent from S.M. Bandar Sunway.

Table 4.8 Distribution of the subjects with respect to experiences of surfing the Internet

Responses	S.M.Bandar Sunway	%	S.M.Seafield	%
Yes	90	65.22	129	86
No	48	34.78	21	14
Total	138	100	150	100

Correspondingly, an examination of the frequency of surfing the Internet reveal that 49 percent of S.M. Seafield reported surfing the Internet frequently. This figure is comparatively low in S.M. Bandar Sunway respondents, where only 30 percent admitted surfing the Internet frequently. Meanwhile, 70 percent of S.M. Bandar Sunway respondents noted that they surf the Internet once a while. This figure is relatively big compared to only 51 percent reported by respondents from S.M. Seafiled. A summary of these data is found in Table 4.9.

Table 4.9 Distribution of the subjects with respect to frequency of surfing the Internet

Responses	S.M.Bandar Sunway	%	S.M.Seafield	%
Frequently	27	30	63	48.84
Once in a while	63	70	66	51.16
Total	90	100	129	100

The respondents were also asked the places they frequent to surf the Internet. Almost half of the respondents (58%) indicated home, followed by Cyber café (20%), friends place (15%) and the remaining (8%) at relative's house. An important point to note here is the fact the S.M. Seafield respondent had given a majority of the responses as compared to S.M. Bandar Sunway for this category of question. The analysis of the data pertaining to this category is presented in Table 4.10.

A review of table 4.11 indicates that as many as 70 % of respondents from both schools have interests in pursuing an IT related career. This data is significant because it includes respondents who had no knowledge of computers but have interest to pursue IT related careers. On the other hand there were only

about 30 % of respondents from S.M. Bandar Sunway and S.M. Seafield respectively who reported choosing non-IT related career.

Table 4.10 Distribution of the subjects (n=300) with respect to places frequented regularly to surf the Internet

Places	Number of responses	%
Home	174	58
Friend's place	45	15
Cyber Café	60	20
Relative's house	24	8
Others	12	4

(total number of respondents is shown as n=300)

Table 4.11 Distribution of the subjects with respect to career choices

Responses	S.M.Sunway	%	S.M.Seafield	%
IT related career	93	70.45	105	70
Non-IT related career	39	29.55	45	30
Total	132	100	150	100

In addition, almost all the respondents believed that IT knowledge would help a person secure a better job. However, about 15 percent of the

respondents from S.M. Bandar Sunway refuted the opinion that IT knowledge will help a person get a better job. Table 4.12 shows the relevant data concerning this matter.

Table 4.12 Distribution of the subjects with respect to the opinion on IT knowledge would help a person get a better job

Responses	S.M.Bandar Sunway	%	S.M.Seafield	%
Yes	120	85.11	150	100
No	21	14.89	0	0
Total	141	100	150	100

The participants were also asked to draw upon their experiences and knowledge of using ICT related technologies. Of the large number of responses, 58 percent of the respondents reported using e-mails compared to 27 percent who have never used e-mails. A majority of the respondents (70%) indicated that they never had experienced designing web pages compared to a small number (19%) who admitted using such technologies. The number of respondents who reported using the Internet to locate information is 68 %, while 21 % said the otherwise. Data pertaining to this is shown in Table 4.13.

An examination of data in Table 4.13 also showed 19% of respondents reported that they never used softwares to create multimedia presentation compared to only 25% who admitted doing so. Similarly, 40% noted having experienced producing documents using word processors incorporating both text and graphics compared to 55% who did not. Other responses include 27 % who noted using educational CD-ROM that has links to revealed websites and 42% for using text, audio and video based communication. A vast majority of respondents reported never experienced using these two categories of technologies. Their proportion is shown (65 %) and (51 %) respectively.

Table 4.14 summarises the data appropriate to Table 4.13 where respondents were asked to indicated the elements which has contributed significantly towards the understanding of ICT. For this, 56 percent of respondents relate to friends as their major source of information about ICT. Family and relative, and reading material account to 34 % and 35 % respectively. Out of 705 responses, 34 % relate electronic media and 22 % relate Cyber café as sources that has helped understand ICT better. The remaining responses are as follows; 15 % at school, 20 % at computer centres, 6% at seminar or exposition and 13 % at computer stores.

Table 4.13 Distribution of the subjects (n=300) with respect to experiences using ICT related technologies

Technology	Yes	%	No	%
E-mail	204	68	81	27
Web page designing	57	19	216	72
Search the Internet to locate information	204	68	63	21
Used softwares like Powerpoint, HyperStudio, etc. to create multimedia presentation	75	25	207	69
Produced a document using word processor incorporating both text & graphics	120	40	165	55
Used educational CD-ROM that enables you to link with the relevant websites	81	27	195	65
Used text, audio & video based communications like Microsoft Chat, Internet Phone & Cu-SeeMe	126	42	153	51

(total number of respondents is shown as n=300)

Table 4.15 summarises the data that were collected with respect to the views held by the respondents concerning the opinion on importance of ICT for the country's development. One hundred percent of the respondents from S.M. Seafield believed that ICT is necessary for the country's development. While, 91.49 percent of S.M. Bandar Sunway respondent gave similar views. The remaining 8.51 % disagreed on this matter.

There was a greater agreement among the views of the respondents concerning the fact that basic ICT skill in Form One, Two and Three would help in choosing ICT related courses. Ninety percent of respondents from S.M.Bandar Sunway agreed on this matter compared to only 10 percent who actually disagreed. S.M. Seafield recorded the highest ratio of agreement that is 92 % compared 8 % who disagreed this notion. A summary of these data is found on Table 4.16.

Table 4.14 Distribution of the subjects (n=300) with respect to factors which has contributed significantly towards the understanding or learning of ICT

Items	Number of responses	% of Total Responses for this type
Books magazines	105	35
Through friends	168	56
School	45	15
At home / through relatives	102	34
Computer centers	60	20
Seminar / exposition	18	6
Computer stores	39	13
Cyber café	66	22
Electronic media (e.g. television)	102	34

(total number of respondents is shown as n=300)

Table 4.15 Distribution of the subjects with respect to the opinion on importance of ICT for the country's development

Responses	S.M.Bandar Sunway	%	S.M.Seafield	%
Yes	129	91.49	150	100
No	12	8.51	0	0
Total	141	100	150	100

Table 4.16 Distribution of the subjects with respect to the opinion that basic ICT skills in Form One, Two, and Three would help in choosing ICT related course

Responses	S.M.Bandar Sunway	%	S.M.Seafield	%
Yes	129	89.58	138	92
No	15	10.42	12	8
Total	144	100	150	100

Respondents were also asked to indicate whether they had helped their teachers to prepare notes or presentation using computers. Over ninety percent of the respondents from S.M. Bandar Sunway indicated that they did not help their teacher on this activity compared to only 10 percent who actually have

helped their teachers prepare notes or presentation. Meanwhile, 16 % S.M. Seafield respondents reported having help their teachers prepare notes or presentation compared to 84 % who did not. Table 4.17 summarises this data.

Table 4.18 summarises the data that was collected with respect to the responses held by the participants in Table 4.17. Thirty-three participants who had earlier admitted helping their teachers with notes or presentation were asked to name the subjects they were told to prepare. Nearly eighty two percent of the respondents noted English, followed by 9.09 % for Arts, Moral Education (18.18%), Georgraphy (18.18%), Physical Education (27.27%), Bahasa Malaysia (27.27 %) and History (54.55 %)

Table 4.17 Distribution of the subjects with respect to helping teachers to prepare notes or presentation using computer

Responses	S.M.Bandar Sunway	%	S.M.Seafield	%
Yes	9	9.68	24	16
No	84	90.32	126	84
Total	93	100	150	100

Table 4.18 Distribution of the subjects (n=33) with respect to academic papers which they had helped to prepare

Subjects	Number of Responses	%
Bahasa Malaysia	9	27.27
English	27	81.82
Art	3	9.09
Geography	6	18.18
Physical education	9	27.27
History	18	54.55
Moral Education	6	18.18

(total number of respondents is shown as n=33)

The respondents were also polled on persons who had discussed about ICT to them. This category included teachers, friends, School Principal, parents, and relative. Of this, friends (68 %) followed by parents (56 %) seems to be more involved in ICT discussion compared to others. Only 25 % and 35 % respectively of the respondents who disagreed on this matter. Fifty two percent of the respondents indicated relatives compared to only 40 percent who viewed the other way. About 15 % of the respondents noted teachers as persons who had discussed about ICT to them compared to 71 % who refuted. A vast majority of respondents (81 %) reported that principals never discussed about ICT to them.

While only 5 % of them acknowledged that School Principals had mentioned about ICT. A summary of these data can be found in Table 4.19.

Table 4.19 Distribution of the subjects (n=300) with respect to persons who had discussed about ICT

Persons	Yes	%	No	%
Teacher	45	15	213	71
Friend	204	68	75	25
School Principal	15	5	243	81
Parents	168	56	105	35
Relative	156	52	120	40

(total number of respondents is shown as n=300)

4.4 Information on ICT Awareness

Table 4.20 summarises respondents' view regarding the benefits of ICT for the country. Of the 439 responses gained for this question, 69 % believed ICT would help develop a country in terms of high technology expertise. A good number of respondents (12%) also mentioned that ICT would benefit the country's economy. The other responses in this questions are ICT as a medium to promote Malaysia to the world (2 %), (9 %) noted ICT would enable a country to communicate with rest of the world, (7 %) said ICT would help a country to be

on par with other countries, (14 %) said ICT will facilitate knowledge sharing, ICT would create an IT literate and developed society (6.33 %), and, overwhelmingly, 27 % felt ICT would lead to better government administration.

Table 4.20 Distribution of the subjects (n=300) with respect to benefits of ICT for the country

Benefits	Responses	%
Development	207	69
Worldwide connection	27	9
Economic development	36	12
Compete with others	21	7
Promote Malaysia	6	2
Knowledge sharing	42	14
IT literate society	19	6.33
Administration	81	27

(total number of respondents is shown as n=300)

The survey also asked the respondents' view on the benefits of ICT for the school. About seventeen percent of the respondents indicated that ICT can produce knowledgeable students. Seven percent noted that ICT can make academic subject interesting, while 13 % agreed that introduction of ICT may help a school produce better academic results. Similarly, 37 % believed ICT

would enable students understand lessons better. Other responses include ICT as tool to improve schools overall administration (30 %) and to create school's webpage (4%). Teachers would be able to teach better using ICT (8 %), teachers and school administrators can easily prepare notes (2 %). And, ICT would enable students to communicate with other students (10 %). A summary of this data analysis can be found in Table 4.21.

Table 4.21 Distribution of the subjects (n=300) with respect to benefits of ICT for the school

Benefits	Number of responses	%
Create school webpage	12	4
Chat with other students	30	10
Improve learning	111	37
Administration	90	30
Create knowledgable students	51	17
Easy to prepare notes	6	2
Make subject interesting	21	7
Improved academic results	39	13
Teachers can teach better	24	8

(total number of respondents is shown as n=300)

Table 4.22 presents data collected with respect to the views on the benefits of ICT to the respondents. There were greater agreements among the views of the respondents (32 %) with regards to ICT as a tool to gain more information about a subject matter. Many respondents also believed that ICT will make them more knowledgeable (45 %). A significant number of respondents also see ICT as a problem solving tool (3 %), produce better class projects (7%) and (20 %) as a tool to facilitate better learning environment. Interestingly, 10 % of the respondents felt that ICT knowledge would enable a person to get better jobs. Other responses include, ICT as a means of communicating with others (17%).

Table 4.22 Distribution of the subjects (n=300) with respect to the benefits of ICT for the respondents

Benefits	Number of responses	%
Easy to locate information	96	32
Knowledgable & skilled	135	45
Class projects	21	7
Problem solving tool	9	3
Better jobs	30	10
Better learning	60	20
Able to communicate with others	51	17

(total number of respondents is shown as n=300)

Respondents were also asked whether they would contribute to the development of ICT in the country. Towards this, many respondents felt that they can influence their friends and relative to make use of ICT (8 %). A significant number of them (5 %) also indicate the interest to create informative websites about the country. A majority of them (17%) noted the need for everyone to master ICT. One respondent mentioned the need to introduce ICT to rural school so that no students would be left out in the IT education as well as to achieve Vision 2020. A summary of this is shown in Table 4.23

Table 4.23 Distribution of the subjects (n=300) with respect to respondents contribution to the development of ICT in the country

Contribution	Number of responses	%
Create informative webpages on Malaysia	15	5
Influence friends & relative to use ICT	24	8
Master ICT	51	17
Introduce ICT to rural students	1	0.33

(total number of respondents is shown as n=300)

The responses from three participants in the interview who had earlier noted attending computer classes revealed that they only learn the basic skills

like word processor and drawing. A total of four participants were asked to name the websites they usually visited in the World Wide Web. The responses reveal that the most frequently visited websites were Yahoo and Hotmail. Only half of the respondents correctly identified the steps to log on the Internet as well as to compose a new message (e-mail). Table 4.24, 4.25, 4.26, and 4.29 presents these data.

Table 4.24 Distribution of the subjects (n=3) with respect to skills or knowledge learnt from computer classes at computer centre

Skills/knowledge	Number of responses
M.S.Word	1
Windows	1
Paint Brush	1
Total	3

(total number of respondents is shown as n=3)

Table 4.25 Distribution of the subjects (n=4) with respect to Websites visited in World Wide Web

Websites	Number of responses
Yahoo	2
Napster	1
Celebrity websites	1
Hotmail	2
Microsoft	1

(total number of respondents is shown as n=4)

Table 4.26 Distribution of the subjects (n=4) with respect to correct steps to get connected with Internet

Internet Connections	Number of responses
Correct steps	2
Incorrect steps	2

(total number of respondents is shown as n=4)

Three participants who had earlier indicated interest in pursuing IT related career in the questionnaire were asked to identify IT related professions. Out of 8 responses for this question, three of the answers relate to programmers, followed by Engineer and one each for Computer Engineer, IT company staff and IT Consultant. Participants who indicated non-IT related careers were similarly asked to name non-IT related professions that require the use of computers. For this, the respondents mentioned accountant followed by secretary, traffic police, bankers and auditors. The data pertaining to this is shown in Table 4.27 and 4.28.

There was a poor response when participants were asked to name the magazine or book which they had earlier claimed to have read in the questionnaire. Out of three interviewee, only two gave an acceptable answer. The responses are

shown in Table 4.30. Lastly, all participants were asked to relate the motivation that would help them in Form Four IT studies. Majority of them indicated 'interest' as the main source of motivation followed by good syllabus, easy to use application and good reading materials. The relevant data is shown in Table 4.31.

Table 4.27 Distribution of the subjects (n=3) with respect to IT related professions

Professions	Number of responses
IT Centres Staffs	1
Programmers	3
Computer Engineer	1
Engineer	2
IT Consultants	1

(total number of respondents is shown as n=3)

Table 4.28 Distribution of the subjects (n=3) with respect to non-IT related profession which also uses computers

Professions	Number of responses
Secretary	1
Traffic police	1
Bankers	1
Auditor	1
Accountant	2

(total number of respondents is shown as n=3)

Table 4.29 Distribution of the subjects (n=4) with respect to correct steps to compose a new message (e-mail)

Compose Message	Number of responses
Correct steps	2
Incorrect steps	2

(total number of respondents is shown as n=4)

Table 4.30 Distribution of the subjects (n=3) with respect to book or magazines which helped in understanding of ICT

Books/Magazines	Number of responses
PC World	1
Chicken Soup	1
CHIP	1
Total	3

(total number of respondents is shown as n=3)

Table 4.31 Distribution of the subjects (n=6) with respect to motivation that may help in Form 4 IT studies

Motivation	Number of responses
Interest	3
Good syllabus	1
Easy to use	1
Reading material	1
Total	6

(total number of respondents is shown as n=6)