

CHAPTER FOUR

ANALYSES AND FINDINGS

4.1 Qualitative Analysis

The obvious high rate of change on the Web suggested that this content and design analysis has to be completed quickly. The original intention was to analyse all selected academic library Web sites simultaneously for each item noted on the matrix. However, two selected library servers could not be accessed from December 1999 to January 2000. Between 29--31 January 2000, emails were sent to their university Webmasters to inform them regarding the problem.

Although there was no reply from the university Webmasters, the two Web sites could be accessed again since 9 February 2000. Then, another two library servers were unreachable from that day onwards. Fortunately, one of them was accessible since 18 February 2000.

To avoid any delay, the number of Web sites in the analysis was effectively limited to the Web sites that could be accessed on the day evaluation conducted. In other words, only the Web sites that appear to be working on the day of analysis of items noted on matrix were examined. Table 4-1 summarises the date and number of Web sites examined.

TABLE 4-1: THE NUMBER OF ACADEMIC LIBRARY WEB SITES
EXAMINED FOR QUALITATIVE ANALYSIS

Item	Date	Number of Web sites examined
General information of the library	29-31 January 2000	10
	9 February 2000	2
Library Online Public Access Catalogue (OPAC)	31 January 2000	10
	10 February 2000	2
Links to other Internet resources	31 January 2000	10
	11 February 2000	2
Interactive services	18 February 2000	11
Internal electronic database services	19 February 2000	10
External electronic database services	20 February 2000	9
Languages used in Web site	22 February 2000	10
Technical services	22 February 2000	10
Instructional supports	23 February 2000	11
Other important features	22 February 2000	10
Loading time of images	23 February 2000	11
Marketing techniques	23 February 2000	11

If the research were done over a period of time then it would be very likely that what were being studied at the beginning would be very different from what were being studied at the end. Therefore, each item noted on the matrix was analysed within a day or so. Changes and new pages that appeared after the date of analysis were not included in the study.

4.1.1 General information of the library

Between 29--31 January 2000, all but two academic library Web sites were examined for general information of the library. The two Web sites that were not examined between 29--31 January 2000 were immediately examined when access to their library servers was achieved on 9 February 2000.

Information about the library and services offered by the library were provided by all of the selected libraries. In some cases, this information was limited to a few paragraphs or to a list of library collection areas and services. Table 4-2 summarises the general information analysis of the 12 library Web sites.

As expected, the name of the library was the most outstanding feature that appeared on the main page of all the library Web sites. Besides the name of the library, the most common feature of general information about the library was library rules and regulations. Eleven (11) of the 12 Web sites had incorporated this feature. Many libraries devoted many pages on their server to

TABLE 4-2: GENERAL INFORMATION OF ACADEMIC LIBRARY WEB SITES IN MALAYSIA

Feature	Number of Web sites
Name of the library	12
Facilities for feedback	12
Library rules and regulations	11
Link to university homepage	10
Introduction	9
hours of opening	9
Staff directory	9
Collections and services	9
Membership	8
Photographs or logos of library	8
Organisation and administration	7
Information on branches	7
Aims or purpose or mission statement of the library	5
Library news update or newsletter	4
Library floor plan	2
Message from Chief Librarian	1

introduction, hours of opening, membership, collections and services, branches, organisation and administration, and staff directory. However, only one library had included a message from the Chief Librarian.

All libraries also provided facilities for feedback but only three of them design HTML forms for users to express their views, suggestions, and comments.

Other libraries include an automatic generation of e-mail message. Another common feature of general information was information on its parent institution through a link to the university homepage.

Logos, photographs, or sketches of the library were common features of all Web sites. Three of these sites had additional photographs of librarians. Other features such as aims, purpose, or mission statement of the library, library floor plan, and library news update or newsletter were not common features in the Web sites examined.

Two Web sites had a few pages that appeared as blank or no response when examined for features such as opening hours, site map, and library facilities.

4.1.2 Library Online Public Access Catalogue (OPAC)

On 31 January 2000, ten academic library Web sites were examined for provision of access to internal computerised library catalogues and information on how to log into the Online Public Access Catalogue (OPAC). The other two Web sites were examined on 10 February 2000.

All, but one academic library Web site, had incorporated access to the library catalogue through the Internet. The one academic library that did not provide

access to its OPAC through Internet was the library which had OPAC that can be accessed remotely with its Campus Wide-Area Network. On the other hand, there was one library that provided not only online catalogue through both Web interface and telnet link, but also provided links to other library online catalogues.

Six (50%) of the libraries provided access to their OPACs through a Web interface such as WebPAC, GeoWeb, and VTLS Web Gateway. However, one of these libraries was unable to be accessed when examined for feature such as phrase search, combination search, and Boolean search. Another one of these Web sites restricted the access to the university community and requires the use of appropriate login names and passwords.

It is worth to note that three of the six libraries that provided access to their OPACs through a Web interface, also provided links to external OPACs (within and outside the country) on the Web sites.

Two (16%) libraries intend to provide access to their OPACs through a Web interface but the Web pages were still under development. Three (25%) libraries provided access to the online catalogue through a telnet link.

4.1.3 Links to other Internet resources

On 31 January 2000, ten academic library Web sites were examined for links to various electronic sources available on the Internet. Another two Web sites were examined on 11 February 2000. It was found that two libraries did not provide any link to other Internet resources. One library only provided links to other libraries.

Nine (75%) library Web sites provided links to selected resources on the Internet. These resources included links to electronic journals, electronic books, electronic reference resources, electronic magazines, electronic newspapers, Malaysian Internet resources, Islamic resources, proceedings of conference, local and international library and information resources, and Internet search engines.

These links were done in a simple form as a plain list, with a short description or annotation for each link. However, some libraries had begun to organise resources for scholars according to subjects relevant to the courses offered and research undertaken at the university. For example, the subject on Malay studies was developed by one library to provide Malay bibliography and directory of Malay studies expertise.

Three libraries offered help to students and researchers in exploring, finding and organising phases of their project writing. To help students and

researchers use Internet resources appropriately, they organised links to information on citing Internet resources and bibliography preparation.

Most of the links were accurate, reliable, up to date, relevant, and appropriate to the needs of users. However, it should be noted that in some libraries, the links were not checked regularly to ensure that they are working.

4.1.4 Interactive services

On 18 February 2000, eleven academic library Web sites were examined for library services incorporated, through a response form built into the Web page or through an interactive email address, or both.

Five libraries offered interactive services to their users. The services include reference inquiries, loan status check and fine accrued, books renewal, charged books reservation, purchase suggestion, and interlibrary loan request.

One of these libraries provided both forms and email addresses for its interactive services. Moreover, users of two libraries obtained various services by simply filling up the relevant forms on the Web sites. One library provided “clickable” email addresses of reference librarians and acquisition librarians to library users. One library that did not provide forms or email

addresses for interactive services, provided online renewal through its OPAC system.

4.1.5 Internal electronic database services

On 19 February 2000, ten academic library Web sites were examined for internal electronic database services and provision of access to these services through their Web sites.

In spite of the fact that many libraries had indicated in their general information that they produce a number of electronic databases for their users, only five (50%) of them provided access to internal electronic database services such as examination papers, thesis abstracts, university publications and public lectures through their Web pages. Two of these Web sites restricted the access only to the university community; they require the use of appropriate login names and passwords.

All libraries had created their own bibliographic databases of thesis and dissertation, and special collections. These internal electronic databases of bibliographic information were integrated into the library's OPAC.

4.1.6 External electronic database services

On 20 February 2000, nine academic library Web sites were examined for seamless access to commercial and non-commercial electronic databases created by suppliers or people outside the library.

Seven (77%) of the libraries had provided links to subscribed databases such as PubMed, ERIC, OVID, ProQuest Direct, EBSCOHost, Springer LINK, and UMI through their Web pages. Some of the services were restricted to the university community; they require the use of appropriate login names and passwords.

It is noted that one library had links to Palmoilis and Sirimlink. Palmoilis and Sirimlink are electronic database services created by research institutions in Malaysia, namely Palm Oil Research Institute of Malaysia (PORIM) and SIRIM Berhad, formerly known as the Standards and Industrial Research Institute of Malaysia.

In addition, some libraries provided access to electronic databases for browsing on a trial basis. The username and password of databases on trial were published on the Web pages; the information thus enables the users to access the databases.

4.1.7 Languages used in Web site

On 22 February 2000, ten academic library Web sites were examined for languages being used and the availability of short explanation in English if the Web page is in the national language, that is, Bahasa Malaysia.

Surprisingly, nine (90%) of the academic library Web sites used English. A Bahasa Malaysia version was available in one of these Web sites. In addition, some of the Web pages of the two Web sites were written in Bahasa Malaysia with a short English explanation.

One (10%) of the Web sites used Bahasa Malaysia. The English version was not available and no English explanation was provided.

4.1.8 Technical services

On 22 February 2000, ten academic library Web sites were examined for the availability of Web pages devoted to resources for technical services, including cataloguing tools such as the Cutter tables, MARC Documentation, and information related to cataloguing electronic publications.

None of the Web sites had developed Web pages specifically for technical service librarians to provide the information or on issues related to acquisitions, cataloguing, serials, and preservation. Two of the libraries

provided links to library technical services created by foreign academic libraries. However, the links were integrated into the feature of Internet resources or electronic information.

4.1.9 Instructional supports

On 23 February 2000, eleven academic library Web sites were examined for the availability of instructional materials and teaching techniques through collaboration with faculty.

One of the libraries provided instructional materials and teaching technique of a coursework called information literacy for its students. The other ten libraries did not develop Web pages specifically for lecturers to provide online instructional materials and teaching techniques. However, two of them provided information in support of teaching, learning, and research of the faculties concerned.

4.1.10 Other important features

On 22 February 2000, every Web page of the ten academic library Web sites was examined for other features that are important such as the provision of a “way out” of the page (perhaps as back to main page), and last update.

Furthermore, the main pages of these Web sites were examined for the availability of postal or street address of the library.

Of the ten main pages studied, only five libraries gave complete street address, telephone contact, fax number, and indication of when the page was last updated. Two main pages did not identify the dates of their most recent updates, and one of them did not even provide street address and contact numbers. In other words, these important features were not embedded on the main page of this library.

It is noted that most of the main pages with the date of last update were updated sometime in the last 20 days before being examined for this study.

The Web pages of these ten Web sites were also examined for provision of “way out” of the page and the feature of last update. Three of the Web sites provided both “way out” and last update features on each of the Web pages. Another three of the Web sites provided “way out” feature only on each of the Web pages.

4.1.11 Loading time of images

Eleven academic library Web sites were examined on Wednesday 23 February 2000, for loading time taken for the first main page to appear. Moreover, the

examination extended to those Web pages with image files.

Surprisingly, all the first main pages with image files did not take more than 30 seconds to appear completely on the computer screen. For Web pages with image files, the loading time was less than 20 seconds.

4.1.12 Marketing techniques

On 23 February 2000, eleven academic library Web sites were examined for their marketing techniques. The title and meta tag description statement created on the main page were examined to identify the most important content indexed by search engines.

Generally, all Web sites, except one, gave proper titles (the words that appear in the frame at the top of the pages) for search engines. The one that did not give proper title to its main page writes the word "HOME" at the top of the page.

None of the Web sites created a good meta tag description statement for search engines to get the most important content indexed. Therefore, the description statements that appeared in the search engines are the first 250 characters written by the libraries in their main pages. Some of the description

statements are in mixed languages that would not be helpful to international users.

4.2 Quantitative Analysis

As part of the evaluation study, a sample of 150 individuals was chosen for participating in a voluntary survey. Questionnaires were distributed to 75 selected information professionals and 75 selected library users between 13 December 1999 and 13 January 2000. To maximise response rates and minimise later non-response conversion efforts of all email surveys, a follow-up email was sent to those who had not replied within 10 days.

The survey data were gathered between 17 December 1999 and 31 January 2000. Of the 103 responses, 11 were eliminated because respondents did not answer the questionnaires; they had either retired, no longer at academic libraries, on leave from academic libraries, or graduated. Therefore, 92 usable questionnaires that represent at least 61 percent of the population are eventually returned. The data in Table 4-3 indicate that 43 information professionals and 49 library users returned the survey questionnaires, resulting in a return rate of 57.3% and 65.3%, respectively.

TABLE 4-3: RESPONSE RATE OF SURVEY QUESTIONNAIRE

Survey Respondents	Information professionals	Library users
Number of sample	75	75
Respondents (usable questionnaire)	43	49
Return rate	57.3%	65.3%

The 43 information professionals are from 10 academic libraries in Malaysia.

Table 4-4 shows that the largest group (23.26%) comprises the information professionals from the USM Library, while the second largest group (16.28%) comprises the information professionals of the UM Library.

TABLE 4-4: RESPONDENTS OF INFORMATION PROFESSIONAL BY LIBRARY

Name of Academic Library	Number	Percentage
International Islamic University Malaysia Library	2	4.65%
Universiti Putra Malaysia Library	6	13.95%
Perpustakaan Tun Sri Lanang UKM	2	4.65%
USM Library	10	23.26%
UUM Sultanah Bahiyah Library	2	4.65%
Perpustakaan Sultanah Zanariah Universiti Teknologi Malaysia	5	11.63%
UM Library	7	16.28%
Multimedia University Libraries	4	9.30%
Perpustakaan Tun Abdul Razak ITM	2	4.65%
UNITAR Virtual Library	3	6.98%

Table 4-5 shows the distribution of the 49 library users from the institution of higher learning. They come from 6 institutions of higher learning. The majority of respondents are library users of Universiti Malaya, and this represents 61.22% of the respondents in the library user group.

4.2.1 Information professional survey

The 43 information professionals rated the 25 evaluation criteria on a scale of 1 to 5, with 1 = relatively unimportant (compared with the rest of the criteria) and 5 = extremely important. The 25 ratings of importance for evaluating academic library Web sites were coded as real numbers for mean and standard deviation analyses. All means and standard deviations were truncated at two decimal places. Rank order based on the mean important rating of the 25 evaluation criteria was obtained (Appendix B).

TABLE 4-5: DISTRIBUTION OF LIBRARY USER RESPONDENTS BY INSTITUTIONS OF HIGHER LEARNING

Name of Institutions	Number	Percentage
Universiti Putra Malaysia	7	14.29%
Universiti Kebangsaan Malaysia	4	8.16%
Universiti Sains Malaysia	1	2.04%
Universiti Malaya	30	61.22%
Universiti Malaysia Sarawak	4	8.16%
UNITAR Virtual Library	3	6.12%

For information professional, the means range from 3.12 to 4.56. Sixteen of the 25 criteria had means of 4.00 or higher. It implies that 16 criteria are rated between very important and extremely important.

The top ten important criteria were *contents of Web sites are updated or refreshed on a regular basis* (4.56), *text should be written in a clear, concise manner* (4.51), *notification on any changes in the address of the Web sites or Web pages* (4.49), *the charts and /or graphs are clearly labelled and easy to read* (4.42), *date of last update should always be present* (4.33), *Web sites have a logical and clear structure* (4.33), *information is free of grammatical, spelling, and other typographical errors* (4.26), *title of the Web site should be descriptive for search engines to get the most important content indexed* (4.19), *seamless access to all electronic databases of the library* (4.16), and *sources for any factual information are clearly listed* (4.16).

The lowest mean was *instructional materials and teaching techniques of lecturers are incorporated into the Web sites* (3.12). It implies that information professionals regard the above criterion as the least important among the 25 criteria.

The standard deviations for the criteria vary from 0.63 to 1.28. The highest mean, 4.56, had the standard deviation of 0.73.

4.2.2 Library user survey

The data generated from ratings of importance of 49 users were also analysed for mean and standard deviation. The 25 evaluation criteria were put in rank order based on the mean important rating (Appendix C).

The means of importance ratings by library users on the 25 evaluation criteria range from 2.49 to 4.59. Twelve of the 25 criteria had means of 4.00 or higher. It implies that 12 criteria are rated between very important and extremely important.

It is noted that the tenth of the rank order consists of two evaluation criteria, due to their means and standard deviations are same values. The top ten important criteria were *contents of Web sites are updated or refreshed on a regular basis* (4.59), *date of last update should always be present* (4.51), *link to the library's parent institution Web site* (4.37), *links to relevant Internet resources* (4.25), *the charts and /or graphs are clearly labelled and easy to read* (4.20), *title of the Web site should be descriptive for search engines to get the most important content indexed* (4.16), *link to the main page itself in each page of the Web site* (4.14), *information is free of grammatical, spelling, and other typographical errors* (4.13), *text should be written in a clear, concise manner* (4.12), and *notification on any changes in the address of the Web sites or Web pages* (4.12).

The lowest mean was *librarians are assuming responsibility for creating and maintaining the Web sites* (2.49). It implies that library users regard the above criterion as the least important among the 25 criteria.

The standard deviations for the criteria vary from 0.41 to 1.41. The highest mean of 4.59 had the standard deviation of 0.64.

4.2.3 A comparison of means between information professionals and library users

The data in Table 4-6 indicate that information professionals and library users rated the same evaluation criterion that *the contents of Web sites are updated or refreshed on a regular basis* as the criterion of highest importance.

The second criterion of highest importance of information professionals, *text should be written in a clear, concise manner*, was the tenth criterion of highest importance of the users. On the other hand, *date of last update should always be present* as the criterion of second highest importance of library users was the criterion of fifth highest importance among the information professionals.

As already mentioned in Chapter 3, information professionals are instructed to perform the evaluation from a user's point of view. However, differences between information professionals and users were observed.

TABLE 4-6: TOP TEN IMPORTANT CRITERIA AS PERCEIVED BY INFORMATION PROFESSIONALS AND LIBRARY USERS

Information Professionals			Users		
Criterion	Mean	SD	Criterion	Mean	SD
The contents of Web sites are updated or refreshed on a regular basis	4.56	0.73	The contents of Web sites are updated or refreshed on a regular basis	4.59	0.64
Text should be written in a clear, concise manner	4.51	0.63	Date of last update should always be present	4.51	0.69
Notification on any changes in the address of the Web sites or Web pages	4.49	0.77	Link to the library's parent institution Web site	4.37	0.70
If there are charts or graphs containing statistical data, the charts and /or graphs are clearly labelled and easy to read	4.42	0.63	Links to relevant Internet resources	4.25	0.60
Date of last update should always be present	4.33	0.72	If there are charts or graphs containing statistical data, the charts and /or graphs are clearly labelled and easy to read	4.20	0.41
The Web sites have a logical and clear structure	4.33	0.64	Title of the Web site should be descriptive for search engines to get the most important content indexed	4.16	1.14
The information is free of grammatical, spelling, and other typographical errors	4.26	0.76	Link to the main page itself in each page of the Web site	4.14	0.98
Title of the Web site should be descriptive for search engines to get the most important content indexed	4.19	0.66	Downloading of single pages proportionately fast	4.14	0.91
Seamless access to all electronic databases of the library (such as OPAC, exam papers, and thesis abstracts)	4.16	0.72	The information is free of grammatical, spelling, and other typographical errors	4.13	0.76
The sources for any factual information are clearly listed so they can be verified in another source	4.16	0.69	Text should be written in a clear, concise manner Notification on any changes in the address of the Web sites or Web pages	4.12	0.67

Information professionals rated the importance of *Web sites have a logical and clear structure, seamless access to all electronic databases of the library (such as OPAC, exam papers, and thesis abstracts), and sources for any factual information are clearly listed so they can be verified in another source*. These three criteria were the sixth, ninth, and tenth criteria of highest importance, respectively. However, they were excluded in the top ten highest mean ratings of the library users.

Similarly, users rated the importance of four criteria, which also did not appear in the top ten highest mean ratings of the information professionals. They were *link to the library's parent institution Web site* (the criterion of third highest importance), *links to relevant Internet resources* (fourth), *link to the main page itself in each page of the Web site* (seventh), and *downloading of single pages proportionately fast* (eighth).

4.2.4 Factor analysis

The two sets of data (information professionals and library users) were combined for factor analysis. Nothing would be gained from using separate factor analyses for the information professionals and library users, since factor analyses in the two groups separately would yield different factor structures but identical factors (Darlington, 1997).

The principal components analysis was used to extract factors followed by varimax orthogonal rotation method to maximise the variance explained by each factor. There were 8 factors with eigenvalues of 1.0 or greater. These 8 factors accounted for 74.92% of the variance in the set of 25 criteria.

Criteria having factor loading with a value at or above 0.30 were treated as being significant. A reasonable cut-off point would be 0.30, with loading below that figure being ignored in explanation of a factor (Child, 1970). The 0.30 cut-off point was also agreed by Comrey (1973). Comrey suggested that factor loading of 0.55 are good, those of 0.63 very good, and those of 0.71 excellent.

The 8 factors that emerged from the factor analysis were interpreted and labelled. Table 4-7 shows the results of the factor analysis for 25 criteria; indicators loading at 0.30 or higher, a commonly accepted measure of significance, have been included in the table.

The first factor, labelled "Objectivity," accounted for 25.86% of the variance. This factor included 5 criteria ranging from *the information is provided as a public service, no password is required, link to the library's parent institution Web site, mean to provide contact/feedback to the library and its staff, technical service departments are embedded in the Web sites, and seamless*

access to all electronic databases of the library (such as OPAC, exam papers, and thesis abstracts).

The second factor shown in Table 4-7, “Reliability of links and information,” had very clear coherence---and was concerned with links and verification. This factor included *verification of links must take place on a regular basis, links to relevant Internet resources, link to the main page itself in each page of the Web site, sources for any factual information are clearly listed so they can be verified in another source, and date of last update should always be present.* It accounted for 11.39% of the variance.

The third factor, labelled “Authority and design control,” brought together five criteria of which two were related to authority and the other three were related to design and structure. Two criteria related to authority were *librarians are assuming responsibility for creating and maintaining the Web sites,* and *authors or Webmasters and their qualifications for creating and maintaining the Web sites are clearly stated.* This factor accounted for 9.44% of the variance.

The fourth factor, labelled “Accountability for content,” contained only two criteria. *Text should be written in a clear and concise manner,* and *notification on any changes in the address of the Web sites or Web pages* occurred in this factor. This factor accounted for 7.95% of the variance.

TABLE 4-7: FACTOR ANALYSIS OF EVALUATION CRITERIA FOR
ACADEMIC LIBRARY WEB SITES IN MALAYSIA

Structure	Factor loading	Eigenvalue	Cum % of variance
Objectivity		6.46	25.86
The information is provided as a public service, no password is required	.730		
Link to the library's parent institution Web site	.680		
Mean to provide contact/feedback to the library and its staff	.658		
Technical service departments are embedded in the Web sites	.638		
Seamless access to all electronic databases of the library (such as OPAC, exam papers, and thesis abstracts)	.524		
Reliability of links and information		2.85	37.25
Verification of links must take place on a regular basis	.800		
Links to relevant Internet resources	.779		
Link to the main page itself in each page of the Web site	.753		
The sources for any factual information are clearly listed so they can be verified in another source	.567		
Date of last update should always be present	.502		
Authority and design control		2.36	46.69
Librarians are assuming responsibility for creating and maintaining the Web sites	.833		
The authors or Webmasters and their qualifications for creating and maintaining the Web sites are clearly stated	.724		
The Web sites have a logical and clear structure	.612		
The colours of background, graphics, fonts and types are suitable	.508		
New sections of information should be highlighted	.380		
Accountability for content		1.99	54.63
Text should be written in a clear, concise manner	.836		
Notification on any changes in the address of the Web sites or Web pages	.737		

Marketing		1.53	60.76
Title of the Web site should be descriptive for search engines to get the most important content indexed	.912		
Balance use of graphics and the palette of colours against the time required to displaying them	.663		
Downloading of single pages proportionately fast	.607		
Accuracy		1.25	65.77
English version or short explanation in English for patrons to understand the content	.804		
If there are charts or graphs containing statistical data, the charts and /or graphs are clearly labelled and easy to read	.484		
The information is free of grammatical, spelling, and other typographical errors	.458		
Currency		1.16	70.39
The contents of Web sites are updated or refreshed on a regular basis	.843		
Instructional support		1.13	74.92
The instructional materials and teaching techniques of lecturers are incorporated into the Web sites	.903		

The fifth factor, labelled “Marketing,” covered three criteria. The criteria load to this factor were *title of the Web site should be descriptive for search engines to get the most important content indexed*, *balance use of graphics and the palette of colours against the time required to displaying them*, and *downloading of single pages proportionately fast*. This factor accounted for 6.13% of the variance.

The sixth factor, labelled “Accuracy,” also covered three criteria. There were *English version or short explanation in English for patrons to understand the*

content, the charts and/or graphs are clearly labelled and easy to read, and information is free of grammatical, spelling, and other typographical errors.

This factor accounted for 5.01% of the variance.

The seventh factor had only one criterion that loads highly. The criterion on the seventh factor, labelled "Currency," was *contents of Web sites are updated or refreshed on a regular basis*. However, this criterion was rated as the most important by respondents both from the information professionals and the library users groups.

The criterion, *instructional materials and teaching techniques of lecturers are incorporated into the Web sites*, which did not seem to correlate well with any other criteria in other factors was loaded to the eighth factor, labelled "Instructional support."