CHAPTER IV

RESULTS

The purpose of this study was to develop and evaluate an Internet training package for teachers – The Basic Internet for Teachers (BasIT) training package. This was carried out through three Instructional Development (ID) stages – needs assessment, design and development, and formative evaluation, which were further broken down into nine steps of action:

1. Needs assessment
2. Task analysis
3. Definition of instructional objectives
4. Selection of media and instructional activities
5. Preparation of draft materials
6. Expert review
7. Revision of draft materials
8. Small group trial
9. Production of the first version of the BasIT training package.

The results obtained in each of these steps are reported in the following sections.

Step One: Needs Assessment

The survey instrument "Analisis Keperluan: Kursus Internet untuk Guru-Guru" (Appendix A) was distributed to 50 Jaringan Pendidikan (JP) teachers and 14 Pusat Sumber Elektronik (PSE) teachers all over the country by mail (electronic or post). The researcher monitored the responses received every two weeks after the first mailing. Additional mailing was sent to the subjects whose responses have yet to be received. Follow-up telephone calls were made after the third mailing to make sure the subjects had received the mailing package.

Sixty-one out of the 64 subjects responded to the survey. The teachers who failed to respond were either transferred or on long leave, with no one to replace them in their respective schools. The result of the needs assessment based on the analysis of the responses of the 61 respondents is discussed in this section.

Item One: Teachers' Computer Experience

The item translated:

> According to your knowledge, how many percent of the teachers in your school had used the computer before?

Table 6 summarized the responses received for this item.

TABLE 6

Teachers' Computer Experience

Response	Number of Responses	Percentage
0 to 20 percent	8	13.1
21 to 40 percent	20	32.8
41 to 60 percent	8	13.1
61 to 80 percent	15	24.6
81 to 100 percent	10	16.4
	61	100.0

As perceived by the JP/PSE teachers, the computer experience of teachers in schools varied. This indicates a need to take into consideration the beginners as well as experienced computer users in the design and development of the BasIT training package.

Item Two: Teachers' Internet Experience

The item translated:

> According to your knowledge, how many percent of the teachers in your school had used the Internet before?

Table 7 summarized the responses to this item.

TABLE 7

Teachers' Internet Experience

Response	Number of Responses	Percentage
0 to 20 percent	44	75.9
21 to 40 percent	4	6.9
41 to 60 percent	5	8.6
61 to 80 percent	2	3.4
81 to 100 percent	3	5.2
	58	100.0
Missing cases = 3		

The result revealed that most teachers were new to the Internet. Thus, the training activities in the BasIT training package have to cover the very basics of the Internet.

Item Three: The Computer Facilities in School

Item 3.1: Number of Computers in School

Table 8 summarized the responses received when asked about the number of computers in the schools of the respondents. Almost all the schools (90.2 percent) surveyed reported that they have less than 20 computers. Based on this finding, the

training activities of the BasIT training package should be designed for small groups of less than 20 participants.

TABLE 8

Number of Computers in School

Number of Computers	Number of Responses	Percentage
0 to 20	55	90.2
21 to 40	5	8.2
41 to 60	1	1.6
More than 60	0	0
	61	100.0

Item 3.2: Number of Internet-Ready Computers in School

Table 9 summarized the responses received concerning the number of Internet-ready computers in school.

TABLE 9

Number of Internet-Ready Computers in School

Number of Internet-Ready Computers	Number of Responses	Percentage
0 to 5	40	65.6
6 to 10	8	13.1
11 to 15	12	19.7
16 to 20	1	1.6
More than 20	0	0
	61	100.0

Forty (65.6 percent) of the 61 schools surveyed reported that they have only 0 to 5 computers equipped for Internet activities. According to this result, the BasIT training package should be designed for the setting of small groups of less than 20 participants, taking into consideration also that there may be a need for the participants to share computers for hands-on exercises.

tem 3.3: Hardware and Software Available in School

Fifty-nine (100 percent) respondents indicated that the computers in their ;chools are installed with mouse, Windows, and Word, with two missing cases. As ;or Microsoft Powerpoint, there are 53 (91.4 percent) positive indications with three nissing cases. Based on this information, the researcher decided to prepare visual-ıids using Microsoft Powerpoint for Windows. For the benefit of the schools which ıre not equipped with the software, a copy of Powerpoint Viewer to view Powerpoint ;omputer slides is included in the first version of the BasIT training package.

tem 3.4: Internet Software Available in School

In this item, the respondents ticked (√) the Internet software available in their chools among a list of software. Table 10 displayed the number and percentage of chools equipped with the software listed.

Other software mentioned by the respondents were Archie, Internet-Relay 'hat (IRC), QVTnet, Telnet, Winzip, etc. The responses to this item revealed that a ariety of Internet software was being used in schools. Netscape Navigator appeared › be the only one available in almost all the schools surveyed (96.7 percent).

TABLE 10

Internet Software Available in School

Internet Software	Number of Schools	Percentage
Trumpet Winsock	48	78.7
Pine Mail	41	67.2
Eudora Mail	8	13.1
Pegasus Mail	2	3.3
FTP	51	83.6
Gopher	6	9.8
Netscape Navigator	59	96.7
Mosaic	1	1.6
Internet in a Box	4	6.6
Internet Chameleon	0	0

Item 3.5: Number of Printers in School

The printer is one of the necessary equipment to conduct a computer-related training course. The responses to this item revealed the number of printers available in the average school. Table 11 summarized the responses.

Thirty-seven (60.7 percent) of the schools surveyed had only less than two printers. Due to this obvious constraint, printing activities in the BasIT training package should be minimized.

TABLE 11

Number of Printers in School

Number of Printers	Number of Responses	Percentage
0 to 2	37	60.7
3 to 5	21	34.4
6 to 8	3	4.9
More than 8	0	0
	61	100.0

Item Four: The Computer Room in School

Item 4.1: Air-conditioned Computer Room

Apart from one missing case, 38 (63.3 percent) reported that the computer room in their schools were air-conditioned.

Item 4.2: Instructional Media in the Computer Room

In this item, the respondents indicated what kinds of instructional media were available in the Computer Room of their schools. Their responses were recorded in Table 12.

TABLE 12

Instructional Media in the Computer Room

Instructional Media	Number of Responses	Percentage
Writing board	59	96.7
Overhead Projector	34	55.7
LCD Panel/Projector	3	4.9

Other media such as recorders and slide projectors were also mentioned by some respondents. Since the overhead projector appeared to be quite commonly available among the schools surveyed (55.7 percent), the researcher had prepared some overhead transparencies to be used as visual-aids, which are included in the first version of the BasIT training package.

Item 4.3: Maximum Capacity of the Computer Room

This item inquired about the maximum number of students/teachers that the Computer Room in the respondent's school can accommodate for training activities at single occasion. The responses received are summarized in Table 13.

The responses to this item revealed that the size of Computer Rooms in the schools surveyed are relatively small, with the maximum capacity of 10 to 20 persons at a single occasion. This fact reminded the researcher once more to design the BasIT training package for small group activities.

TABLE 13

Maximum Capacity of the Computer Room

No. of Persons	No. of Responses	Percentage
Less than 10	17	27.8
10 to 20	38	62.3
21 to 30	4	6.6
More than 30	2	3.3
	61	100.0

Item Five: Teachers' Needs for Internet Training

The item translated:

In general, does the teacher need to attend training course on the Internet?

The responses to this item are summarized in Table 14.

TABLE 14

Teachers' Needs for Internet Training

Response	No. of Responses	Percentage
No need	0	0
May be	2	3.3
Yes	18	30.0
Definitely yes	40	66.7
	60	100.0
Missing cases = 1		

Almost all the respondents (96.7 percent) indicated either "Yes" or "Definitely yes" in this item. This revealed that the respondents, as teachers, were aware and positive about their need for Internet training. Some of the reasons given for their positive responses were

To keep up with technology

To be exposed to the Internet and its applications

To have more alternatives in teaching approach

For professional collaboration/support

For more effective access to educational resources

Teachers need to be trained before guiding the students.

Item Six: The Need for Every Teacher to be trained for Internet

The main rationale for this study was that to have only a few teachers trained for Internet in a school is not enough to implement Internet activities successfully. To

examine the perception of teachers about this matter, this item required the respondents to give their comments based on a statement given:

> Every teacher in a school should be trained to use the Internet in order to successfully organize Internet activities for the students in that school.

The analysis of the responses to this item revealed the different opinions of the teachers in this matter. Five of the respondents left the item blank (missing cases). Forty-eight (85.7 percent) responded positively and one (1.8 percent) agreed conditionally to the notion of the statement. Four (7.1 percent) disagreed with the statement and suggested that only those who are interested and committed need to be trained. The views of the remaining three (5.4 percent) were not clear although they forwarded some suggestions with regards to Internet training for teachers in school. Table 15 records the responses received.

TABLE 15

The Need for Every Teacher to be Trained for Internet

Response	No. of Responses	Percentage
Stand not clear	3	5.4
Disagree	4	7.1
Agree with conditions	1	1.8
Agree	48	85.7
	56	100.0
Missing cases = 5		

In general, the responses to this item revealed that the teachers were favorable to the idea of having every teacher trained to use the Internet. Those who agreed with the statement argued that training for teachers to use the Internet will, among others,

- Promote information technology (IT) acculturation in education and reduce technophobia among teachers
- Help teachers to keep up with technology

- Enable the teachers to contribute positively to the implementation of Internet activities in school
- Encourage Internet-use in school
- Reduce the work-load on a limited number of teachers to implement Internet activities
- Build up skill and confidence in the teachers to guide the students in Internet activities.

The respondent who agreed conditionally suggested that the teachers should also be trained to maintain the computer facilities in their respective schools.

Those who did not indicate clearly whether or not they agree with the statement forwarded several suggestions, including

- Reduce the number of teaching periods for the teachers so that they can spend more time planning for Internet activities
- Training content should be selected carefully, taking into consideration the limited computer knowledge/experience of some teachers.

Item Seven: Language Medium for Training Sessions

The respondents were asked in this item to specify whether English or Bahasa Malaysia would be more suitable as the language medium to conduct Internet training sessions for the teachers in their respective schools. Forty-four (72.1 percent) of them chose Bahasa Malaysia, seven (11.5 percent) chose English, and ten (16.4 percent) indicated both (Figure 2). Bahasa Malaysia appeared to be most acceptable according to the respondents. Thus, the researcher proceed to develop the BasIT training package in Bahasa Malaysia, naming it Asas Internet untuk Guru (Basic Internet for Teachers).

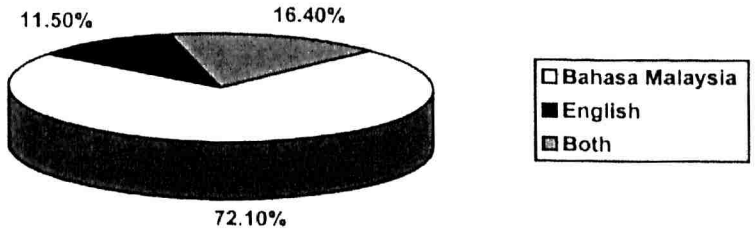

FIGURE 2: Language Medium for Training Sessions

Item Eight: Respondents' Internet Experience

In this item, the respondents marked the Internet activities they have done before from a list. Table 16 summarized the responses.

TABLE 16

Respondents' Internet Experience

Internet Activity	No. of Responses	Percentage
E-mail	47	77.0
News-reading	38	62.3
Subscribing to Electronic Discussion Group (EDG)	7	11.5
Forming Electronic Discussion Group (EDG)	3	4.9
Gopher	4	6.6
FTP	24	39.3
Telnet	24	39.3
Exploring the World Wide Web (WWW)	41	67.2
Web page publishing	31	50.8

The responses revealed that most of the respondents had used e-mail (77.0 percent), WWW (67.3 percent), and the news-reading (62.3 percent) facility of the Internet before. Apart from the Internet activities listed, two of the respondents added Internet-Relay Chat (IRC) to their list.

Item Nine : Important and Relevant Internet Skills for Teachers

In this item, the respondents gave scores (1 = not important, 2 = may be important, 3 = no idea, 4 = important, 5 = very important) to the Internet skills listed. Their responses are as recorded in Table 17. In order to identify the Internet skills which the respondents consider important and relevant for teachers, the researcher sum up the number and percentage of respondents giving scores 4 and 5 to each Internet skills listed. This yielded the result displayed in Table 18.

Almost all the respondents (above 90 percent) considered e-mailing, news-reading, and exploring the WWW relevant and important to the daily tasks of teachers. This suggests that these Internet skills should be considered as the content of Internet training for teachers in Malaysia. One of the respondents commented that e-mailing and the WWW are the most important tools and that these skills are relatively easy for teachers to learn. Another suggested that teachers need to be equipped with all the skills listed – especially the WWW, which she claimed is useful as support in the teaching and learning process.

TABLE 17

Important and Relevant Internet Skills for Teachers

Internet Skills	Scores										Missing Cases
	1 Not important		2 May be important		3 No idea		4 Important		5 Very important		
	n	%	*n*	%	*n*	%	*n*	%	*n*	%	
-mail	0	0	3	5.0	1	1.7	33	55.0	23	38.3	1
ews-reading	0	0	1	1.7	1	1.7	29	49.2	28	47.4	2
ubscribing to DG	0	0	8	13.3	5	8.3	30	50.0	17	28.3	1
orming EDG	0	0	16	28.1	6	10.5	27	47.4	8	14.0	4
opher	0	0	9	17.3	17	32.7	16	30.8	10	19.2	9
TP	0	0	7	12.5	9	16.1	22	39.3	18	32.1	5
elnet	0	0	3	5.5	13	24.1	23	42.6	15	27.8	7
xploring the WW	0	0	1	1.6	0	0	20	32.8	40	65.6	0
eb page ublishing	2	3.4	15	25.4	5	8.5	25	42.4	12	20.3	2

TABLE 18

Important and Relevant Skills for Teachers – Scores 4 and 5 only

Internet Skills	Number of Responses	Valid Cases	Percentage
E-mail	56	60	93.3
News-reading	57	59	96.6
Subscribing to EDG	47	60	78.3
Forming EDG	35	57	61.4
Gopher	26	52	50.0
FTP	40	56	71.4
Telnet	38	54	70.3
Exploring the WWW	60	61	98.4
Web page publishing	37	59	62.7

Item Ten: Suitable Internet Training Activities for Teachers

In this item, the respondents gave scores to each of the Internet activities listed to indicate whether the activities are appropriate as training activities for teachers (1 = too difficult, 2 = difficult, 3 = no idea, 4 = appropriate, 5 = most appropriate), considering their limited computer knowledge and experience. Their responses are summarized in Table 19.

TABLE 19

Suitable Internet Training Activities for Teachers

Internet Activities	Scores										Missing Cases
	1		2		3		4		5		
	n	%	n	%	n	%	n	%	n	%	
E-mail	0	0	0	0	1	1.8	26	44.8	31	53.4	3
News-reading	0	0	0	0	2	3.5	25	43.1	31	53.4	3
Subscribing to EDG	0	0	6	10.7	10	17.9	28	50.0	12	21.4	5
Forming EDG	2	3.7	11	20.4	8	14.8	23	42.6	10	18.5	7
Gopher	1	2.1	5	10.4	20	41.7	18	37.5	4	8.3	13
FTP	0	0	6	11.3	11	20.8	26	49.0	10	18.9	8
Telnet	0	0	5	9.8	11	21.6	24	47.0	11	21.6	10
Exploring the WWW	0	0	0	0	0	0	18	31.6	39	68.4	4
Web page publishing	5	9.3	11	20.4	6	11.1	20	37.0	12	22.2	7

Several other activities that the respondents suggested included using the Internet in teaching and learning activities, Internet-Relay Chat (IRC), maintenance of hardware, trouble-shooting skills, etc.

As in item 9, the researcher summed up the number and percentage of respondents giving scores 4 and 5 for each of the Internet activities listed. Table 20 records the result.

TABLE 20

Suitable Internet Training Activities for Teachers – Scores 4 and 5 only

Internet Skills	No. of Responses	Valid Cases	%
E-mail	57	58	98.3
News-reading	56	58	96.6
Subscribing to EDG	40	56	71.4
Forming EDG	33	54	61.1
Gopher	22	48	45.8
FTP	36	53	67.9
Telnet	35	51	68.6
Exploring the WWW	57	57	100.0
Web page publishing	32	54	59.3

Again, the result indicated e-mail (98.3 percent), news-reading (96.6 percent), and WWW (100.0 percent) as the candidate content for the BasIT training package. One of the respondents commented that these two activities are easy enough as training activities even for teachers without any prior computer experience. Other comments included

- Teachers should be trained to evaluate and select information/resources on the Internet
- Basic computing course should be conducted for teachers who are new to the computers before Internet training
- Training activities should be moderate and not too excessive.

tem 11: Suitable Time to conduct Internet Training for Teachers in School

In this item, the respondents are asked to choose between school days, term ıolidays, and weekends for Internet training sessions. Five respondents skipped the tem (missing cases). Out of those who responded, 14 (25.0 percent) preferred school ays, 13 (23.2 percent) preferred term holidays, and 29 (51.8 percent) opted for /eekends (Figure 3).

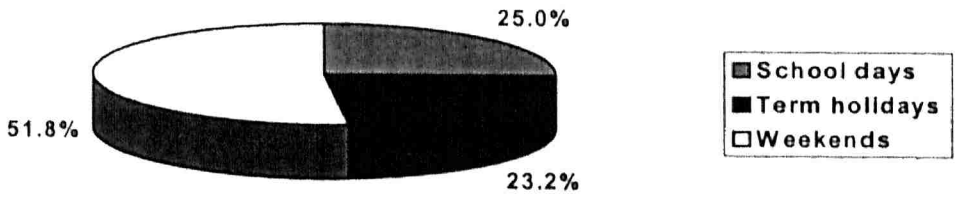

FIGURE 3: Suitable Time to conduct Internet Training for Teachers in School

Around half of the respondents (51.8 percent) indicated that they preferred eekends for Internet training activities. The reasons given for their choice are

Teachers are loaded with work during school days

The Computer Room is free only on weekends and during holidays

Allow teachers from both the morning and afternoon sessions to participate

More time for training compared to during school days.

ıose who indicated term holidays gave their reasons:

More time for training

Teachers are loaded with work during school days

Allow teachers to plan forward for the training (being notified long before the training sessions).

Those who preferred to have training during school days had also given their reasons:

- It is inconvenient for teachers to come back to school during weekends and holidays (the school is located far away from residential areas)
- Allow teachers to rest during weekends and holidays
- More teachers will be able to attend.

The teachers' preference of time for training varies due to their respective school setting. Some schools have computer classes on school days, leaving the Computer Room free only during weekends and holidays; while some schools are located far from residential areas, causing inconvenience for the teachers to come back to school for training during weekends and holidays. Thus, the question as to when is the most suitable time to conduct training for teachers in school cannot be easily settled without further consideration of the school setting. Based on this finding, the researcher designed and developed the BasIT training package such that it is flexible and can be carried out at the convenience of the teachers in any school setting.

Item 12: Duration for Each Training Session

In this item, the respondents are expected to specify the number of hours they think each training session should last. Some had obviously misunderstood the item, giving their responses to be more than five hours, in term of days, and even weeks. The researcher found 24 such responses, which is 39.3 percent of all the responses. Due to this great number of missing cases, the researcher decided to discard this item from consideration.

'indings

The analysis of the responses to the survey instrument "Analisis Keperluan; ursus Internet untuk Guru-Guru" (Training Needs Analysis: Internet Training for eachers) (Appendix A) yielded the following findings.

he Teachers

The level of computer literacy of the teachers in the schools surveyed covers a wide range – from novices to experienced computer users

Most of the teachers were new to the Internet

omputer/Internet Facilities in School

Most of the schools have less than 20 computers – in which less than five are Internet-ready – and less than two printers

The computers in the schools surveyed were mostly equipped with mouse, Windows, Word, and Powerpoint

Various kinds of Internet software were being used in school. Netscape Navigator was the only one found to be available in almost all the schools surveyed (96.7 percent)

'mputer Room and Training Facilities

Over half of the schools surveyed (63.3 percent) reported that their Computer Rooms were air-conditioned

Writing boards were the most common instructional media in the Computer Rooms of the schools (96.7 percent), followed by overhead projector (55.7 percent). Only three (4.9 percent) of the schools surveyed have LCD panel/projector

- The Computer Rooms in the schools were relatively small, with maximum capacity of 10 to 20 persons at a single occasion

Teachers' Perception about the Need for Internet Training

Almost all the respondents (96.7 percent) acknowledged that teachers need to attend raining courses on the Internet. Many of them (85.7 percent) also agreed that every eacher should be trained to use the Internet in order to organize Internet activities uccessfully for students.

anguage

he respondents indicated that Bahasa Malaysia (Malaysian Language) is more uitable as the language medium in training sessions for teachers.

raining Content

-mail, news-reading, and the WWW were indicated to be the candidate content for ternet training for teachers.

raining Time

eacher's preference in time for training varies due to the difference in their spective school setting.

lection of Content

E-mail had always been the most frequently used Internet facility, while the WW is increasingly popular since its introduction in 1989 (Yeow, 1996). Surveys Internet users had confirmed that while e-mail retained its popularity, the usage of

the WWW had increased significantly over the years (CommerceNet, 1996; Matrix Information and Directory Services, Inc., 1996). In Malaysia, Dass (1996) reported that the WWW is the second favorite Internet application after e-mail among local Internet users.

The researcher seriously considered the three candidate content based on the review of latest Internet survey reports and the expert's advice and recommendation. Eventually, e-mail and the WWW were selected to be the main training content of the BasIT training package. The selection was made based on the following reasons:

- E-mail and WWW are the most popular Internet application at present
- E-mail and WWW cover two important functions of the Internet – communication and information retrieval
- User-friendly Windows-based software for e-mailing and WWW activities are widely distributed.

Selection of Internet Software

Researchers had suggested that computer-related training for teachers should be less technical, focusing on applications rather than programming (Gan, 1991; Oh, 1992). Based on these suggestions, the training activities in the BasIT training package were designed to concentrate on software application. To make decisions on the software to be used in the training sessions, the researcher visited Sekolah Menengah (P) Sri Aman (SMSA, Sri Aman Secondary School), Petaling Jaya – where the Small Group Trials were supposed to be conducted later – to examine the hardware and software setting in the school.

The researcher discovered that SMSA – which is a Pusat Sumber Elektronik (PSE, Electronic Resource Center) school – were equipped with Microsoft Mail for e-

mail and Netscape Navigator for WWW. At the time of the selection of Internet software, the browser Netscape Navigator has been found to be used by around 80 percent of the Internet users (Survey.net, 1996). In fact, almost all of the schools surveyed (96.7 percent) were equipped with Netscape Navigator. Thus, Netscape Navigator was selected to be used for WWW activities in the BasIT training sessions.

For e-mail activities, various kinds of e-mail software were being used in the schools, including Pine, Eudora, Pegasus, etc. It is quite difficult to make a choice. However, in SMSA, Microsoft Mail was used for e-mailing in a computer network called Rangkaian Munsyi set up for 14 PSE schools all over the country by Bahagian Teknologi Pendidikan (BTP, Educational Technology Division) of the Ministry of Education (MOE) with the help of Telekom Malaysia Berhad (TMB). Since the Small Group Trials were supposed to be conducted in this school, the researcher selected Microsoft Mail to be used for e-mail activities in the BasIT training package.

Conclusions and Decisions

Based on the findings of the survey, the advice of the experts, and the review of recent Internet survey reports, the researcher made several conclusions and decisions about the design and development of the BasIT training package. First of all, e-mail and the WWW were selected as the main training content for the BasIT training package because

they are frequently used;

they cover the two functions of the Internet – communication and information retrieval; and

user-friendly Windows-based software for these activities are widely available.

After visiting SMSA, the school where the Small Group Trials were supposed to be conducted later, the researcher decided that Netscape Navigator shall be used for WWW and Microsoft Mail for e-mailing activities in the BasIT training sessions.

The researcher had decided to design and develop the package in Bahasa Malaysia (Malaysian Language). The researcher had also realized that to fulfill the needs of the teachers, the package must

- cover the very basics of the Internet (most teachers were new to the Internet)
- have training activities that are suitable for novices as well as experienced computer users, and can be carried out at the teachers' convenience.

Realizing the limited facilities and constraint of space in the Computer Room of the average school, the researcher proceed to design the package to be carried out in small groups (less than 20 persons), with printing activities minimized.

Step Two: Task Analysis

After the content for the BasIT training package was selected, the researcher began the task analysis. In this step, the learning tasks involved in the selected content was carefully identified and analyzed. The subtasks (transfer and procedural) involved in order to fulfill a particular major task are recorded using the "Task Analysis" form (Appendix B). Table 21 shows the outcome of the task analysis for e-mailing and WWW.

At the end of the task analysis process, a flow-chart showing the relationship between the major learning tasks involved is constructed (Figure 4).

TABLE 21

Task Analysis for the BasIT Training Package

No.	Learning Tasks	Subtasks	
		Transfer	Procedural
	Content/Topic: E-mail (Microsoft Mail)		
1.	Starting Microsoft Mail	1.1 Switch on computer	1.1.1 Locate switches 1.1.2 Switch to "on" position
		1.2 Click on Mail icon	1.2.1 Start Windows 1.2.2 Find Mail icon 1.2.3 Point at icon 1.2.4 Double-click at icon
		1.3 Login	1.3.1 Type user name and password
2.	Composing Mail	2.1 Select/Name recipient of the mail and its copy	2.1.1 Open Address Book 2.1.2 Select the recipient 2.1.3 Click at "To" or "Cc" 2.1.4 Click at "OK"
		2.2 Add new correspondents into Address Book	2.2.1 Open Address Book 2.2.2 Click on the Folder button 2.2.3 Type in particulars 2.2.4 Click on Save button
		2.3 Type Subject of message	2.3.1 Click on the Subject bar 2.3.2 Type the subject of message
		2.4 Type the message	2.4.1 Click at the massage pad 2.4.2 Type message
3.	Sending Mail	3.1 Select Options	3.1.1 Click at Options button 3.1.2 Select priority of mail 3.1.3 Select to be notified when the mail had been retrieved 3.1.4 Select whether to keep copy of mail after it is sent 3.1.5 Click at "OK"
		3.2 Send the mail	3.2.1 Click at Send button
4.	Retrieving Mail	4.1 Open In Box folder	4.1.1 Double-click at In Box folder
		4.2 Select and open mail	4.2.1 Double-click at the mail to be read
5.	Replying Mail	5.1 Reply to a mail	5.1.1 Click on Reply or Reply All button 5.1.2 Type reply message 5.1.3 Send the massage

TABLE 21 (continued)

Task Analysis for the BasIT Training Package

No.	Learning Tasks	Subtasks	
		Transfer	Procedural
	Content/Topic: E-mail (Microsoft Mail) (continued)		
6.	Forwarding Mail	6.1 Forward a mail	6.1.1 Click at Forward button 6.1.2 Select recipient from Address Book 6.1.3 Click on the body of message 6.1.4 Change or add to the message 6.1.5 Send the message
7.	Printing Mail	7.1 Get printer ready	7.1.1 Switch on printer 7.1.2 Feed in paper
		7.2 Print a mail	7.2.1 Open mail to be printed 7.2.2 Select Print from File menu 7.2.3 Specify number of copies to be printed and print quality desired 7.2.4 Click at "OK"
8.	Deleting Mail	8.1 Delete mail from In Box	8.1.1 Open In Box folder 8.1.2 Select mail to be deleted 8.1.3 Click on Delete button
		8.2 Delete mail from Deleted Mail	8.2.1 Open Deleted Mail folder 8.2.2 Select mail to be deleted 8.2.3 Click on Delete button
9.	Closing Microsoft Mail	9.1 Close Mail	9.1.1 Open File menu 9.1.2 Click at Exit
	Content/Topic: WWW (Netscape)		
1.	Starting Netscape	1.1 Switch on computer	1.1.1 Locate switches 1.1.2 Switch to "on" position
		1.2 Click on Netscape icon	1.2.1 Start Windows 1.2.2 Locate Netscape icon 1.2.3 Point at icon 1.2.4 Double-click at icon
2.	Browsing Web Document	2.1 Scroll up/down	2.1.1 Point at up/down arrow at the sides of the frame 2.1.2 Click to move document up/down
		2.2 Select hypertext	2.2.1 Identify hypertext 2.2.2 Point and click at hypertext

TABLE 21 (continued)

Task Analysis for the BasIT Training Package

No.	Learning Tasks	Subtasks	
		Transfer	Procedural
	Content/Topic: WWW (Netscape) (continued)		
2.	Browsing Web Document (continued)	2.3 Back and forward	2.3.1 Click on Back or Forward button
		2.4 Interrupt data transfer	2.4.1 Click on Stop button
3.	Searching for Information	3.1 Use Search Engine's indexes	3.1.1 Click on Net Search button 3.1.2 Click at any subject listed on the index of the Search Engine
		3.2 Use keywords	3.2.1 Click on Net Search button 3.2.2 Click at keyword bar in the Search Engine dialog box 3.2.3 Type keyword 3.2.4 Submit for search
		3.3 Use Uniform Resource Locator (URL)	3.3.1 Click at Location bar 3.3.2 Delete the URL in the bar 3.3.3 Type new URL 3.3.4 Press Enter key
4.	Use Bookmarks	4.1 Add Bookmark to a site	4.1.1 Open Bookmark menu 4.1.2 Click at Add bookmark
		4.2 Go to a Bookmarked site	4.2.1 Open Bookmark menu 4.2.2 Click on the site in the list of Bookmarked sites
		4.3 Remove a Bookmark	4.3.1 Open Bookmark menu 4.3.2 Click at Go to Bookmark... 4.3.3 Select site to be removed from the list of Bookmarked sites 4.3.4 Press Delete key to remove the site from the Bookmark list
5.	Saving the Content of a Web Document	5.1 Save text	5.1.1 Open File menu 5.1.2 Click at Save As... 5.1.3 Type file name and specify drive 5.1.4 Insert floppy diskette into drive 5.1.5 Click at "OK"

TABLE 21 (continued)

Task Analysis for the BasIT Training Package

No.	Learning Tasks	Subtasks	
		Transfer	Procedural
	Content/Topic: WWW (Netscape) (continued)		
5.	Saving the Content of a Web Document (continued)	5.2 Save graphics	5.2.1 Point at graphics 5.2.2 Click right mouse button 5.2.3 Click at Save this image as... 5.2.4 Type file name and specify drive 5.2.5 Insert floppy diskette into drive 5.2.6 Click at "OK"
		5.3 Opened saved file of Web document	5.3.1 Insert floppy diskette with file into drive 5.3.2 Open File menu 5.3.3 Click at Open File... 5.3.4 Type file name and specify drive 5.3.5 Click at "OK"
6.	Printing Web Pages	6.1 Get the printer ready	6.1.1 Switch on printer 6.1.2 Feed in paper
		6.2 Print Web pages	6.2.1 Open File menu 6.2.2 Click at Print 6.2.3 Select print options – number of copies, print quality, pages, etc. 6.2.4 Click at "OK"
7.	Closing Netscape	7.1 Close Netscape	7.1.1 Open File menu 7.1.2 Click at Exit

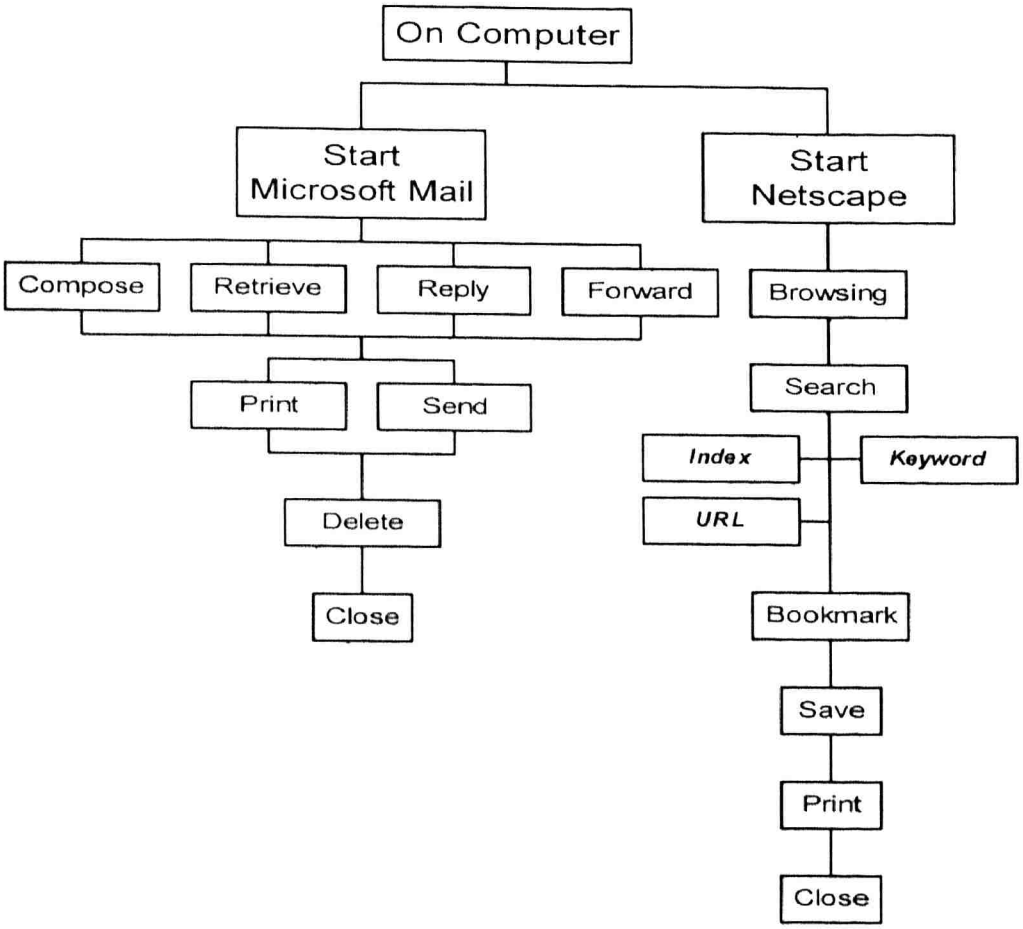

FIGURE 4: Task Analysis Flow-Chart for the BasIT Training Package

Step Three: Definition of Instructional Objectives

Based on the results of the task analysis, the instructional objectives for the BasIT training package were defined. The objectives for the learning tasks were defined and listed using the form entitled "Learning Tasks and Their Objectives" (Appendix D). The result is shown in Table 22.

TABLE 22

Learning Tasks and The Objectives of the BasIT Training Package

Task/Subtasks	Terminal Objectives (TO)	Intermediate Objectives (IO)	Enabling Objectives (EO)
Content/Topic: E-mail (Microsoft Mail)			
1. Starting Microsoft Mail	TO1 Provided with an Internet-ready computer with Microsoft Mail installed, the participant should be able to start Microsoft Mail running.		
1.1 Switch on the computer		IO1.1 Provided with a computer connected to the power point on the wall, the participant should be able to turn on the computer.	EO1.1.1 Provided with a computer connected to the power point on the wall, the participant should be able to locate all the switches concerned and switch them to the "on" position.
1.2 Click on the Microsoft Mail icon		IO1.2 Provided with an Internet-ready computer with Microsoft Mail installed, the participant should be able to use the mouse to double-click on the Microsoft Mail icon.	Provided with an Internet-ready computer with Microsoft Mail installed, the participant should be able to EO1.2.1 start Microsoft Windows running. EO1.2.2 (Windows started) find the Microsoft Mail icon in the Windows program group. EO1.2.3 (Microsoft Mail icon found) point at the Microsoft Mail icon and double-click.

TABLE 22 (continued)

Learning Tasks and The Objectives of the BasIT Training Package

Task/Subtasks	Terminal Objectives (TO)		Intermediate Objectives (IO)		Enabling Objectives (EO)	
Content/Topic: E-mail (Microsoft Mail)						
1. Starting Microsoft Mail (continued)						
1.3 Login			IO1.3	Provided with an Internet-ready computer with Microsoft Mail Started, the participant should be Able to login to use Microsoft Mail.	EO1.3.1	When Microsoft Mail start, the participant should be able to type user name and password in the dialog box that appeared to login.
2. Composing Mail	TO2	The participant should be able to compose a mail using Microsoft Mail installed in an Internet-ready computer.				
2.1 Select recipient			IO2.1	Provided with a computer running Microsoft Mail, the participant Should be able to select the Recipients of mail and copy of mail composed.	EO2.1.1	On Microsoft Mail's Compose Mail window, the participant should be able to use the mouse to click on the Address button to open the Address Book.
					EO2.1.2	In Microsoft Mail's Address Book, the participant should be able to select the recipient of the mail and copy of the mail composed.

TABLE 22 (continued)

Learning Tasks and The Objectives of the BasIT Training Package

Task/Subtasks	Terminal Objectives (TO)	Intermediate Objectives (IO)		Enabling Objectives (EO)	
Content/Topic: E-mail (Microsoft Mail)					
2. Composing Mail (continued)					
2.2 Add new correspondents		IO2.2	With Microsoft Mail running, the Participant should be able to add New correspondent's record into The Address Book.	EO2.2.1	In Microsoft Mail's Address Book, the participant should be able to click on the folder button to add in new correspondents.
				EO2.2.2	In the dialog box that appeared, the participant should be able to type in the particulars of the new correspondent to be added.
				EO2.2.3	After typing in the particulars, the participant should be able to click on the save button to save the particulars.
2.3 Typing subject of message.		IO2.3	In Microsoft Mail's Compose Mail window, the participant Should be able to type the subject of message in the space provided.		In Microsoft Mail's Compose Mail window, the participant should be able to
				EO2.3.1	click at the space for Subject to activate the typing mode.
				EO2.3.2	Type the Subject of message of the mail when the cursor blinks at the Subject bar.

TABLE 22 (continued)

Learning Tasks and The Objectives of the BasIT Training Package

Task/Subtasks	Terminal Objectives (TO)	Intermediate Objectives (IO)	Enabling Objectives (EO)
Content/Topic: E-mail (Microsoft Mail)			
2. Composing Mail (continued)			
2.4 Type the message		IO2.4 In Microsoft Mail's Compose Mail window; the participant Should be able to type the message in the space provided.	In Microsoft Mail's Compose Mail window, the participant should be able to
			EO2.4.1 click at the message pad to activate typing mode.
			EO2.4.2 Type the message of the mail when the cursor blinks in the message pad.
3. Sending Mail	TO3 After composing a mail using Microsoft Mail, the participant should be able to send the mail.		
3.1 Select options		IO3.1 After composing a mail using Microsoft Mail, the participant Should be able to select the options For sending the mail.	In Microsoft Mail's Compose Mail window, the participant should be able to
			EO3.1.1 click on the Option button.
			EO3.1.2 specify priority of mail and other options in the Options dialog box.

TABLE 22 (continued)

Learning Tasks and The Objectives of the BasIT Training Package

Task/Subtasks		Terminal Objectives (TO)		Intermediate Objectives (IO)		Enabling Objectives (EO)	
Content/Topic: E-mail (Microsoft Mail)							
3.	**Sending Mail** (continued)						
3.2	Send mail			IO3.2	After selecting the options for Sending the mail, the participant Should be able to send the mail.	EO3.2.1	In Microsoft Mail's Compose Mail window, the participant should be able to click on the send button to send the mail.
4.	**Retrieving Mail**	TO4	Provided with an Internet-ready computer with Microsoft Mail installed, the participant should be able to retrieve electronic mail.				
4.1	Open In Box folder			IO4.1	In Microsoft Mail's main window, The participant should be able to Open the In Box folder.	EO4.1.1	In Microsoft Mail's main window, the participant should be able to double-click at the In Box folder.
4.2	Select mail to be opened			IO4.2	From the list of mail in the In Box Folder, select the mail to be opened.	EO4.2.1	From the list of mail in the In Box folder, double-click on the mail to be opened.

TABLE 22 (continued)

Learning Tasks and The Objectives of the BasIT Training Package

Task/Subtasks		Terminal Objectives (TO)		Intermediate Objectives (IO)		Enabling Objectives (EO)
Content/Topic: E-mail (Microsoft Mail)						
5. **Replying to a Mail**	TO5	Provided with an Internet-ready computer with Microsoft Mail installed, the participant should be able to reply to a mail received.	IO5.1	After reading a mail, the participant should be able to reply to the mail.	EO5.1.1	After reading a mail, the participant should be able to click-on the Reply or Reply All button.
					EO5.1.2	In Microsoft Mail's Reply window, the participant should be able to type the reply message.
					EO5.1.3	After the reply message is completed, the participant should be able to send the message.
6. **Forwarding Mail**	TO6	Provided with an Internet-ready computer with Microsoft Mail installed, the participant should be able to forward a mail received to another person.	IO6.1	After reading a mail, the participant should be able to forward the mail.	EO6.1.1	After reading a mail, the participant should be able to click on the Forward button to forward the mail.
					EO6.1.2	In Microsoft Mail's Forward Mail window, the participant should be able to select the recipient for the mail to be forwarded.

TABLE 22 (continued)

Learning Tasks and The Objectives of the BasIT Training Package

Task/Subtasks	Terminal Objectives (TO)		Intermediate Objectives (IO)		Enabling Objectives (EO)	
Content/Topic: E-mail (Microsoft Mail)						
6. Forwarding Mail (continued)					EO6.1.3	In Microsoft Mail's Forward Mail window, the participant should be able to change or add to the content of the mail to be forwarded.
					EO6.1.4	In Microsoft Mail's Forward Mail window, the participant should be able to send the mail to be forwarded.
7. Printing Mail	TO7	Provided with an Internet-ready computer with Microsoft Mail installed, the participant should be able to print mail messages.				
7.1 Get the printer ready			IO7.1	Provided with a printer connected And set up for a computer, the participant should be able to get the printer ready to print.	EO7.1.1	Provided with a printer, the participant should be able to switch it on.
					EO7.1.2	Provided with a printer, the participant should be able to feed in paper into the printer.

TABLE 22 (continued)

Learning Tasks and The Objectives of the BasIT Training Package

Task/Subtasks	Terminal Objectives (TO)	Intermediate Objectives (IO)	Enabling Objectives (EO)
Content/Topic: E-mail (Microsoft Mail)			
7. Printing Mail (continued)			
7.2 Print the mail		IO7.2 Provided with an Internet-ready computer with Microsoft Mail Installed that is connected to a Printer set up to print, the Participant should be able to print a mail.	EO7.2.1 In Microsoft Mail's main window, the participant should be able to open a mail to be printed. EO7.2.2 In Microsoft Mail's main window, the participant should be able to select Print from the File menu. EO7.2.3 In the Print dialog box that appeared, the participant should be able to specify number of copies to be printed, print quality, pages, etc. before printing.
8. Deleting Mail	TO8 Provided with an Internet-ready computer with Microsoft Mail installed, the participant should be able to delete mail from the In Box folder and the Deleted Mail folder.		

TABLE 22 (continued)

Learning Tasks and The Objectives of the BasIT Training Package

Task/Subtasks	Terminal Objectives (TO)	Intermediate Objectives (IO)		Enabling Objectives (EO)	
Content/Topic: E-mail (Microsoft Mail)					
8. Deleting Mail (continued)					
8.1 Delete mail from In Box folder		IO8.1	In Microsoft Mail's main window, The participant should be able to Delete mail from the In Box folder.	EO8.1.1	In Microsoft Mail's main window, the participant should be able to open the In Box folder.
				EO8.1.2	In the In Box folder window, the participant should be able to select a mail to be deleted.
				EO8.1.3	With the mail to be deleted highlighted in the In Box folder, the participant should be able to click at the Delete button.
8.2 Delete mail from Deleted Mail folder		IO8.2	In Microsoft Mail's main window, The participant should be able to Delete mail from the Deleted Mail folder.	EO8.2.1	In Microsoft Mail's main window, the participant should be able to open the Deleted Mail folder.
				EO8.2.2	In the Deleted Mail folder Window, the participant should be able to select a mail to be deleted.

TABLE 22 (continued)

Learning Tasks and The Objectives of the BasIT Training Package

Task/Subtasks		Terminal Objectives (TO)		Intermediate Objectives (IO)		Enabling Objectives (EO)	
Content/Topic: E-mail (Microsoft Mail)							
8.	**Deleting Mail** (continued)						
8.2	Delete mail from Deleted Mail folder (continued)					EO8.2.3	With the mail to be deleted highlighted in the Deleted Mail folder, the participant should be able to click at the Delete button.
9.	**Closing Microsoft Mail**	TO9	Provided with an Internet-ready computer with Microsoft Mail installed, the participant should be able to close Microsoft Mail after using it.	IO9.1	In Microsoft Mail's main window, The participant should be able to Close Microsoft Mail.	EO9.1.1	In Microsoft Mail's main window, the participant should be able to open File menu.
						EO9.1.2	In Microsoft Mail's main window, the participant should be able to click at Exit in the File menu.

TABLE 22 (continued)

Learning Tasks and The Objectives of the BasIT Training Package

Task/Subtasks		Terminal Objectives (TO)		Intermediate Objectives (IO)		Enabling Objectives (EO)	
Content/Topic: WWW (Netscape)							
1.	**Starting Netscape**	TO1	Provided with an Internet-ready computer with Netscape installed, the participant should be able to starting the Netscape running.				
1.1	Switch on the computer			IO1.1	Provided with a computer connected to the power point, the participant should be able to switch on the computer.	EO1.1.1	Provided with a computer connected to the power point, the participant should be able to locate all the switches concerned and switch them to the "on" position.
1.2	Click on the Netscape icon			IO1.2	Provided with an Internet-ready computer with Netscape installed, The participant should be able to double-click on the Netscape icon.		Provided with an Internet-ready computer with Netscape installed, the participant should be able to
						EO1.2.1	start the Microsoft Windows.
						EO1.2.2	find the Netscape icon in the Windows program group.
						EO1.2.3	point at the Netscape icon and double-click.

TABLE 22 (continued)

Learning Tasks and The Objectives of the BasIT Training Package

Task/Subtasks	Terminal Objectives (TO)	Intermediate Objectives (IO)	Enabling Objectives (EO)
Content/Topic: WWW (Netscape)			
2. Browsing Web Document	TO2 Provided with an Internet-ready computer with Netscape running, the participant should be able to browse Web documents.		
2.1 Scrolls up/down		IO2.1 In Netscape's window, the participant should be able to move the document up and down to read it.	EO2.1.1 In Netscape's window, the participant should be able to point at the up/down arrows on the side of the frames and click to move the document up/down.
2.2 Select Hypertext		IO2.2 In Netscape's window, the participant should be able to select a Hypertext in the document.	In Netscape's window, the participant should be able to EO2.2.1 recognize the Hypertext in the document. EO2.2.2 point and click at a Hypertext.

TABLE 22 (continued)

Learning Tasks and The Objectives of the BasIT Training Package

Task/Subtasks		Terminal Objectives (TO)		Intermediate Objectives (IO)		Enabling Objectives (EO)	
Content/Topic: WWW (Netscape)							
2.3	Back and Forward			IO2.3	In Netscape's window, the participant should be able to jump back and forward between visited Web sites.	EO2.3.1	From one Web site, the participant should be able to click at the Back button to return to the previously visited Web site.
						EO2.3.2	From one Web site, the participant should be able to click at the Forward button to jump to the Web site from where the Back button was clicked.
2.4	Interrupt data transmission			IO2.4	While data was being transferred, The participant should be able to interrupt the data transmission.	EO2.4.1	While data was being transferred, the participant should be able to click at the Stop button to stop the transmission.
3.	**Searching for Information**	TO3	Provided with an Internet-ready computer with Netscape running, the participant should be able to search for information in the WWW.				

TABLE 22 (continued)

Learning Tasks and The Objectives of the BasIT Training Package

Task/Subtasks	Terminal Objectives (TO)	Intermediate Objectives (IO)		Enabling Objectives (EO)	
Content/Topic: WWW (Netscape)					
3. Searching for Information (continued)					
3.1 Using index of Search Engines		IO3.1	Running Netscape on the computer, The participant should be able to Search for information using subject index of the Search Engines on the WWW.	EO3.1.1	With Netscape running on the computer, the participant should be able to click on the Net Search button.
				EO3.1.2	On the Net Search page in Netscape's window, the participant should be able to click on any subject to get information.
3.2 Use keywords		IO3.2	Running Netscape on the computer, The participant should be able to Search for information on the WWW using keywords.	EO3.2.1	With Netscape running on the computer, the participant should be able to click on Net Search button.
				EO3.2.2	On the Net Search page in Netscape's window, click on the keyword bar.
				EO3.2.3	When the cursor blinks in the keyword bar, the participant should be able to type the keyword and submit it for search.

TABLE 22 (continued)

Learning Tasks and The Objectives of the BasIT Training Package

Task/Subtasks		Terminal Objectives (TO)		Intermediate Objectives (IO)		Enabling Objectives (EO)	
Content/Topic: WWW (Netscape)							
3.	**Searching for Information** (continued)						
3.3	Use Uniform Resource Locator (URL)			IO3.3	Running Netscape on the computer, The participant should be able to Type new Uniform Resource Locator (URL) in the Location bar to get to The Web site.	EO3.3.1	With Netscape running on the computer, the participant should be able to click at the Location bar to activate typing mode.
						EO3.3.2	When the cursor blinks in the Location bar, the participant should be able to delete the existing URL and type in the new URL.
4.	**Using Bookmarks**	TO4	Provided with an Internet-ready computer with Netscape running, the participant should be able to make use of Book-marks to mark Web sites.				
4.1	Add Bookmark			IO4.1	Running Netscape on a computer, The participant should be able to Add Bookmark to a Web site.	EO4.1.1	With Netscape running on a computer, the participant should be able to open the Bookmark menu.
						EO4.1.2	In the Bookmark menu, the participant should be able to click at Add Bookmark.

TABLE 22 (continued)

Learning Tasks and The Objectives of the BasIT Training Package

Task/Subtasks	Terminal Objectives (TO)	Intermediate Objectives (IO)		Enabling Objectives (EO)	
Content/Topic: WWW (Netscape)					
4. Using Bookmarks (continued)					
4.2 Go to a Bookmarked site		IO4.2	Running Netscape on the computer, The participant should be able to go Directly to the Bookmarked sites.	EO4.2.1	With Netscape running on a computer, the participant should be able to open the Bookmark menu.
				EO4.2.2	In the Bookmark menu, the participant should be able to click at the desired Web site from the list of book-marked sites.
4.3 Remove Bookmark		IO4.3	Running Netscape on the computer, The participant should be able to remove the Bookmark on a Web Site.	EO4.3.1	With Netscape running on a computer, the participant should be able to open the Bookmark menu.
				EO4.3.2	In the Bookmark menu, the participant should be able to click at Go to Bookmark.
				EO4.3.3	On the list of Bookmarked sites, the participant should be able to select Web site from which Bookmark is to be removed and press Delete key.

TABLE 22 (continued)

Learning Tasks and The Objectives of the BasIT Training Package

Task/Subtasks		Terminal Objectives (TO)		Intermediate Objectives (IO)		Enabling Objectives (EO)	
Content/Topic: WWW (Netscape)							
5.	**Saving the Content of a Web Document**	TO5	Provided with an Internet-ready computer with Netscape running, the participant should be able to save the content of a Web document in a floppy diskette.				
5.1	Save the text			IO5.1	Running Netscape on a computer, The participant should be able to Save the text on a document in a Floppy diskette.		With Netscape running on a computer, the participant should be able to
						EO5.1.1	insert a floppy diskette into the drive.
						EO5.1.2	open the File menu.
						EO5.1.3	From the File menu, the participant should be able to click at Save As...
						EO5.1.4	In the Save As... dialog box, the participant should be able to type in file name and specify the floppy drive.

TABLE 22 (continued)

Learning Tasks and The Objectives of the BasIT Training Package

Task/Subtasks	Terminal Objectives (TO)	Intermediate Objectives (IO)	Enabling Objectives (EO)
Content/Topic: WWW (Netscape)			
5. Saving the Content of a Web Document (continued)			
5.2 Save the graphics		IO5.2 Running Netscape on a computer, The participant should be able to Save the graphics on the document in a floppy diskette.	With Netscape running on a computer, the participant should be able to EO5.2.1 insert a floppy diskette into the drive. EO5.2.2 point at a graphics on the Web document and click the right mouse button. EO5.2.3 In the dialog box that appeared after clicking the right mouse button, the participant should be able to click on Save Image As... EO5.2.4 In the Save Image As... dialog box, the participant should be able to type in file name and specify the floppy drive.

TABLE 22 (continued)

Learning Tasks and The Objectives of the BasIT Training Package

Task/Subtasks	Terminal Objectives (TO)	Intermediate Objectives (IO)	Enabling Objectives (EO)
Content/Topic: WWW (Netscape)			
5. Saving the Content of a Web Document (continued)			
5.3 Open saved files of Web document		IO5.3 Running Netscape on a computer, The participant should be able to open the saved files of a Web document to view it.	With Netscape running on the computer, the participant should be able to
			EO5.3.1 insert the floppy diskette with the saved files into the drive.
			EO5.3.2 open the File menu.
			EO5.3.3 In the File menu, the participant should be able to click on Open File.
			EO5.3.4 In the dialog box that appeared, the participant should be able to type in file name and specify the floppy drive where the file is to be retrieved.

TABLE 22 (continued)

Learning Tasks and The Objectives of the BasIT Training Package

Task/Subtasks		Terminal Objectives (TO)		Intermediate Objectives (IO)		Enabling Objectives (EO)	
Content/Topic: WWW (Netscape)							
6.	**Printing Web Pages**	TO6	Provided with an Internet-ready computer with Netscape installed and connected to a prin , the participant should be able to print Web pages from a Web site.				
6.1	Get the printer ready			IO6.1	With Netscape running on the computer connected to the printer, the participant should be able to get the printer ready to print.		With Netscape running on the computer connected to the printer, the participant should be able to
						EO6.1.1	switch on the printer.
						EO6.1.2	feed in paper for printing.

TABLE 22 (continued)

Learning Tasks and The Objectives of the BasIT Training Package

Task/Subtasks		Terminal Objectives (TO)		Intermediate Objectives (IO)		Enabling Objectives (EO)	
Content/Topic: WWW (Netscape)							
6.	**Printing Web Pages** (continued)						
6.2	Print Web pages			IO6.2	With Netscape running on the computer connected to the printer set up for printing, the participant should be able to print Web pages from a Web site.	EO6.2.1	When the Web site to be printed is on the Netscape screen, the participant should be able to open the File menu.
						EO6.2.2	In the file menu, the participant should be able to click at Print.
						EO6.2.3	In the Print dialog box that appeared, the participant should be able to specify number of copies to be printed, print quality, pages, etc.
7.	**Closing Netscape**	TO7	Provided with an Internet-ready computer with Netscape running, the participant should be able to close Netscape after using it.	IO7.1	Running Netscape on the computer, The participant should be able to close Netscape.	EO7.1.1	With Netscape running on the computer, the participant should be able to open the File menu.
						EO7.1.2	In the File menu, the participant should be able to click at Exit.

ID researchers stipulate that instructional objectives should clearly identify the skills to be learned (performance), the conditions under which the skills must be performed (condition), and the criteria for successful performance (standard) (Dick and Carey, 1985; Leshin, Pollock, and Reigeluth, 1992). Moreover, teachers – as adult learners – need to have clear goals in their learning (Bennett, 1994; Cline, Billingsley, and Farley, 1993; Wood and Thompson, 1980). In view of the importance of having clearly defined objectives in learning, the researcher analyzed and evaluated each objective of the BasIT training package before finally entering it into the list in Table 21. The form entitled "Analysis of Instructional Objectives" (Appendix C) was used for this purpose. The result of the analysis is recorded in Table 23.

TABLE 23

Analysis of Instructional Objectives for the BasIT Training Package

Objective No.	Condition	Performance	Standard
	Content/Topic: E-mail (Microsoft Mail)		
TO1	Internet-ready computer with Microsoft Mail	start . . .	. . . Microsoft Mail
IO1.1	computer connected to power point on the wall	turn on . . .	. . . the computer
EO1.1.1	computer connected to power point on the wall	locate . . .	. . . switches concerned
		switch to . . .	. . . "on" position
IO1.2	Internet-ready computer with Microsoft Mail and mouse	double click . . .	. . . at Microsoft Mail icon
EO1.2.1	Internet-ready computer with Microsoft Mail and mouse	start . . .	. . . Windows
EO1.2.2	Internet-ready computer with Microsoft Mail and mouse, Windows started	find . . .	. . . Microsoft Mail icon

ID researchers stipulate that instructional objectives should clearly identify the skills to be learned (performance), the conditions under which the skills must be performed (condition), and the criteria for successful performance (standard) (Dick and Carey, 1985; Leshin, Pollock, and Reigeluth, 1992). Moreover, teachers – as adult learners – need to have clear goals in their learning (Bennett, 1994; Cline, Billingsley, and Farley, 1993; Wood and Thompson, 1980). In view of the importance of having clearly defined objectives in learning, the researcher analyzed and evaluated each objective of the BasIT training package before finally entering it into the list in Table 21. The form entitled "Analysis of Instructional Objectives" (Appendix C) was used for this purpose. The result of the analysis is recorded in Table 23.

TABLE 23

Analysis of Instructional Objectives for the BasIT Training Package

Objective No.	Condition	Performance	Standard
	Content/Topic: E-mail (Microsoft Mail)		
TO1	Internet-ready computer with Microsoft Mail	start . . .	. . . Microsoft Mail
IO1.1	computer connected to power point on the wall	turn on . . .	. . . the computer
EO1.1.1	computer connected to power point on the wall	locate . . .	. . . switches concerned
		switch to . . .	. . . "on" position
IO1.2	Internet-ready computer with Microsoft Mail and mouse	double click . . .	. . . at Microsoft Mail icon
EO1.2.1	Internet-ready computer with Microsoft Mail and mouse	start . . .	. . . Windows
EO1.2.2	Internet-ready computer with Microsoft Mail and mouse, Windows started	find . . .	. . . Microsoft Mail icon

TABLE 23 (continued)

Analysis of Instructional Objectives for the BasIT Training Package

Objective No.	Condition	Performance	Standard
	Content/Topic: E-mail (Microsoft Mail) (continued)		
EO1.2.3	Internet-ready computer with Microsoft Mail and mouse, Windows started, Microsoft Mail icon found	Point and double-click . . .	. . . at Microsoft Mail icon
IO1.3	Internet-ready computer with Microsoft Mail started	login . . .	. . . to use Microsoft Mail
EO1.3.1	Microsoft Mail started	type user name and password . . .	. . . in dialog box
TO2	Internet-ready computer with Microsoft Mail	compose a mail . . .	. . . using Microsoft Mail
IO2.1	Microsoft Mail running	select recipients . . .	. . . for mail and copy of mail
EO2.1.1	in Microsoft Mail's Compose Mail window, use mouse	click . . .	. . . Address button
EO2.1.2	in Microsoft Mail's Address Book	select recipients . . .	. . . for mail and copy of mail
IO2.2	Microsoft Mail running	add new correspondents . . .	. . . into Address Book
EO2.2.1	in Microsoft Mail's Address Book	click . . .	. . . on Folder button
EO2.2.2	In New User dialog box	type . . .	. . . particulars of new correspondent
EO2.2.3	after typing particulars of new correspondent	click . . .	. . . on Save button
IO2.3	in Microsoft Mail's Compose Mail window	type subject of message . . .	. . . in the space provided
EO2.3.1	in Microsoft Mail's Compose Mail window	click . . .	. . . at Subject bar
EO2.3.2	when cursor blinks in Subject bar	type . . .	. . . subject of message
IO2.4	in Microsoft Mail's Compose Mail window	type message . . .	. . . in the space provided
EO2.4.1	in Microsoft Mail's Compose Mail window	click . . .	. . . at message pad
EO2.4.2	when cursor blinks in message pad	type . . .	. . . message
TO3	after composing mail using Microsoft Mail	send . . .	. . . the mail
IO3.1	after composing mail using Microsoft Mail	select . . .	. . . options
EO3.1.1	after composing mail using Microsoft Mail	click . . .	. . . at Option button
EO3.1.2	in Option dialog box	specify . . .	. . . priority of mail and other options

TABLE 23 (continued)

Analysis of Instructional Objectives for the BasIT Training Package

Objective No.	Condition	Performance	Standard
	Content/Topic: E-mail (Microsoft Mail) (continued)		
TO4	Internet-ready computer with Microsoft Mail	retrieve . . .	. . . mail
IO4.1	in Microsoft Mail main window	open . . .	. . . In Box folder
EO4.1.1	in Microsoft Mail's main window	double-click . . .	. . . at In Box folder
IO4.2	from the list of mail in In Box folder	select . . .	. . . mail to be opened
EO4.2.1	from the list of mail in In Box folder	double-click . . .	. . . at mail to be opened
TO5	Internet-ready computer with Microsoft Mail	reply . . .	. . . to a mail
IO5.1	after reading a mail	reply . . .	. . . the mail
EO5.1.1	after reading a mail	click . . .	. . . at Reply/Reply All button
EO5.1.2	in Microsoft Mail's Reply window	type . . .	. . . reply message
EO5.1.3	after reply message is completed	send . . .	. . . the message
TO6	Internet-ready computer with Microsoft Mail	Forward mail . . .	. . . to another person
IO6.1	after reading a mail	Forward . . .	. . . the mail
EO6.1.1	after reading a mail	click . . .	. . . at Forward button
EO6.1.2	in Microsoft Mail's Forward Mail window	Select . . .	. . . recipients for the mail to be forwarded
EO6.1.3	in Microsoft Mail's Forward Mail window	Change or add to . . .	. . . content of mail to be forwarded
EO6.1.4	in Microsoft Mail's Forward Mail window	send . . .	. . . the mail to be forwarded
TO7	Internet-ready computer with Microsoft Mail	print . . .	. . . mail messages
IO7.1	printer connected and set up for computer	get . . . ready	. . . printer . . . for printing job
EO7.1.1	Printer	Switch	on
EO7.1.2	printer, switched on	feed . . .	. . . paper into printer
IO7.2	Internet-ready computer with Microsoft Mail, connected and set up for printing	print . . .	. . . mail messages
EO7.2.1	in Microsoft Mail's main window	open . . .	. . . mail to be printed
EO7.2.2	in Microsoft Mail's main window	Select . . .	. . . Print from File menu
EO7.2.3	in Print dialog box	Specify . . .	. . . number of copies, print quality, pages, etc.

TABLE 23 (continued)

Analysis of Instructional Objectives for the BasIT Training Package

Objective No.	Condition	Performance	Standard
	Content/Topic: E-mail (Microsoft Mail) (continued)		
TO8	Internet-ready computer with Microsoft Mail	Delete . . .	. . . mail from In Box and Deleted Mail folder
IO8.1	in Microsoft Mail's main window	Delete . . .	. . . mail from In Box folder
EO8.1.1	in Microsoft Mail's main window	open . . .	. . . In Box folder
EO8.1.2	in In Box folder	Select . . .	. . . mail to be deleted
EO8.1.3	mail to be deleted highlighted in In Box folder	click . . .	. . . at Delete button
IO8.2	in Microsoft Mail's main window	Delete . . .	. . . mail from Deleted Mail folder
EO8.2.1	in Microsoft Mail's main window	open . . .	. . . Deleted Mail folder
EO8.2.2	in Deleted Mail folder	Select . . .	. . . mail to be deleted
EO8.2.3	mail to be deleted highlighted in Deleted Mail folder	click . . .	. . . at Delete button
TO9	Internet-ready computer with Microsoft Mail	close . . .	. . . Microsoft Mail
IO9.1	in Microsoft Mail's main window	close . . .	. . . Microsoft Mail
EO9.1.1	in Microsoft Mail's main window	open . . .	. . . File menu
EO9.1.2	in File menu	click . . .	. . . at Exit
	Content/Topic: WWW (Netscape)		
TO1	Internet-ready computer with Netscape	start . . .	. . . Netscape
IO1.1	computer connected to power point on the wall	Switch . . .	. . . on
EO1.1.1	computer connected to power point on the wall	Locate . . .	. . . switches
		turn . . .	. . . to "on" position
IO1.2	Internet-ready computer with Netscape	Double-click . . .	. . . at Netscape icon
EO1.2.1	Internet-ready computer with Netscape	start . . .	. . . Windows
EO1.2.2	Internet-ready computer with Netscape, Windows started	find . . .	. . . Netscape icon

TABLE 23 (continued)

Analysis of Instructional Objectives for the BasIT Training Package

Objective No.	Condition	Performance	Standard
	Content/Topic: WWW (Netscape) (continued)		
EO1.2.3	Internet-ready computer with Netscape, Windows started, found Netscape icon	point and double-click . . .	. . . at Netscape icon
TO2	Internet-ready computer with Netscape	Browse . . .	. . . Web documents
IO2.1	in Netscape window	Move document . . .	. . . up/down
EO2.1.1	in Netscape window	point and click . . .	. . . at up/down arrows
IO2.2	in Netscape window	Select . . .	. . . hypertext
EO2.2.1	in Netscape window	Identify . . .	. . . hypertext
EO2.2.2	in Netscape window	point and click . . .	. . . at hypertext
IO2.3	in Netscape window	jump . . .	. . . back and forward
EO2.3.1	from one Web site	click . . .	. . . on Back button
EO2.3.2	from one Web site	click . . .	. . . on Forward button
IO2.4	while data is being transferred	Interrupt . . .	. . . data transfer
EO2.4.1	while data is being transferred	click . . .	. . . at Stop button
TO3	Internet-ready computer with Netscape running	Search . . .	. . . for information
IO3.1	Netscape running	Search . . .	. . . using index of Search Engine
EO3.1.1	Netscape running	click . .	. . . at Net Search button
EO3.1.2	from index of Search Engine	click . . .	. . . at any subject
IO3.2	Netscape running	Search . . .	. . . using keywords
EO3.2.1	Netscape running	click . . .	. . . at Net Search button
EO3.2.2	on Net Search page	click . . .	. . . at keyword bar
EO3.2.3	when cursor blinks in keyword bar	type and submit . . .	. . . keyword for search
IO3.3	Netscape running	type . . .	. . . Uniform Resource Locator (URL) in Location bar
EO3.3.1	Netscape running	click . . .	. . . at Location bar
EO3.3.2	when cursor blinks in Location bar	Delete . . .	. . . existing URL
		type . . .	. . . new URL
TO4	Internet-ready computer with Netscape running	use Bookmark . . .	. . . to mark Web sites
IO4.1	Netscape running	add Bookmark . . .	. . . to a Web site
EO4.1.1	Netscape running	open . . .	. . . Bookmark menu
EO4.1.2	when the Bookmark menu is opened	click . . .	. . . at Add Bookmark
IO4.2	Netscape running	go directly to . . .	. . . Bookmarked sites
EO4.2.1	Netscape running	open . . .	. . . Bookmark menu

TABLE 23 (continued)

Analysis of Instructional Objectives for the BasIT Training Package

Objective No.	Condition	Performance	Standard
	Content/Topic: WWW (Netscape) (continued)		
EO4.2.2	In the Bookmark menu	click . . .	. . . on a Web site in the list
IO4.3	Netscape running	Remove . . .	. . . Bookmark from a Bookmarked site
EO4.3.1	Netscape running	open . . .	. . . Bookmark menu
EO4.3.2	In the Bookmark menu	click . . .	. . . at Go to Bookmark...
EO4.3.3	On the list of Bookmarked sites	click to select . . .	. . . Bookmarked site to be removed
		press . . .	. . . Delete key
TO5	Internet-ready computer with Netscape running	save . . .	. . . Web document in floppy diskette
IO5.1	Netscape running	save . . .	. . . the text of Web document in floppy diskette
EO5.1.1	Netscape running	Insert floppy diskette . . .	. . . into drive
EO5.1.2	Netscape running	open . . .	. . . File menu
EO5.1.3	from File menu	click . . .	. . . at Save As...
EO5.1.4	in Save As... dialog box	type . . .	. . . file name
		Specify . . .	. . . drive
IO5.2	Netscape running	save . . .	. . . graphics on Web document in floppy diskette
EO5.2.1	Netscape running	Insert floppy diskette . . .	. . . into drive
EO5.2.2	Netscape running	point at . . .	. . . graphics
		click . . .	. . . right mouse button
EO5.2.3	in the shortcut menu	click . . .	. . . at Save This Image As
EO5.2.4	in Save This Image As... dialog box	type . . .	. . . file name
		Specify . . .	. . . drive
IO5.3	Netscape running	open . . .	. . . saved file of a Web document
EO5.3.1	Netscape running	Insert floppy diskette . . .	. . . with saved file into drive
EO5.3.2	Netscape running	open . . .	. . . File menu
EO5.3.3	in File menu	click . . .	. . . at Open File
EO5.3.4	in Open File dialog box	type . . .	. . . file name
		Specify . . .	. . . drive
TO6	Internet-ready computer with Netscape, connected to and set up for a printer	print . . .	. . . Web pages
IO6.1	Netscape running, printer connected	get . . . ready . . .	. . . printer . . . for printing job
EO6.1.1	printer	Switch . . .	. . . on
EO6.1.2	printer, on	feed . . .	. . . paper into the printer

TABLE 23 (continued)

Analysis of Instructional Objectives for the BasIT Training Package

Objective No.	Condition	Performance	Standard
	Content/Topic: WWW (Netscape) (continued)		
IO6.2	Netscape running, printer connected	print . . .	. . . Web pages
EO6.2.1	at the Web page to be printed	open . . .	. . . File menu
EO6.2.2	in File menu	click . . .	. . . at Print
EO6.2.3	in Print dialog box	Specify . . .	. . . number of copies to be printed, print quality, pages, etc.
TO7	Internet-ready computer with Netscape running	close . . .	. . . Netscape
IO7.1	Netscape running	close . . .	. . . Netscape
EO7.1.1	Netscape running	open . . .	. . . File menu
EO7.1.2	in File menu	click . . .	. . . at Exit

Step Four: Selection of Media and Instructional Activities

Based on the results of the task analysis and the objectives set, the researcher distributed the content of the BasIT training package to be delivered in four two-hour sessions – two sessions for e-mail and another two for WWW. The media and instructional activities for each session were selected by using the form entitled "Selection of Media and Instructional Activities" (Appendix E). This form was adopted based on Gagne's theory of instructional events (Gagne and Briggs, 1979). Media decisions were guided by principles laid down by researchers like Benett (1994), Joyce and Showers (1980), Wood and Thompson (1980), Martin (1990), Oh (1992), and others. Table 24 shows the result.

TABLE 24

Selection of Media and Instructional Activities for the BasIT Training Package

Session 1
Objective of the Lesson/Session:

- Start Microsoft Mail
- Compose mail
- Send mail
- Close Microsoft Mail

Instructional Event	Duration (Min.)	Stimulus	Media	Rationale of Selection	Activities	
					Instructor	Learner
1. Gaining Attention	5	Spoken words, printed words, electronic visuals.	Printed materials, computer slides/ overhead transparencies	• Facilities available • Technology helps in adult learning (Office of Vocational and Adult Education, 1992)	• Discuss strength of e-mail as a mean of communication • Show computer slides/ transparencies	• Listen • Refer to module
2. Informing the learner of the objective	5	Spoken words, printed words, electronic visuals.	Printed materials, computer slides/ overhead transparencies		• Read and explain objectives • Show computer slides/ transparencies	• Listen • Refer to module

TABLE 24 (continued)

Selection of Media and Instructional Activities for the BasIT Training Package

Session 1 (continued)

Instructional Event	Duration (Min.)	Stimulus	Media	Rationale of Selection	Activities	
					Instructor	Learner
3. Stimulating recall of pre-requisite learning	25	Spoken words, printed words, hands-on	Printed materials, computer	• Facilities available • Technology helps in adult learning (Office of Vocational and Adult Education, 1992) • Computers a must in computer-related training (Martin, 1990)	Instruct learners to go through Wintutor activities	Follow instructions to go through Wintutor – practice to use mouse and work in Windows environment
4. Presenting the stimulus material	15	Spoken words, printed words, hands-on.	Printed materials, computer		Demonstrate how to login, compose mail, send mail, and close Microsoft Mail	• Observe • Refer to module • Take notes • Ask questions
5. Providing learner guidance	15	Spoken words, printed words, hands-on.	Printed materials, computer		• Get a learner to try out demonstrated tasks • Provide guidance and comments	• Observe • Give comments • Refer to module • Take notes

TABLE 24 (continued)

Selection of Media and Instructional Activities for the BasIT Training Package

Session 1 (continued)

Instructional Event	Duration (Min.)	Stimulus	Media	Rationale of Selection	Activities	
					Instructor	Learner
6. Eliciting performance	20	Spoken words, printed words, hands-on.	Printed materials, computer	• Facilities available • Technology helps in adult learning (Office of Vocational and Adult Education, 1992) • Computers a must in computer-related training (Martin, 1990)	• Send learners to Work Stations for hands-on • Go around to provide guidance • Get learners together for discussion after hands-on	• Practice • Get help from instructor when necessary • Jot down problems
7. Providing feedback about the performance correctness	10	Spoken words, printed words.	List of problems	Encourage interaction and collaboration (Bennett, 1994)	• Organize discussion • Attend to problems • Distribute Self-Assessment Form (SAF) • Briefing on Assignment	• Report problems • Participate in discussion • Take notes

TABLE 24 (continued)

Selection of Media and Instructional Activities for the BasIT Training Package

Session 1 (continued)

Instructional Event	Duration (Min.)	Stimulus	Media	Rationale of Selection	Activities	
					Instructor	Learner
8. Assessing the performance	20	Spoken words, printed words, hands-on.	Printed materials, computer	• Facilities available • Technology helps in adult learning (Office of Vocational and Adult Education, 1992) • Computers a must in computer-related training (Martin, 1990)	• Send learners back to Work Stations • Provide personal guidance and comments	• Practice • Use SAF • Complete Assignment • Get help when necessary
9. Enhancing retention and transfer	5	Spoken words, printed words, electronic visuals.	Printer materials, computer slides/ transparencies	• Facilities available • Technology helps in adult learning (Office of Vocational and Adult Education, 1992)	• Recapitulation • Inform the learners of what they will learn in the next session • Invite questions if any • Collect SAF and Assignments	• Listen • Refer to module • Take notes • Ask questions • Submit completed SAF and Assignments

TABLE 24 (continued)

Selection of Media and Instructional Activities for the BasIT Training Package

Session 2
Objective of the Lesson/Session:

- Retrieve mail
- Reply to mail
- Forward mail
- Print mail
- Delete mail

Instructional Event	Duration (Min.)	Stimulus	Media	Rationale of Selection	Activities	
					Instructor	Learner
1. Gaining attention	2	Spoken words, printed words, electronic visuals	Printed materials, computer slides/ transparencies	• Facilities available • Technology helps in adult learning (Office of Vocational and Adult Education, 1992)	• Show slides/ transparencies • Explain	• Listen • Refer to module
2. Informing the learner of the objective	3	Spoken words, printed words, electronic visuals	Printed materials, computer slides/ transparencies		• Read and explain objectives • Show slides	• Listen • Refer to module • Ask questions
3. Stimulating recall of pre-requisite learning	5	Spoken words, printed words, electronic visuals	Printed materials, computer slides/ transparencies		Remind learners of what they have learned in last session	• Listen • Refer to module

TABLE 24 (continued)

Selection of Media and Instructional Activities for the BasIT Training Package

Session 2 (continued)

Instructional Event	Duration (Min.)	Stimulus	Media	Rationale of Selection	Activities	
					Instructor	Learner
4. Presenting the stimulus material	20	Spoken words, printed words, hands-on.	Printed materials, computer	• Facilities available • Technology helps in adult learning (Office of Vocational and Adult Education, 1992) • Computer a must in computer-related training (Martin, 1990)	Demonstrate how to retrieve mail, reply to a mail, forward mail, and delete mail	• Observe • Refer to module • Take notes • Ask questions
5. Providing learner guidance	20	Spoken words, printed words, hands-on.	Printed materials, computer		• Get a learner to try out the demonstrated tasks • Provide guidance and comments	• Observe • Give comments • Refer to module • Take notes
6. Eliciting performance	20	Spoken words, printed words, hands-on.	Printed materials, computer		• Send learners to Work Stations for hands-on • Provide personal guidance and comments • Gather learners for discussion after hands-on	• Practice • Get help from instructor when necessary • jot down problems

TABLE 24 (continued)

Selection of Media and Instructional Activities for the BasIT Training Package

Session 2 (continued)

Instructional Event	Duration (Min.)	Stimulus	Media	Rationale of Selection	Activities	
					Instructor	Learner
7. Providing feedback about the performance correctness	10	Spoken words, printed words	List of problems	Encourage interaction and collaboration (Bennett, 1994)	• Organize discussion • Attend to problems • Distribute SAF • Briefing on Assignment	• Report problems • Participate in discussion • Take notes
8. Assessing the performance	30	Spoken words, printed words, hands-on.	Printed materials, computer	• Facilities available • Technology helps in adult learning (Office of Vocational and Adult Education, 1992) • Computer a must in computer-related training (Martin, 1990)	• Send learners back to Work Stations • Provide personal guidance and comments	• Practice • Use SAF • Complete Assignment
9. Enhancing retention and transfer	10	Spoken words, printed words, electronic visuals	Printed materials, computer slides/ transparencies	• Facilities available • Technology helps in adult learning (Office of Vocational and Adult Education, 1992)	• Suggest ways to use e-mail for professional support and in teaching/learning • Get other suggestions • Collect SAF and Assignment	• Listen • Take notes • Offer suggestions • Submit SAF and Assignments

TABLE 24 (continued)

Selection of Media and Instructional Activities for the BasIT Training Package

Session 3 and 4
Objective of the Lesson/Session:

- Start/close Netscape
- Browse Web documents
- Search for information
- Use Bookmark
- Save Web document
- Print Web pages

Instructional Event	Duration (Min.)	Stimulus	Media	Rationale of Selection	Activities	
					Instructor	Learner
1. Gaining attention	5	Spoken words, printed words, electronic visuals	Printed materials, computer slides/ transparencies	• Facilities available • Technology helps in adult learning (Office of Vocational and Adult Education, 1992)	• Show computer slides/ transparencies • Explain	• Listen • Refer to module
2. Informing the learner of the objective	5	Spoken words, printed words, electronic visuals	Printed materials, computer slides/ transparencies		• Read and explain the objectives • Show computer slides/ transparencies	• Listen • Refer to module • Ask questions

TABLE 24 (continued)

Selection of Media and Instructional Activities for the BasIT Training Package

Session 3 and 4 (continued)

Instructional Event	Duration (Min.)	Stimulus	Media	Rationale of Selection	Activities	
					Instructor	Learner
3. Stimulating recall pre-requisite learning	15	Spoken words, printed words, electronic visuals	Printed materials, computer slides/ transparencies	• Facilities available • Technology helps in adult learning (Office of Vocational and Adult Education, 1992)	• Introduce the WWW, explain its strength and how it works • Introduce Netscape, the browser • Show computer slides/ transparencies	• Listen • Refer to module • Take notes • Ask questions
4. Presenting the stimulus materials	20	Spoken words, printed words, hands-on	Printed materials, computer	• Facilities available • Technology helps in adult learning (Office of Vocational and Adult Education, 1992) • Computer a must in computer-related training (Martin, 1990)	Demonstrate how to start/close Netscape, browse Web documents, search for information, use Bookmark, save Web documents, and print Web pages.	• Observe • Refer to module • Take notes • Ask questions
5. Providing learner guidance	20	Spoken words, printed words, hands-on	Printed materials, computer		• Get a learner to try out the demonstrated tasks • Provide guidance and comments	• Observe • Give comments • Refer to module • Take notes

TABLE 24 (continued)

Selection of Media and Instructional Activities for the BasIT Training Package

Session 3 and 4 (continued)

Instructional Event	Duration (Min.)	Stimulus	Media	Rationale of Selection	Activities	
					Instructor	Learner
6. Eliciting performance	40	Spoken words, printed words, hands-on	Printed materials, computer	• Facilities available • Technology helps in adult learning (Office of Vocational and Adult Education, 1992) • Computer a must in computer-related training (Martin, 1990)	• Send learners to Work Stations for hands-on • Provide personal guidance and comments • Gather learners for discussion after hands-on	• Practice • Get help from instructor when necessary • Jot down problems
7. Providing feedback about the performance correctness	15	Spoken words, printed words	List of problems	Encourage interaction and collaboration (Bennett, 1994)	• Organize discussion • Attend to problems • Distribute SAF • Briefing on Assignment	• Listen • Participate in discussion • Take notes

TABLE 24 (continued)

Selection of Media and Instructional Activities for the BasIT Training Package

Session 3 and 4 (continued)

Instructional Event	Duration (Min.)	Stimulus	Media	Rationale of Selection	Activities	
					Instructor	Learner
8. Assessing the performance	90	Spoken words, printed words, hands-on	Printed materials, computer	• Facilities available • Technology helps in adult learning (Office of Vocational and Adult Education, 1992) • Computer a must in computer-related training (Martin, 1990)	• Send learners back to Work Stations • Provide personal guidance and comments	• Practice • Use SAF • Complete Assignment • Get help from instructor when necessary
9. Enhancing retention and transfer	30	Spoken words, printed words	Printed materials	Encourage interaction and collaboration (Bennett, 1994)	• Organize learners for presentation • Collect SAF and Assignments	• Present Assignments (use printed Web pages) • Give comments • Submit SAF and Assignments

Step Five: Preparation of Draft Materials

After the task analysis, definition of instructional objectives, and selection of media and instructional activities, the researcher proceeded to prepare the draft materials of the BasIT training package. The draft materials produced consisted of the

- instructional materials – training module and visual aids
- assessment instruments – Self-Assessment Form (SAF) and assignments.

These are described in the sections that follows.

Instructional Materials

Training Module

The training module was prepared based on the media and instructional activities selected. Its content was organized under the four training sessions – two sessions for e-mail, and another two for the WWW. For each training session, the module contained

- The list of objectives of the session
- Printed computer slides (using Microsoft Powerpoint) for the session
- Step-by-step instructions for the hands-on exercises during the session
- Assignment for the session.

The instructional activities in the hands-on sessions were organized in sequence guided by the result of the task analysis. In the first session, the researcher included a hands-on session on using the mouse and working in Windows environment. This was to equip learners with the necessary manipulative skills (using mouse) and also to provide them with some background experience of working with Windows.

Visual-aids

The visual-aids in the draft materials were computer slides prepared by using Microsoft Powerpoint. The slides were printed to be included in the module for reference. The files of the computer slides were compressed and saved in floppy diskette. Combination of graphics and text were selected carefully to provide the best effects possible.

Assessment Instruments

Self-Assessment Form (SAF)

To solve the problem of the adult learner's anxiety due to fear of assessment and judgment, Joyce and Showers (1980) suggested that they should be given the opportunity to assess one another. Based on this suggestion, the SAF or Borang Penilaian Kendiri was designed for the participants to assess themselves during the BasIT training sessions.

The SAF was basically a list of Internet skills/tasks to be learned in the BasIT training sessions. The skills were covered in three SAFs – one for each of the e-mail sessions, and one for the WWW sessions. The participants were required to fill in scores (1, 2, 3, or 4) to indicate their competence for each skill listed according to their perception, where

1 = I will not be able to do this after the session

2 = I may not be able to do this after the session

3 = I am confident that I will be able to do this after the session

4 = I am very confident that I will be able to do this after the session.

By the result obtained using the SAF, the course organizer would be able to see how well a participant have done with the help of the training activities. As the participant

assess his/her own progress, the SAF serves as a guide through the training activities and also provides him/her with instant feedback on his/her progress.

Assignments

There were all together three assignments throughout the BasIT training sessions. Each assignment was planned in such a way that the participant would have to apply what he/she had learned from the training sessions to complete it. The first assignment required the participant to compose at least three mail messages and send the mails under different priority settings (low, normal, and high). To fulfill this assignment, the participant have to know how to start Microsoft Mail, compose mail and send mail – the skills covered in the first session on e-mail. They were to submit the particulars of the recipients of their mails to the instructor at the end of the session.

In the second session, the participants were required to retrieve a mail, type reply message to it with the original message included, and print it before sending it. The printed copy of the mails were to be submitted.

The last assignment has to do with the application of Netscape Navigator to explore the WWW. The participants were required to locate at least three Web sites of his/her subject matter and print the Web pages. At the end of the WWW sessions, each participant were to present the Web pages to the other participants and explain briefly how the Web sites can be used in the teaching and learning process. The printed copies of the Web pages were to be submitted for the purpose of assessment.

Noordin (1991) suggested that the assessment of participants in an introductory computing course should place emphasis on the acquisition of practical skills and not merely concentrate on theoretical knowledge. Through the SAF and the

assignments, the participants' performance in the BasIT training sessions can be assessed with more emphasis on practical skills as recommended.

Step Six: Expert Review

As reported earlier, two experts assisted the researcher in this study. One of the experts is a teacher educator in a university, who had supervised and conducted several pioneer researches on the use of the Internet in education locally. The other expert is a practicing teacher who had completed her graduate studies in educational technology, in which she had submitted her dissertation related to Internet-use in education. Both experts had the experience of conducting courses and seminars on the use of Internet.

Copies of the draft materials (the training module, SAF, and the printed visual-aids) were sent to be reviewed by the experts. Both experts provided valuable recommendations as to the accuracy of content, the instructional sequence, and the presentation format of the materials. The first expert, who is one of the authors of a Bahasa Malaysia dictionary for computer terminology, had also helped the researcher in the use of Bahasa Malaysia terms in producing the materials.

Being a practicing teacher as well as a Jaringan Pendidikan (JP, Education Network) teacher, the second expert had also acted as the target population expert – providing additional information about the target learners (the teachers), the resources, and the constraints of the schools with respect to Internet training.

Step Seven: Revision of the Draft Materials

Based on the comments and advice of the experts, the draft materials were revised to be used in the Small Group Trials. In general, the training content is

acceptable, corrections were made mainly to the presentation format, the use of Bahasa Malaysia terms, and hands-on instructions of the draft materials.

Step Eight: Small Group Trials

The revised materials were then submitted to two Small Group Trials in Sekolah Menengah (P) Sri Aman (SMSA, Sri Aman Secondary School), Petaling Jaya – a Pusat Sumber Elektronik (PSE, Electronic Resource Center) school. All the subjects involved in the Small Group Trials were female teachers since there was no male teacher in the school.

Chinien and Boutin (1994) suggested that instructional materials can be evaluated based on the achievement and attitude of the learners. The researcher evaluated the materials based on this suggestion, examining the participants' performance in the training sessions and attitude towards the training activities.

To assess the performance of the participants, the researcher collected the completed Self-Assessment Form (SAF) and assignments of each participant during the training sessions of both trials. To probe into the affective domain, observation and informal discussions were carried out during and after the training sessions; and the questionnaire "Penilaian Kursus" (Course Evalauation) (Appendix F) was administered after all the training sessions in the second trial. Since both groups were small (five and 13 teachers respectively), the researcher was able to talk to the subjects informally and on individual basis to get other suggestions to improve the training package.

First Trial

The Subjects

The first trial was carried out with five teachers from SMSA as participants. The teachers represented several subgroups of the target learners. The form "Asas Internet untuk Guru" (Basic Internet for Teachers) (Appendix G) was used to obtain information about each of them. Table 25 recorded their particulars – teaching experience, subject matter, computer experience, and Internet experience.

TABLE 25

Participants of the First Small Group Trials of the BasIT Training Package

Participant's initials	Teaching experience (years)	Subject Matter	Computer experience	Internet experience
CSH	5	Mathematics	None	None
AK	16	English and history	None	None
TTC	9	Mathematics and Physics	Use once a month for word-processing and games	None
MM	5	Science	Use once a week for word-processing, data processing, and games	WWW (Netscape)
SAG	2	Bahasa Melayu and Geography	Use two to three times a year for word-processing, data processing, graphics generation, and games	None

Performance Assessment

The participants went through all four BasIT training sessions and submitted the assignments. All of them were able to complete their assignments with minimal assistance. The average score of the participants recorded in the SAF is 3.38 out of 4 (Table 26), this indicates their confidence in using the Internet after receiving the training.

TABLE 26

Participants' Average Scores as recorded in the SAF for the First Small Group Trial

Participant's initials	Average Score
CSH	3.0
AK	3.3
TTC	3.6
MM	4.0
SAG	3.0
Overall average score = 3.38	

Participants' Attitude

Throughout the training sessions, the researcher observed that the participants were actively involved in the training activities. They appeared relaxed and comfortable. There was no complaint except expressions of impatience while waiting for data transmission to be completed during the WWW sessions. There were joy and excitement when they received e-mails from their colleagues. They appeared enthusiastic and eager to learn, which indicated that the training opportunity provided by the BasIT sessions was indeed timely and relevant for them.

Conclusion and Revision of Materials

Based on the assessment of the participants' performance and attitude, the researcher concluded that the training materials used were effective in training the teachers and that the training activities provided were suitable and relevant. However, some minor errors were identified and rectified and two subtasks – deleting mail from the Deleted Mail folder (e-mail) and removing Bookmark (WWW) – were added in. The revised BasIT training package was then used in the second Small Group Trial.

Second Trial

The Subjects

The second trial was conducted with 13 teachers from SMSA as participants. Their particulars based on the record in the form "Asas Internet untuk Guru" (Basic Internet for Teachers) (Appendix G) are displayed in Table 27.

TABLE 27

Participants of the Second Small Group Trials of the BasIT Training Package

Participant's initials	Teaching experience (years)	Subject matter	Computer experience	Internet experience
LKM	14	Chemistry	Use two to three times a year for word-processing	None
WAJ	6	Islamic education	Use once a week for word-processing	None
LCS	17	Commerce and Accounting	None	None
LSK	20	Mathematics	Use two to three times a year	WWW (Netscape)
LML	20	Chemistry	Use two to three times a year for word-processing, data processing, graphics generation, and games	WWW (Netscape)
SFC	19	Mathematics and Chemistry	Use two to three times a year for word-processing, graphics generation, and games	None
LBY	14	Physics	Use two to three times a year for data processing	E-mail
YKC	15	Home Economics	Use two to three times a year for word-processing	WWW (Netscape)
WHH	18	Mathematics and Biology	Use two to three times a year for games	None
DC	20	English, Science, and Mathematics	Use two to three times a year for word-processing, graphics generation, and games	WWW (Netscape)
LPT	20	Mathematics and Science	Use two to three times a year for word-processing and games	None
SA	20	Mathematics and Biology	None	None
AJ	17	English and Physical Education	Use two to three times a year for games	None

Performance Assessment

The participants had little problem completing their assignments. Their average score recorded in the SAF is 3.28 over 4 (Table 28), which indicates that they were confident in using the Internet after the training.

TABLE 28

Participants' Average Scores as recorded in the SAF for the Second Small Group Trial

Participant's Initials	Average Score
LKM	4.0
WAJ	3.0
LCS	3.3
LSK	3.0
LML	3.5
SFC	2.9
LBY	3.0
YKC	3.4
WHH	3.9
DC	3.0
LPT	2.8
SA	3.1
AJ	3.7
Overall average score = 3.28	

The performance of the participants as observed from their assignments and SAF scores was impressive. This again indicated that the training activities in the BasIT training sessions were helpful for the participants in acquiring the skills in using the Internet.

Participants' Attitude

The questionnaire "Penilaian Kursus" (Course Evaluation) (Appendix F) is administered after all the training sessions in the second Small Group Trial. The first 18 items of the questionnaire probed into the participants' perception of the training materials and activities of the BasIT training package in general. In item 19 and 20,

the participants were given the opportunity to point out the strengths and weaknesses of the training package and to make suggestions to improve the training package. The responses to the first 18 items are tabulated in Table 29.

TABLE 29

Responses to the First 18 Items of Penilaian Kursus

Item (translated)	Strongly disagree		Disagree		Agree		Strongly agree		Missing cases
	n	%	*n*	%	*n*	%	*n*	%	
1. I enjoyed the course.	0	0	0	0	5	38.5	8	61.5	0
2. I will register for a course like this in the future.	0	0	0	0	4	30.8	9	69.2	0
3. I understand the course objectives.	0	0	0	0	6	46.2	7	53.8	0
4. In my opinion, the course materials and activities provided are sufficient to achieve the objectives.	0	0	0	0	8	66.7	4	33.3	1
5. I can carry out all the course activities with the instructions given.	0	0	0	0	9	69.2	4	30.8	0
6. The course activities are related with my daily work.	0	0	1	7.7	8	61.5	4	30.8	0
7. I am confident that I will be able to use the skills learned in this course in my daily work.	0	0	1	7.7	9	69.2	3	23.1	0
8. The relationship between the materials, activities, and the objectives of the course are clear.	0	0	0	0	6	46.2	7	53.8	0
9. The course activities are suitable and can be carried out in school if the equipment is available.	0	0	0	0	7	58.3	5	46.7	1
10. The information and instructions given in the course module is clear and easy to follow.	0	0	0	0	7	53.8	6	46.2	0
11. The assignments given are reasonable and related with the course objectives.	0	0	0	0	8	61.5	5	38.5	0
12. The visual-aids used are suitable and effective.	0	0	0	0	8	66.7	4	33.3	1

TABLE 29 (continued)

Responses to the First 18 Items of Penilaian Kursus

Item (translated)	Strongly disagree		Disagree		Agree		Strongly agree		Missing cases
	n	%	*n*	%	*n*	%	*n*	%	
13. The instructor is capable of conducting the course all by himself.	0	0	1	7.7	8	61.5	4	30.8	0
14. Time for the hands-on exercises is sufficient to achieve the course objectives.	0	0	2	15.4	8	61.5	3	23.1	0
15. I have clear feedback about my progress during the course.	0	0	2	16.7	8	66.7	2	16.7	1
16. Most of the time during the course, I am uncertain about whether I have carried out the course activities correctly.	1	7.7	10	76.9	2	15.4	0	0	0
17. I need an official statement to inform me about my level of achievement in the course.	0	0	5	41.7	6	50.0	1	8.3	1
18. The SAF used in the course can help me to assess my own progress and achievement during the course.	0	0	0	0	10	76.9	3	23.1	0

The responses to the first 18 items of the "Penilaian Kursus" (Course Evaluation) questionnaire revealed that the participants were generally positive towards the training materials and activities of the BasIT training package. Their responses to these items indicated that

- They liked and enjoyed the course (items 1 and 2)
- They were clear about the course objectives (item 3)
- They found that the training materials and activities were related with the course objectives and relevant to their work (items 4, 6, 7, 8 and 11)
- They agreed that the course activities were suitable to be conducted in the school setting (item 9)

- They were comfortable with the training materials and activities (items 5 and 10)
- They acknowledged that the visual-aids and the instructor were effective (items 12 and 13), the time for hands-on exercises was sufficient (item 14), and clear feedback had been given to them about their progress (items 15, 16, and 18).

However, more than half of them (58.3 percent) indicated that they would need an official statement to inform them about their achievement throughout the course (item 17). Based on this response, the researcher designed a certificate-format performance report – Sijil Pencapaian (Certificate of Achievement) – to be given to each participant who had completed the course. The "Sijil Pencapaian" form is included in the first version of the BasIT training package.

In item 19, the participants listed down the most obvious strength and weakness they perceived in the materials and activities of the BasIT training package. Some of the strengths listed were

- Comfortable for beginners
- Instructions were comprehensive, clear, and easy to follow.

One of the participants commented that

> We were able to follow the course without having a basic knowledge of computer and yet not feel intimidated by our lack of knowledge in this field.

During the period of the second Small Group Trial, the network in SMSA broke down several times. The participants were rather disappointed with the network failure and the slow speed of data transmission. Thus, when asked to list down the weakness of the training package in item 19, many put down hardware/network failure as the main weakness although the matters of hardware has nothing to do with the training materials and activities of the training package. Other weaknesses mentioned were

- Not enough computers
- Insufficient personal guidance from instructor.

In item 20, the participants provided some suggestions to improve the existing BasIT training package. These included

- Design an advanced course as a sequel to the present package
- Provide instructions to deal with unexpected results due to errors made by the participants
- Prepare quick-reference version of the hands-on instructions in the module
- Extend time for hands-on
- Reduce the size of the module.

Based on the feedback gathered, the researcher proceed to re-evaluate the entire training package in order to produce the first version of the BasIT training package.

Step Nine:
Production of the First Version of the BasIT Training Package

Based on the feedback obtained in the Small Group Trials, the existing training materials of the BasIT training package was further improved. As a result, the first version of the BasIT training package was produced. The package consists of seven components:

- Modul Kursus – Training module for participants
- Pengenalan Kepada Asas Internet untuk Guru – Introduction pamphlet to the BasIT training package
- Panduan Fasilitator – Instructor's manual
- Borang Penilaian Kendiri – Self-Assessment Form (SAF)

- Sijil Pencapaian (Certificate of Achievement) – Certificate-format performance report
- Overhead transparencies
- Floppy diskette – contained supplementary software for course organizer/ instructor

These components are described in the following sections.

Modul Kursus (Course Module)

This is the training module for the participants. It is organized under the four BasIT training sessions. For each training sessions, the module contained

- The list of objectives for the session
- The printed computer slides with spaces to take notes
- Step-by-step instructions for hands-on exercises
- The Assignment.
- Summary of hands-on exercise (for quick-reference)

Pengenalan Kepada Asas Internet untuk Guru

(Introduction to the Basic Internet for Teachers)

This is a pamphlet to introduce the BasIT training package to the users. It described the BasIT training package briefly – its objectives, components, training content, hardware and software requirements, target group, evaluation and assessment, etc.

Panduan Fasilitator (Instructor's Guide)

The researcher had problems finding a suitable Bahasa Malaysia term for instructor. Thus, to emphasize the function of the instructor as more of a facilitator in the BasIT training sessions, the researcher chose the term "fasilitator" in Bahasa Malaysia. Panduan Fasilitator (more accurately translated as "The Facilitator's Guide") is actually the instructor's manual. Among topics of interest in this booklet are lesson plans for each BasIT training sessions, instructions to use the Self-Assessment Form (SAF) or Borang Penilaian Kendiri, instructions to prepare Sijil Pencapaian (Certificate of Achievement) for participant, and a list of suggested references. It also contained tips on what to do before conducting the BasIT training sessions and installation of software included in the BasIT training package.

Borang Penilaian Kendiri (Self-Assessment Form)

There are all together three forms in the whole set of the Borang Penilaian Kendiri, or Self-Assessment Form (SAF). One form each for Session 1 and Session 2 (e-mail), and another one for Sessions 3 and 4 (WWW). Each participant need to use these forms to assess their own progress during those sessions. The participant give scores (1, 2, 3, or 4) to each of the skills listed in the forms to indicate how well they think they have master the skill:

1 = I will not be able to do this after the session

2 = I may not be able to do this after the session

3 = I am confident that I will be able to do this after the session

4 = I am very confident that I will be able to do this after the session.

Sijil Pencapaian (Certificate of Achievement)

This is a certificate-format performance report to be prepared for every participant who had completed the BasIT training sessions. Based on the SAF scores and assignments of the participants, the instructor shall prepare Sijil Pencapaian (Certificate of Achievement) for them. Signatures of the instructor and the head of department (principal, director, etc.) will be put down to endorse the report.

Overhead Transparencies

A set of overhead transparencies are prepared for the schools that are equipped with overhead projector. The transparencies are actually printed computer slides to be used as visual-aids for the BasIT training sessions. The slide's number and training session in which it should be shown is printed at its bottom for reference.

Floppy Diskette

A three-and-a-half inch floppy diskette is included in the package. The floppy diskette contained compressed files of some supplementary software for the BasIT training sessions. These include

- Microsoft Powerpoint presentation files for each training sessions
- Microsoft Powerpoint Viewer to view the presentation (as some schools may not have Powerpoint installed)
- Wintutor (for mouse exercises and training to work in Windows environment)
- pkunzip.exe program file to decompress the compressed files.

A complete set of the first version of the BasIT training package is submitted together with this dissertation (Appendix H).

Summary

The development of the BasIT training package began with the needs assessment. This was accomplished by administering the survey instrument entitled "Analisis Keperluan: Kursus Internet untuk Guru" (Training Needs Analysis: Internet Training for Teachers) (Appendix A) on 50 Jaringan Pendidikan (JP, Education Network) teachers and 14 Pusat Sumber Elektronik (PSE, Electronic Resource Center) teachers, out of which 61 responded. The result of the needs assessment suggested that the BasIT training package should be developed

- for teachers with a wide range of computer literacy level – from novices to experienced computer users – and minimal Internet experience
- for small group training environment (10 to 20 persons only at any single occasion)
- in Bahasa Malaysia (Malaysian Language)
- with minimal printing activities
- to be flexible so that it can be conducted at the convenience of the teachers in any school setting.

Through the needs assessment, the researcher had also discovered e-mail, news-reading, and the World Wide Web (WWW) should be considered as the candidate content of the BasIT training package. Based on the advice of experts, further studies of recent Internet survey reports, the researcher selected e-mail and WWW as the content to be covered in the BasIT training package. A visit to Sekolah Menengah (P) Sri Aman (SMSA, Sri Aman Secondary School) – where the Small Group Trials were supposed to be carried out – helped the researcher to identify the Internet software to be used in the BasIT training sessions – Microsoft Mail for e-mail and Netscape Navigator for WWW.

After the content and the software to be used were identified, task analysis was carried out. The instructional objectives were then defined, followed by the selection of media and instructional activities for the BasIT training sessions. Based on the results of these processes, a set of draft materials of the BasIT training package was prepared. The draft materials included the training module, the computer slides, and the Self-Assessment Form (SAF), or Borang Penilaian Kendiri. The draft materials were reviewed by two experts, revised, and then submitted to Small Group Trials.

Both Small Group Trials were conducted in SMSA. The first trial was attended by five teachers, and the second trial by 13 teachers. Due to the absence of male teachers in SMSA, the subjects involved in the trials were all female teachers. The training materials were revised again after the first trial before being submitted to the second trial. The average score of the participants recorded in the SAF is 3.38 in the first trial, and 3.28 in the second over the total score of 4. These relatively high scores indicated the participants' confidence in using the Internet after receiving the training. Furthermore, the participants were also able to complete the assignments in both trials. Based on the achievement level of the participants, the researcher concluded that the training materials and activities in the BasIT training package were effective in fulfilling the teachers' training needs related to Internet.

During the BasIT training sessions, the researcher observed that the participants were comfortable, enthusiastic, and eager to learn. The participants of the second trial had also given positive responses in the questionnaire "Penilaian Kursus" (Course Evaluation) (Appendix F). Their responses indicated that

- they enjoyed the training sessions
- the objectives of the training sessions were clear
- the training activities were relevant to their daily work

- the training materials and activities were easy to follow, etc.

Besides the hardware/network failure, there were no major complaints. They suggested that

- an advanced course should be designed following this one
- quick-reference version of the hands-on instructions should be prepared
- the training module should be made smaller
- an official statement of their performance during the course should be issued.

Based on the feedback obtained from the Small Group Trials, the researcher re-evaluate the existing package, and produced the first version of the BasIT training package to be released for circulation. The components of the package consisted of

- Modul Kursus (Course Module) – the training module
- Pengenalan Kepada Asas Internet untuk Guru (Introduction to the Basic Internet for Teachers) – the introduction pamphlet to the BasIT training package
- Panduan Fasilitator (The Facilitator's Guide) – the instructor's manual
- Borang Penilaian Kendiri (Self-Assessment Form) – SAF
- Sijil Pencapaian (Certificate of Achievement) – certificate-format performance report for participants
- Overhead transparencies
- Floppy diskette – contained supplementary software e.g. Microsoft Powerpoint presentation files, Microsoft Powerpoint Viewer, Wintutor, etc.

A set of the materials of the first version of the BasIT training package is submitted together with this dissertation.