

Chapter 5





5.1	Introduction	90
5.2	Objectives to be met by the evaluation instruments	91
5.3 5.3.1.1 5.3.1.2 5.3.1.3 5.3.1.4 5.3.1.5 5.3.1.6 5.3.2 5.3.2.1 5.3.2.2 5.3.2.3	Interpretation of the data Lecturers Interpretation of the data Computer-based Training (CBT) group Interpretation of the data Results from the expert interface rating form Experts Interpretation of the data	92 93 92 94 96 98 98 100 102 102 103 103
5.4 5.4.1 5.4.2 5.4.3 5.4.4	Research questions and findings Research question 1 Research question 2 Research question 3 Research question 4	106 106 108 109 110
5.5	Summary	110



Chapter 5

Findings

5.1 Introduction

This chapter deals with the results of the data gathered through the summative evaluation in Chapter 4.

The samples that participated in the evaluation comprised of users and experts. Students already identified as the target group in the analysis phase, lecturers, and a group of postgraduate students in Computer-based training (CBT) represented the users. The experts were representative in the web design field and educational environment.

Figure 5.1 indicates the composition of the groups who evaluated the program.

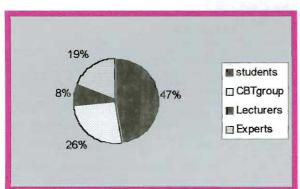


Figure 5.1 Compositions of respondents.

All the respondents mentioned above evaluated the same dimensions of the web site. The experts however, had the opportunity to comment on each question. The instrument used for the experts made provision for comments and suggestions (Questionnaire 4). The researcher expected different outcomes, knowing that the respondents evaluated with different values and knowledge.

5.2 Objectives to be met by the evaluation instruments

Referring to the research questions in Chapter 1 of this thesis, it is essential to determine whether these questions were answered by the questions in the different questionnaires. Table 5.1 indicates where each objective is met through the evaluation instruments.



Table 5.1 Evaluation instruments to meet the objectives

Objectives	Questionnaire 3 Questionnaire 4 (Evaluation)	Questionnaire 2 (Target analysis)	Questionnaire 1 (Open day)
What are the characteristics of the target population?	N/A	Section A Q 4- Geographical Q 5- Gender Section B Q 8- Attendance Section C Q 13- Computer skills Q 12- Computer access Q 15- Computer use	Section 4Computer skills
How will effective learning be achieved? (Content issues)	Q 2- Readability Q 12- Content in manageable chunks Q 13- Content understandable Q 17- Promotes learning Q 19- Easy to use	Section C Q 12- Access to computer Q 16- Access to Internet Q 18- Obtaining information from the Internet Q 20- Benefit of a web site	Section 4 Computer access Computer skills Internet connection
How can comfortable and efficient communication be incorporated? (Communication issues)	Q 2- Readability Q 9- Layout of site map Q 16- Contact details	Section A Q 3- Age Q 4- Geographical Q 6- Language Section B Q 8- Class attendance Q 10- Current communication between students Q 11- Current communication between student/lecturer Section C Q 12- Computer access Q 16- Access to Internet Q 20- Benefit of web site Q 21- Communication facility	Section 4 Internet connection Information obtain Information search method

		UNIVERSITEIT VAN PRETORIA UNIVERSITY OF PRETORIA	
Objectives	Questionnaire 3 Questionnaire 4 (Evaluation)	(Target analysis)	Questionnaire 1 (Open day)
What will make a web site work?	Q 1-Overall look Q 3-Consistency Q 4-Colour use	Section C Q 22- Most important thing to find on site	N/A
(Design issues)	Q 8-Consistency of navigation (buttons) Q 14-Content presentation Q 15 Choice of-graphics	Section D Q 23- Overall look Q 38- Graphics	
How should a web site be structured? (Structural issues)	Q 5- Choice of fonts Q 6- Layout of site map Q 7- Navigation to homepage	Section D Q 28- Layout of site map Q 32- Navigation options	N/A
	Q 11- "Useful Links" page Q 18- Download time	Q 34- Chunking	

According to Table 5.1 it is possible to indicate whether the research questions have been met. The researcher will make appropriate recommendations in Chapter 6 according to the findings in this chapter.

5.3 Findings

5.3.1 Results from the user interface rating form (Appendix C)

The results of the three different user groups are set out in Tables 5.2 to 5.4 and an interpretation of each table will follow.

For the purpose of the findings the researcher divided the data into categories representing:

Good (option 1 and 2 on the Likert scale)

Average (option 3 on the Likert scale)

Poor (option 4 and 5 on the Likert scale)

5.3.1.1 Students

A group of 25 students involved in Architecture, and the Program in Interior Design participated in the evaluation of the web site. They ranged from 1st year to 4th year students. The questionnaires were not handed in separately and the results are therefor not divided into the different levels of study. Table 5.2 displays the results from the students.



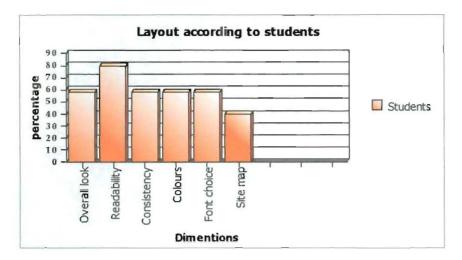
Table 5.2 Results from the students (Questionnaire 3=25 respondents) [†]

Questions	25	Respo	ndent	s eval	uated	the w	reb si	ite
Layout of the web site	E	G	%	Aa	0/0	A	Po	or %
1. The appearance of the web site and the overall "look" is:	6	8	56 %	4	16 %	4	3	28 %
The readability (size and space of writing) on the pages is:	6	11	68 %	3	12 %	2	3	20 %
3. The consistency of all the elements through out the web site is:	3	11	56 %	7	28	4	0	16 %
4. The use of colours in the web site is:	6	8	56 %	3	12 %	4	4	32 %
5. The choice of fonts (type of writing) is:	2	12	56 %	5	20 %	4	2	24 %
6. The layout of the site map is:	3	7	40 %	7	28 %	8	0	32 %
Navigation								
7. The navigation to and from the homepage is:	6	11	68 %	4	16 %	3	1	16 %
8. The consistency of the buttons through out the web site is:	7	8	60 %	4	16 %	6	0	24 %
The layout of the site map for navigation purposes is:	4	7	44 %	8	32 %	5	1	24 %
 The different options of navigation in the site is clear and easy to follow: 		11	68 %	4	16 %	4	0	16 %
11. The "Useful link " page will attract more visitors:	4	7	44 %	4	16 %	8	2	40 %
Content				_		LUST		-
12. The amount of content per page is presented in manageable chunks:	4	12	64 %	7	28	1	1	8%
13. The content is understandable and appropriate:	3	13	64 %	9	36 %	0	0	0%
14. The way in which the content is presented gain the attention of the visitor:	1	7	32 %	7	28 %	8	2	40 %
15. The choice of graphics is:	3	5	36 %	5	20 %	6	5	44 %
Communication, support and ease of u	-						P. C.	
16. The possibility of communicating with other students and lecturers, with a bulletin board and listserve will be:	3	12	60 %	6	24 %	3	1	16 %
17. The contact details on the web site is easy accessible and clear:	6	13	76 %	3	12 %	3	0	12 %
18. The web site enables and promotes learning:	0	9	36 %	14	52 %	2	1	12 %
19. The download times of the web pages is:	6	8	56 %	8	32 %	3	0	12 %
20. The web site is easy to use:	7	15	88 %	3	12 %	0	0	0%

Figure 5.2 indicates the proportion of the different elements regarding the layout according to the students.



Figure 5.2 Elements of layout rated by the students



5.3.1.2 Interpretation of the data [+]

Interpreting the results gathered from the students, it indicates the need for something to make the site more exciting.

"Need more young and spunky design..."

The sections as a whole were evaluated and the interpretation thereof reflected a different outcome.

Section 1: Layout

Regarding the layout, the majority of students rated the **overall "look"** above 50%. 16% of the respondents evaluated the layout as average.

The **readability** was evaluated very high by scoring an 80%.

The **consistency** of the elements through out the site received 56%. Opposed to that, an average score of 28% indicated that the consistency was above good and above.

The **colours** used in the web site were not very popular with the students. The researcher is of **opinion**, that changing the colours would affect the "look" in a way more likeable for younger people (students).

Concerning the **choice of fonts**, the majority of 56% agreed that the fonts were suitable. It is clear however that the possibility of another font could enhance the layout of the web site.



The result on the **sitemap** indicated that the majority of respondents had difficulty in understanding this screen. A 40% positive outcome, a 28% average and a 32% negative reaction describes the matter.

To conclude, only one issue in the layout dropped below 50%, being the layout of the site map.

Section 2: Navigation

Three (3) out of five (5) issues related to the navigation were evaluated above 60% percent, which indicates a good navigation structure.

The navigation options available through the **site map** are not effective according to the students. This issue received a 44% with 32% being the average score and 24% of the students rating it average to poor.

The **ease of use** and clear presentation of the navigation scored a 68% with 16% average and 16% towards poor.

The majority of students found the navigation to and from the **home page** good.

The fact that the researcher made the statement that the **"useful links"** page will attract more visitors to the web site, was meagerly supported by the students with 44%.

The **navigation buttons** indicated to be consistent.

Section 3: Content

The majority of students approved of the **chunking** of content.

The majority (64%) rated the content understandable and appropriate.

According to the respondents the **consistency** regarding the presentation of the content was acceptable scoring above 50%. A very low 8% experienced the consistency poor.

The result of the content **gaining attention** received a score of 40% opposed to 32% of the respondents who felt that the content was attention gaining.

According to the students the choice of **graphics** was not successful. The negative outcome was higher than the positive reaction.

Section 4: Communication, Support and ease of use

The general results of this section were positive.

The **communication possibilities** for students and lecturers appeared to be successful with a 60% rating.

The clarity and easy accessibility of the **contact details** received an excellent rating of 76%.

Only 36% of the respondents supported the issue of **learning** over the web with the majority of 52% being neutral about the issue and 12% indicating an average to poor interest.

The **download time** of the web pages received a score of above 50%, which indicates that it is acceptable.

The workability and ease of use of the web site appeared successful.

5.3.1.3 Lecturers

Four (4) lecturers involved in Architecture and Program in Interior Design evaluated the web site. One of the lecturers was the client who initially presented assistance in the design of the program. Their participation in the summative evaluation was of specific importance, because utilizing the site in future as a learning- and communication aid is possible.

Table 5.3 reveals the results for all the sections rated by the lecturers with an interpretation of the results to follow.



Table 5.3 Results from lecturers [†]

Questions	4 Respondents evaluated the web site							
Layout of the web site	E	E G	%	Aa	%	A	Poor %	
1. The appearance of the web site and the overall "look" is:	0	2	50 %	2	50 %	0	0	0%
2. The readability (size and space of writing) on the pages is:	1	2	75 %	1	25 %	0	0	0%
3. The consistency of all the elements through out the web site is:	0	2	50 %	2	50 %	0	0	0%
4. The use of colours in the web site is:	1	2	75 %	1	25 %	0	0	0%
5. The choice of fonts (type of writing) is:	1	2	75 %	0	0%	1	0	25 %
6. The layout of the site map is:	2	1	75 %	1	25 %	0	0	0%
Navigation								
7. The navigation to and from the homepage is:	2	0	50 %	2	50 %	0	0	0%
8. The consistency of the buttons through out the web site is:	3	1	100	0	0%	0	0	0%
The layout of the site map for navigation purposes is:	0	3	75 %	1	25 %	0	0	0%
10. The different options of navigation in the site is clear and easy to follow:	1	3	100	0	0%	0	0	0%
11. The "Useful link " page will attract more visitors:	0	2	50 %	1	25 %	1	0	25 %
Content			THE T					
12. The amount of content per page is presented in manageable chunks:	0	1	50 %	2	25 %	0	1	25 %
13. The content is understandable and appropriate:	2	1	75 %	1	25 %	0	0	0%
14. The way in which the content is presented gain the attention of the visitor:	1	2	75 %	0	0%	1	0	25 %
15. The choice of the graphics is:	1	2	75	1	25	0	0	0%
Communication, Support and ease of u	se							
16. The possibility of communicating with other students and lecturers, with a bulletin board and listserve will be:	4	0	100 %	0	0	0	0	0
17. The contact details on the web site is easy accessible and clear:	3	1	100	0	0%	0	0	0%
18. The web site enables and promotes learning:	1	2	75 %	1	25 %	0	0	0%
19. The download times of the web pages is:	2	1	75 %	1	25 %	0	0	0%
20. The web site is easy to use:	4	0	100	0	0%	0	0	0%



5.3.1.4 Interpretation of the data [+]

A very positive experience is obvious from the evaluation of the lecturers. In general, most dimensions evaluate between GOOD and EXCELLENT, a few aspects rated AVERAGE and a small minority evaluated POOR. Because of the significant majority, the researcher provided a general interpretation.

Section 1: Layout

Readability, use of colours, fonts and layout of the sitemap are good.

The "overall look" and consistency of elements are above average.

Section 2: Navigation

All the **navigation** dimensions are good and above average.

Section 3: Content

The presentation of content in **manageable chunks** needs attention.

One respondent experienced the **attention gaining** factor as poor, but the majority evaluated it good.

Section 4: Communication, Support and ease of use

The lecturers rated this section very good. One of the respondents was not sure whether the site could **promote learning** and whether the **download time** is fast enough.

It is clear from the interpretation that the lecturers feel the site has a pleasing **layout**, the **navigation** is clear and **easy to use**. The presentation of the **content** however, needs a little attention to satisfy all.

5.3.1.5 Computer-based Training (CBT) group

This group consisted of 13 respondents who is currently in the final year of a diploma in Computer Based Training (CBT) at the University of Pretoria. With an established knowledge of web design and the design principles, their evaluation of the program was of great value. The researcher expected that these results would differ mentionable from those of the students. Table 5.4 displays the results of this group.



Table 5.4 Results of the CBT group [†]

Questions	131	Respo	ondent	s eva	luated	the	web s	site
Layout of the web site	E	E G	%	Aa	%	A	Poor %	
The appearance of the web site and the overall "look" is:	6	4	77 %	2	15 %	1	0	8%
The readability (size and space of writing) on the pages is:	6	6	92 %	0	0%	1	0	8%
3. The consistency of all the elements through out the web site is:	7	4	85 %	2	15 %	0	0	0%
4. The use of colours in the web site is:	5	7	92 %	0	0%	1	0	8%
5. The choice of fonts (type of writing) is:	6	6	92 %	0	0%	1	0	8%
6. The layout of the site map is:	8	4	92 %	1	8%	0	0	0%
Navigation				-0.11				
7. The navigation to and from the homepage is:	7	4	85 %	1	8%	1	0	8%
8. The consistency of the buttons through out the web site is:	7	6	100 %	0	0%	0	0	0%
The layout of the site map for navigation purposes is:	7	6	100	0	0%	0	0	0%
10. The different options of navigation in the site is clear and easy to follow:	7	6	100	0	0%	0	0	0%
11. The "Useful link " page will attract more visitors:	8	3	85 %	1	8%	1	0	8%
Content	W-1				-			
12. The amount of content per page is presented in manageable chunks:	4	5	69 %	4	31 %	0	0	0%
13. The content is understandable and appropriate:	7	4	85 %	2	15 %	0	0	0%
14. The way in which the content is presented gain the attention of the visitor:	9	2	85 %	1	8%	1	0	8%
15. The choice of the graphics is:	7	4	85 %	1	8%	1	0	8%
Communication, Support and ease of u	ise	(1 h						
16. The possibility of communicating with other students and lecturers, with a bulletin board and listserve will be:	7	4	85 %	2	15 %	0	0	0
17. The contact details on the web site is easy accessible and clear:	10	2	92 %	1	8%	0	0	0%
18. The web site enables and promotes learning:	6	4	77 %	2	15 %	1	0	8%
19. The download times of the web pages is:	7	4	85 %	1	8%	1	0	8%
20. The web site is easy to use:	11	2	100 %	0	0%	0	0	0%



5.3.1.6 Interpretation of the data [*]

A total different outcome is revealed by the evaluation results of the CBT group. It is obvious that these respondents focused more on effective layout, functionality and workability of the program.

An interpretation of the results on the questionnaire used for this evaluation was as follows:

Section 1: Layout of the web site

The majority of the group approved of the **overall "look"** of the web site (77%). A minority of 15% was not quite convinced and only 8% rated the site average too poor.

The majority in this group supported the **readability**, the **colours** used, the **choice of fonts** and the **lay out of the site map**. Only 8% of the respondents rated these components average too poor.

Concerning the **consistency** of the elements used throughout the site, 15% evaluated it as average and 85% rated it good.

The layout of the site is successfully presented and appealing to a large majority of the respondents.

Section 2: Navigation

This group had a positive opinion regarding the navigation as a whole.

Navigation to and from the **home page** received an 85% rating.

The purpose of the **"Useful links"** page to attract more visitors to the site was 85% supported by the respondents and only 16% evaluated it between average and poor.

The **consistency of the buttons** for navigation, the navigation purposes of the **site map** and the clarity of the different **options of navigation** all scored a 100%. No negative feedback was received on these issues.



Section 3: Content

The presentation of content in **manageable chunks** was not as successfully experienced by the respondents, as was the rest of the site. A total of 69% was awarded for this content issue as good.

The **understandability and appropriateness** of the content, the **attention gaining** aspect of the content and the **choice of graphics** all received 85%

Section 4: Communication, Support and ease of use

This section was evaluated with a very positive outlook.

All the **contact details** are easy accessible (92%). As soon as the **bulletin board and Listserve** are available to the site, it will offer various ways of communicating (85%). The majority of the respondents feel that the web site would **promote learning** and the issue received a 77%.

The **download time** was accepted by most of the respondents. It is clear to the researcher that peak times on the Internet are very busy and it will affect the download times. The developers kept the images and graphics to the minimum and changed the format of images and graphics, which was initially too large.

The CBT group rated **ease of use of the web site** a 100%. This implicates a workable web site.

5.3.2 Results from the expert interface rating form (Appendix D)

5.3.2.1 Experts

The questionnaire was sent to ten (10) experts in related fields via electronic mail. 8 responded within a week and because of limited time available the researcher could not wait for late responses. Ample space for comments and suggestions were made available at the end of each section. Personal input from the different experts lead to the necessary refinement of the program.



Table 5.5 Results from expert interface rating form [*]

Questions	8 experts evaluated the web site								
Layout of the web site	E	E G	%	Aa	%	A	Poor	%	
The appearance of the web site and the overall "look" is:	1	6	87 %	1	13 %	0	0	0 %	
2. The readability (size and space of writing) on the pages is:	3	3	75 %	1	13 %	1	0	12 %	
The consistency of all the elements through out the web site is:	2	3	63 %	2	25 %	1	0	13	
4. The use of colours in the web site is:	3	2	62 %	3	37 %	0	0	0 %	
5. The choice of fonts (type of writing) is:	3	2	63 %	2	25 %	1	0	13	
6. The layout of the site map is:	3	2	63 %	2	25 %	1	0	13	
Navigation	F. 1						TRONG		
7. The navigation to and from the homepage is:	1	4	62 %	2	25 %	1	0	13 %	
8. The consistency of the buttons through out the web site is:	4	2	75 %	0	0%	2	0	25 %	
The layout of the site map for navigation purposes is:	4	1	63 %	2	25 %	1	0	13 %	
 The different options of navigation in the site is clear and easy to follow: 	3	3	75 %	2	25 %	0	0	0%	
11. The "Useful link " page will attract more visitors:	0	4	50 %	2	25 %	2	0	25 %	
Content					The F			1	
12. The amount of content per page is presented in manageable chunks:	3	3	75 %	0	0%	2	0	25 %	
13. The content is understandable and appropriate:	3	3	75 %	2	25 %	0	0	0%	
14. The way in which the content is presented gain the attention of the visitor:	2	3	63 %	2	25 %	1	0	13 %	
15. The choice of the graphics is:	4	0	50 %	3	38	1	0	12 %	
Communication, Support and ease of us		NO.	Land	1				f I	
16. The possibility of communicating with other students and lecturers, with a bulletin board and listserve will be:	1	6	87 %	1	13 %	0	0	0%	
17. The contact details on the web site is easy accessible and clear:	3	1	50 %	3	38 %	1	0	12 %	
 The web site enables and promotes learning: 	0	4	50 %	3	38 %	1	0	12 %	
The download times of the web pages is:	1	3	50 %	2	25 %	2	0	25 %	
20. The web site is easy to use:	4	1	63 %	2	25 %	1	0	12 %	

5.3.2.2 Interpretation of the data [+]

The experts who evaluated the program seemed positive about the general layout and workability of the program. The evaluation by the experts resulted in high ratings for all the sections.

5.3.2.3 Comments and suggestions from the experts

Layout:

"Fonte kan kleiner wees; dit sal te veel 'scrolling' verhoed en lees vergemaklik"

"Verander fonte van navigasie kolom sodat dit meer uitstaan"

"At first the site map did not make sense to me, but after surfing a little I understood the purpose and layout better. I would have liked a simpler, more explanatory site map."

" Site map se uitleg is goed, maar van die agtergrond kleure veroorsaak dat die teks moeiliker leesbaar is."

"The blue font of the links does not always show clearly on the coloured backgrounds."

Navigation:

"The link to the application form goes to the University home page. Try to link directly to the form."

Content:

"Choice of graphics is stunning."

General comments:

'Produk voldoen aan basiese ontwerpbeginsels en indien enkele logistiese aanpassings gemaak word, kan dit n bydrae lewer om leer te bevorder en te ondersteun."

"Great look and feel.Odd punctuation mistakes. Check layout for consistency. Good piece of work."

"Site is rustig, met n professionele voorkoms. Groot sukses! Geluk!"

Figure 5.3 to Figure 5.6 compare the results of the ratings by the different respondents.



Figure 5.3 Outcome of the Layout as rated by the different respondents

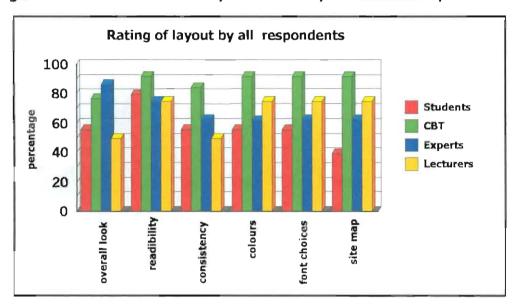


Figure 5.4 Outcome of the Navigation as rated by the different respondents

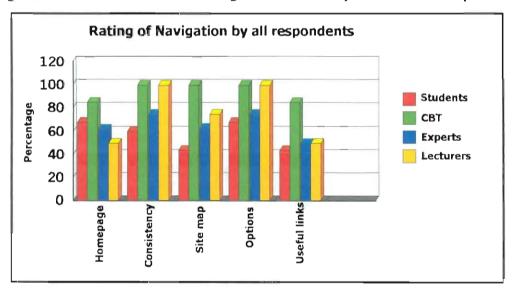




Figure 5. 5 Outcome of the Content rated by the different groups

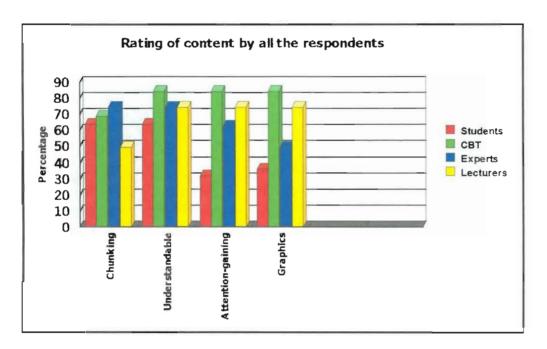
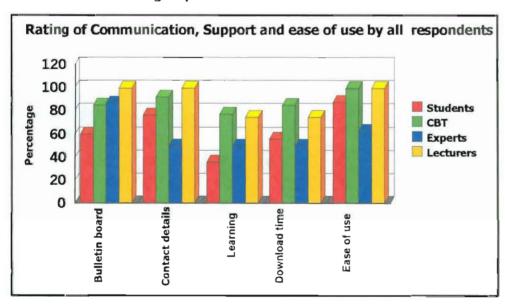


Figure 5.6 Outcome of the Communication, Support and ease of use rated by the different groups



Following are the research questions with an evaluation of the different dimensions from the questionnaires. Findings are derived from these results.



5.4 Research questions and findings

5.4.1 Research question 1



Specific questions with relevance to research question 1 were selected from the questionnaire. Averages of all the respondents were calculated on every question and this information is displayed in Table 5.6.

Table 5.6 Questions and comments regarding research question 1

Questions	Average of respondents (%)	Comments
(Layout) 2. The readability on the pages?	81	The average respondent rated the readability excellent. No need to make changes to the typeface/font.
3. Consistency of all elements in the site?	64	Consistency is relatively stable.
4. Use of colours in the site?	71	Students evaluated the colour below average. Brighter colours could be used.
5. Choice of fonts?	72	Students and experts evaluated font choice below average. Possible change to accommodate the target group.
(Navigation) 8. Consistency of buttons in site?	84	Students rated the consistency below average. It might need some attention but compared to the other 3 groups the researcher assumes that some students misunderstood the question or the terminology.
10. Navigation options clear and easy?	86	Two of the groups awarded this aspect 100%, which resulted in a very high average. Students however caused a drop but not mentionable.
(Content) 12. Content in manageable chunks?	65	Lecturers had a negative feedback about this aspect. Improvement on the content issue will be easy as a lecturer supplied the content.
13. Content are understandable/ appropriate?	75	Students evaluated the content below average. This could mean that the presentation was unusual or they were not familiar with the specific content supplied by the lecturer. Since the content was not complete for all the sections it could have been confusing for the students.
14. Presentation of content gains attention?	64	The students experienced a huge problem with this aspect of content. A change in the presentation is very likely. The fact that more appropriate student work should still be incorporated could contribute to a more attention-gaining site.



Questions	Average of respondents(%)	Comments
15.Choice of graphics?	65	The graphics were unacceptable to the students. Experts were not excited about the graphics. Definite attention should be given to this aspect of the content. The CBT group gave positive feedback regarding the graphics, the reason possibly being a lack of interest in the content as a whole.
(Communication, support) 18.Site will promote effective learning?	63	CBT group and lecturers evaluated the learning possibility above average, while the students did not experience a favorable learning environment. This may be due to the fact that the communication facilities were not in a working capacity at the time of production. Another possibility is that relevant and important information was not available at the time of evaluation.

An average of 71.8% of the respondents supports the success of research question 1

5.4.2 Research question 2

To determine whether this objective had been met, the following questions were selected from the questionnaires and an average was calculated from the evaluations of the four groups. The relevant questions that tested the sustainability of this objective are set out in table 5.7.

Table 5.7 Questions and comments regarding research question 2

Questions	Average of respondents(%)	Comments
(Lay out) 2. The readability on the pages	81	Positive evaluation from all respondents regarding the readability. An important aspect of the layout regarding communication.
6. Layout of the site map	68	The students appeared to have difficulty in reading the site map, which could affect the efficiency of communication in general. A definite change should be considered to promote the incorporation of communication channels.
(Communication, Support and use) 39. Use of bulletin board and listserve	83	The students and lecturers supported the incorporation of these communication channels. The experts and CBT group experienced it very positive. The communication issue was answered succesfully through this instrument.
40. Contact details are accessible and clear	83	Except for the experts who were not totally sure about the clarity and accessibility of the contact details, the other respondents rated this aspect of communication high. The researcher believes that communication as a whole will be promoted by the high evaluation on this question.

An average of 78.7% of the respondents supports the success of research question 2

5.4.3 Research question 3

What will make a web site world

In order to determine whether this objective had been met, the researcher calculated the outcome of the design principles applied in the program. Questions relevant to this objective were selected from the questionnaires and are set out in Table 5.9 below. The average of the four respondent groups indicated in what way the objective had been met.

Table 5.8 Questions and comments regarding research question 3

Questions	Average of respondents(%)	Comments
(Layout) 1. Appearance of the web site/overall "look?	68	Workability regarding the overall look of the site was acceptable and no urgent changes were necessary. Minor adaptations should be made to accommodate suggestions from individuals.
2. The readability on the pages?	81	Readability was good and supported different aspect of workability.
3. Consistency of all elements in the site?	64	The consistency throughout the site was acceptable for all. Individual recommendations could be attended to.
4. Use of colour in the site?	71	The use of colour caused no urgent upset, however comments from students indicated that brighter colours could make the site more eye-catching and thus more popular and successful.
5. Choice of fonts?	72	The choice of fonts was accepted and no changes were necessary.
(Navigation) 7. Navigation to /from homepage?	67	No definite suggestions about the navigation to and from the homepage from any respondent. The evaluation was satisfactory.
8. Consistency of buttons in site?	84	Very good. The buttons remained unchanged and implicated that the choice of buttons promoted the clarity and workability of the site.
9. Layout of site map for navigation?	71	Evaluation on the sitemap appeared very negative from the students side It needs attention urgently. Although the other groups evaluated the sitemap positively, the students being the primary target population, should be satisfied with the sitemap.
(Communication, support and ease of use) 20.The site is easy to use?	88	All the respondents had easy access and moved through the site freely.

An average of 74% of the respondents supports the success of research question 3.



5.4.4 Research question 4

In order to determine whether this objective had been met, questions relevant to the specific objective were selected from the questionnaire and the average taken from all four respondent groups indicated in what way the objective had been met.

Table 5.9 Questions and comments regarding research question 4

Average of respondents(%)	Comments
68	The structure of the web site was displayed in the site map. The students misunderstood the map or disliked the total look of it and their evaluation of the site map was very negative. The other groups experienced the site map functional. To accommodate the target population, a change to the structure in that regard would be essential.
65	Lecturers appeared to be dissatisfied with the presentation of the content. The fact that a lecturer supplied the content indicated however that the result of this aspect could be rectified easily
67	This aspect of the navigation dimension was satisfactory to all the respondents. It seems as if every one managed his/ her way through the site quite easily.
84	The consistency of the structure appeared to be acceptable to all the respondents.
	68 65

An average of 71% of the respondents supports the success of research question 4.

5.5 Summary

Referring to Table 5.6 to Table 5.10, minor changes will maximize the success of the program as a whole. The findings, which derived from the results provided by the summative evaluation in this chapter, will be discussed in Chapter 6. The researcher will make the necessary recommendations in Chapter 6.