

CHAPTER 7

CONSOLIDATION OF FINDINGS

1. INTRODUCTION

The previous chapter presented detailed reports on the findings of each of the evaluation methods used to evaluate the *SA Government Online* website. This chapter provides a consolidation of these findings. An attempt is made to present a comprehensive overview of usability problems experienced and identified, as well as of complaints, comments and suggestions of respondents and evaluators during the evaluations. Where the findings of the respective evaluation methods confirm each other they are indicated as such. In addition, substantial findings that reflected the view of only one or some of the respondents or evaluators, or which were only revealed in one or some of the evaluation methods are also reflected. No attempt is made to draw conclusions based on the consolidated findings, or to present solutions for the improvement of the website, as these are discussed in chapter eight.

The findings are presented in the same way as the discussion of evaluation criteria in chapter four.

2. CONTENT

2.1 Orientation to the website

The results of both the heuristic evaluation methods found the availability of an orientation to the website to be a positive feature. It was reasoned that the orientation provided a background on the development of the site, on its main objectives, an overview on information covered, an indication of when it was last updated, as well as information on document formats.

However, the critical evaluation pointed out that the overview lacked depth. It did not provide a clear enough understanding of the depth and breadth of content and main index pages did not provide an overview of the content thereof, how information was handled, or how far back information dated.

The critical evaluation furthermore pointed out the lack of copyright and disclaimer statements.

2.2 Authority of the website

According to the critical evaluator, the URL of the website (<http://www.gov.za>) and the reference to the GCIS as responsible organisation for the maintenance of the website contributed to the authority of the website. The critical evaluator, however, also mentioned that the site did not clarify that it was the official South African government website and that the statement "Maintained by Government Communications" was not consistently applied.

Overall, the site was considered to be without glaring errors and the information accurate. However, instances of wrong or inaccurate information were found, for example the structures and contact information of government departments.

The heuristic evaluators indicated that references and indications of authors of documents had made it possible for users to determine where documents originated and where relevant information could be accessed. It was, however, pointed out that contact information for authors was not consistently provided.

2.3 Comprehensiveness/information coverage/scope

The findings of the heuristic evaluation indicated that the site provided a fairly comprehensive and balanced choice of material, and that it covered the most relevant issues that should appear on a government website. Information was considered useful and necessary. The inclusion of forthcoming events was considered a positive feature, while the *Press Releases* category was considered very comprehensive, as it included information since 1994. Information about the country was regarded to be comprehensive. The website was found to be useful as information source in itself, as well as with regard to links to other information.

The findings of the online survey, however, indicated that respondents were only moderately satisfied with the coverage of information on the website – 71,5% of respondents indicated that they were either 'very satisfied' or 'satisfied' with this aspect, but more importantly, it ranked sixth of the 10 individual aspects measured.

Each of the four evaluation methods identified that additional material should be added to the website or linked to. It was significant that the individual findings indicated the same range of information as essential ingredients for the website.

With regard to the breadth of information, information categories such as public service vacancies, government projects, campaigns and programmes, the history of the South African government, and FAQs were suggested for inclusion on the site. Inclusion of information on government services and on government service delivery was also required. The critical evaluator additionally indicated that two-way communication between government and users was not sufficiently provided for. This perception was confirmed by the online survey, where respondents suggested that users should be provided with the opportunity to ask questions, provide input on government policies, comment on government documents, chat online with departments and e-mail government officials.

Several suggestions were made towards the improvement of the depth of information:

- Government documents and publications. The findings indicated that the *Government Documents, Reports & Forms* category lacked complete listings of government forms, white papers, notices, and other documents and reports. With regard to the latter, reports of the Auditor-General, statistical reports and reports of commissions and committees were specifically mentioned. It was suggested that this category should be expanded to also include Hansard, the Government Gazette, provincial gazettes, regulations promulgated in terms of legislation, annual reports of government departments, policy documents, departmental publications, annual financial statements of government departments and discussions of parliamentary committees. The user tests also revealed a need for the inclusion of two of GCIS's publications, the *Media Directory* and the *Government Directory*.

All the findings indicated the requirement for the website to contain at least those government documents prior to 1997.

- Government structures, functions, offices and contact information. The need was expressed for more detailed information on departmental staff structures, e-mail addresses for ministers, deputy ministers and departments, and contact information for regional offices of departments. The need to include information on the so-called government 'clusters', the names of deputy directors-general, and information on parastatals was also expressed. It was suggested that a definition be provided of

Government Bodies and Institutions. In addition, the inclusion of profiles of more government officials, for example of directors-general and senior departmental officials was requested. User test respondents also requested the inclusion of contact information for MPCCs and local governments.

- Government activities, programmes, events and news. It was suggested that this category be expanded even further and that information on government projects, recent news about government, fact sheets, FAQs on specific issues such as HIV/AIDS, a consolidated calendar of forthcoming events and schedules/diaries of prominent government officials additionally be included. According to the critical evaluator it seemed as though events were selected randomly without any clear policy or guidelines on the selection process as well as the time-scale of display.
- Speeches and media statements. Speeches by provincial officials and foreign delegates were found to be not comprehensive enough. In addition, the critical evaluator found that access to media statements issued by government officials no longer in office, as well as speeches made by foreign delegates were restricted to the *Searchable Database*.
- Provincial and local government. The critical evaluator commented on the unequal coverage between the three levels of government, i.e. that more detail was provided for national government than for the other two levels of government. This observation was confirmed by the need expressed by respondents in the online survey for information on provincial events, activities and developments in provinces, provincial gazettes and annual reports, and more speeches from provincial and local government officials. With regard to local government information, special mention was made of the need for local government contact information, while the user tests revealed that there was also a need for the contact information of MPCCs.
- *SA: An Overview.* The critical evaluator suggested the inclusion of statistical and demographical information and a country profile. The online survey revealed a further need for information on the history of the country, a map of South Africa, information on past presidents and the term calendars of universities and technicons. A need for specific topical issues such as socio-economic issues, the upcoming municipal elections, HIV/AIDS and housing related matters was also expressed. One of the user test respondents required the music of the national anthem.

- *Travel and Tourism.* The critical evaluation considered this category as merely links to related sites, and thus not successful in attracting tourism to the country.
- *Links to other websites.* The critical evaluator commended the wide selection of information linked to and the relevancy of the topics covered. However, the evaluator criticised the unavailability of an explanation about selection policy, and remarked on the difficulty of finding all the links to external websites, as different access points were scattered over the site. The online survey revealed a need for more links to popular sites.
- *Information in non-text formats.* The critical evaluator commented on the limited use of information in non-text formats.

2.4 Currency and timeliness

Three expert evaluators were satisfied that the site was current and up to date. However, the other findings indicated that this aspect of the website was lacking with regard to what could have been expected from a government website. With the exception of the search engine, this aspect rated most negatively in the online survey (a 65,7% satisfaction level).

Aspects found to be satisfactory were the presentation of new information on the home page itself, the indication of the date and time of the latest update and the categorisation of new information as it provided users an immediate overview of the latest additions to the main sections. In general, the heuristic evaluators found the frequency of updating satisfactory, but the critical evaluator mentioned that no updates were made over weekends.

The aspect of out-of-date information featured prominently in the findings. There was a clear expectation that material should be kept current, but the findings revealed that this expectation was not always met. Information considered not being updated included the vision and mission of government departments, contact information for government officials, structures and bodies, profiles of government officials, Bills and other documents, and the *Elections* page. Dissatisfaction was also expressed that the most current information was not always available soon enough, as the latest speeches and documents were not always included in updates. The findings of the heuristic evaluation indicated that name changes of departments were not always effected quickly.

Among other issues that were found wanting was that no indication was given of when specific documents were added to the website, or what the update frequency of the site was. Furthermore, inconsistencies were found with regard to the handling of 'last updated' dates – on some pages these dates were omitted, while they were also not displayed consistently on pages. Lastly, dead links were found on the site.

2.5 Objectivity and fairness

The heuristic evaluators indicated they were satisfied with the objectivity of the site – no bias was found and the content was regarded as balanced. The other evaluation methods provided no results in this regard.

2.6 Writing and editorial style

Positive remarks were made about the overall writing style, and heuristic evaluators commended aspects such as the lack of typographical errors and editorial problems, the fact that pages were easy to read, the professional tone used and the availability of clear headings and page titles. The presentation of information to be read online was found to be acceptable.

The critical evaluation and the user tests revealed instances of ambiguity with regard to the labelling of menu entries and link text. The *Documents, Reports & Forms* sub-category provided the most problems in this regard for test users, but the critical evaluation also identified this problem for the rest of the categories of the website. The following problems were identified:

- Sometimes menu entries/labels were found to be inconsistent with the headings of pages linked to, or headings and entries did not correspond with the content linked to. For example *Government System* and *National System & Structure*, *Deputy President* and *The Presidency*, *Ministers* and *Ministries*. The *Press Releases* heading also included media statements, while user test respondents had various interpretations for the term *Portfolio list*.
- In some cases, the text chosen for the sidebar or menu entries was not self-explanatory and did not provide sufficient context. Subsequently it was difficult to recognise it as the relevant entry to specific information. Examples include *Related links* in the side

navigation bar on the *Provincial Government* page, *Events* as found on the home page, *Combined Contact List*, *Portfolio list*, *A rainbow country* and so on.

- The distinction between sub-categories at *Documents*, *Reports & Forms* was not clear enough, for example *Documents listed per subject*, and *Reports and other documents*.
- Different entries or headings were used over the site for linking to the same information. For example, the *Government & Politics* heading at *SA Webs* linked to *South African Embassies*, and *Related links* at *National System & Structure* linked to *SA Missions abroad*.

The critical evaluation found some pages where headings were omitted, as well as instances where page titles were not changed to reflect changes in content. Some instances were also found with regard to inconsistent naming conventions for page titles (for example *home* versus *index* versus *index page*). The critical evaluation also commented on the occasional omission of page titles or indexed PDF fields.

Both the heuristic evaluation findings, as well as the user tests revealed that issues such as overly long pages had a detrimental effect on the overall usability of the website. This aspect is discussed in more detail in paragraphs 3.2.3 and 5.1.

2.7 Language

The critical evaluator and respondents in the online survey mentioned that the use of languages other than English was too limited.

3. INFORMATION ARCHITECTURE/ORGANISATIONAL STRUCTURE

3.1 The home page and *What's New*

As the home page is required to be a conceptual space leading to information on the website and providing organisational context for the user, this aspect was discussed as part of the paragraph about information architecture in chapter four (paragraph 3.1) and in chapter six. However, to consolidate all aspects related to this issue, navigation and design issues relating to the home page itself also form part of the discussion in this chapter. As the *What's New* functionality formed part of the home page on the site at the time it was

evaluated, it will also be discussed here, as will navigation and design aspects of the home page.

3.1.1 The home page

The heuristic evaluation results found the home page a good entry point to government information, as it provided a good general overview of the information on the site and of its organisational structure. Other positive elements highlighted were the page's aesthetic appeal, especially with regard to the mix of graphics and text, its good basic design, as well as the top graphic banner. The results of the online survey supported the perception that the home page was well designed and organised, as this aspect achieved the highest satisfaction rate (83,8%) of all individual aspects evaluated.

However, there is reason for concern, as problems and dissatisfaction with the home page became evident in the findings of all evaluation methods.

The main issues that were negatively experienced are as follows:

- In contrast to positive comments made by the critical evaluator with regard to the division of the home page in three distinct columns, the other evaluators and respondents experienced problems with this practice. User test respondents found it difficult to distinguish between main category headings and the *What's New* headings. The main reason for this seemed to be the duplication of headings and/or the perception that *What's New* presented subcategories that were a more direct route to the required information. Responses in the online survey about duplication of information on the home page confirmed this observation.
- The home page was considered to be too cluttered and busy, or as having too much detail.
- The display of the search button at the bottom of the page was experienced as a problem. Respondents and evaluators expected it to be more visible and did not want to scroll down to find it. It was suggested that the search box be displayed on the home page itself, and not only at a deeper level.
- The findings indicated that the choice of main categories presented on the home page did not fulfil the needs of respondents and evaluators. Reasons offered for this were

that it did not sufficiently guide users to information lying deeper down in the site, that some information did not feature prominently enough on the home page, and that information was not immediately visible or made apparent enough from the home page. Contact information, links to other websites, profiles, budget information and information relating to national identity were examples of information not found easily from the home page. User test and online survey respondents commented on and made suggestions with regard to the relegation of certain categories to lower levels, the combination or merging of certain categories, adding categories of information that were not yet available, and moving up certain categories that were often used but which were only available at a deeper level. Additional information suggested for inclusion on the site and to be accessible directly from the home page included national symbols, parliamentary information, government services, contact information and public service vacancies. Easier access to departmental home pages from the home page was mentioned as a specific requirement. To create more room for additional information categories, the removal of entries such as *Ministers*, *Deputy Ministers* and *Africa* were suggested.

- The critical evaluator found that the main categories focused too much on government organisational information, and that no trace was found of an attempt to also follow a functional approach. Furthermore, the main categories did not represent a true reflection of the actual content of the website, as national government information was spread out more horizontally over the site than other categories, but did not necessarily constitute more important or broader information content.

3.1.2 *What's New*

The critical evaluator considered the announcement of new information posted directly on the home page in a positive light, as it supported users to immediately view the latest additions to the website without having to click down to a next layer. However, the treatment of this feature by the web developers did not support this positive perception, but rather contributed to a negative perception thereof. Many difficulties were experienced and dissatisfaction was expressed with the way the announcement of new information was treated on the site.

Specific issues that presented problems or what were commented upon were as follows:

- The critical evaluation found the font size and font type used for the entries listed under *What's New* too small, especially in relation to other information entries and graphics on the home page, and therefore difficult to read. In addition, user test respondents criticised the use of red for the latest additions.
- Individual entries or document titles were not clickable. Users were required to select the heading of the relevant category. These headings linked to general category listings presenting all the information in these categories and not only to the new information. Furthermore, the new information was not always presented in the same sequence as presented on the home page.
- The heuristic evaluation findings found that the home page became too long when a substantial amount of new information or events were presented, resulting in users having to scroll down to see all the new information or events.
- The expert and user tests found the presentation of the new entries to be too cluttered.
- It was not clear if the announcement of new information also included postings to other government websites.
- It was not clear for how long 'new' information was displayed on the home page, and it was not possible to determine which information was added on the website for a specific period.

3.2 Organisational scheme of the website

On the surface, online survey findings for the organisational aspects of the website seemed to be positive, as the broader category of information organisation (also including findings for the home page) rated the highest of all categories in the online survey (81,9% satisfaction level). Furthermore, expert evaluators generally commented positively on this aspect.

Aspects found to be satisfactory included the relative shallow link hierarchy, the clear interface that enabled users to see at a glance where they were and what information was available, the logical and sequential way information was organised, the grouping of information under the right headings, and the availability of alternative methods of organising and providing access to documents, speeches and media statements.

However, when evaluating the findings for related questions, almost a third of the online survey respondents indicated that they found it difficult to find information on the site, or found it 'neither easy nor difficult', or were uncertain on this. At the request to motivate their answers, the majority of responses concerned the organisation of information. Factors that contributed to respondents' dissatisfaction included that "information was not immediately visible" or "was not made apparent on the home page", that information was spread out over the site and that labelling was not always logical. The findings of the critical evaluation and user tests confirmed that fundamental problems existed with the organisational structure of the website that could have contributed to usability problems and to users not being able to find the information that they required.

The main problems identified with regard to the organisational structure of the website are discussed in the following paragraphs.

3.2.1 Fragmentation of information

The user tests revealed that information was often fragmented, causing key concepts to span over multiple pages. In instances where the same information was represented multiple times with slight variations, and where information on the same topic was carried in different sections of the website, user test respondents became confused. The findings of the heuristic evaluations confirmed this observation and mentioned the following categories in this regard: links to the different levels of government (national, provincial and local), links to other government bodies and to other external websites, information on the Constitution, public holidays, arts and culture, elections, the Coat of Arms and other national symbols, speeches and media statements, provincial profiles, documents, and contact information.

3.2.2 Hidden information

The critical evaluation, online survey as well as user tests found that certain important information was hidden and difficult to find. In this regard, the findings specifically identified government documents, media statements, links to external websites, contact information, profiles of government officials, familiar information products such as the contact directories, national emblems, provincial and country-wide profiles, topical information, provincial and local government websites and the websites of government bodies other than national departments.

3.2.3 Long documents

The critical evaluation found that the long documents carried on the website contributed to the problem of hidden and therefore difficult to find information. As no links were provided to the main sections contained in these documents, the content was difficult to locate. This finding was confirmed by the findings of the online survey and expert evaluation. The chapters of the *South Africa Yearbook at SA: An Overview* were specifically mentioned in this regard – the critical evaluator found that publishing complete chapters without chunking them further hid much of the valuable content contained therein.

3.2.4 Hierarchical scheme

The user tests revealed that users got irritated when unnecessary steps had to be followed to get to the required information – they wanted information immediately. For example, respondents expected to find the parliamentary website when clicking on *Parliament of the Republic of South Africa* on the *National System & Structure* page. Dissatisfaction was also expressed when a further click was required to find the provincial websites after clicking on *nine provinces* on the *Provincial Government* page. This observation is confirmed by the finding of the critical evaluator that information was not always accessible via the shortest possible route, resulting in users having to take unnecessary steps to reach the required information.

The critical evaluation further identified that hierarchies were not built in a consistent way, causing difficulty to move easily through the site without getting lost. Sometimes information was presented from general to specific, but in other cases specific information was presented immediately on the main pages, with information just as important relegated to deeper levels of the hierarchy.

3.2.5 Consistency

User test respondents expected a consistent approach to the organisation of information. After they were shown how contact information was treated on the site, they expected the same treatment and organisational approach when looking for profiles of government officials.

3.2.6 Organisational methods

The following problems were experienced and suggestions made by respondents in the user test:

- It was not clear to respondents that an additional sorting method or option of finding documents according to subject had been provided. This was also relevant for documents listed per annum and all documents listed together for all the years.
- Respondents suggested that documents should be listed chronologically as well as alphabetically, and that all documents for all years and for all subjects should be grouped together in one listing. The title “archive” was suggested in place of *All Documents combined*.
- Respondents not only required a listing of gazettes but also wanted to have access to gazettes according to the type of information contained therein.
- The requirement for an alphabetical listing on longer pages such as *National Departments*, and which would make it possible to have shorter pages with less information on each was expressed. It was suggested that for the less experienced user a general page listing for all the departments be combined with the first option.
- Respondents did not recognise that additional listing methods had been provided to ensure improved access to information. For example, the *Portfolio list* was perceived as unnecessary duplication of information content.

3.2.7 Specific information presenting problems during the user tests

Categories and subcategories that especially presented difficulties for user test respondents were *Speeches*, containing speeches as well as media statements, documents, *Contact information*, and links to external websites.

- Speeches and media statements. The first factor contributing to difficulty was the heading “Speeches”, requiring the user to guess that media statements were also available in this category. This observation was made with regard to the home page listing as well as the link on the *Ministries* page. Secondly, when results were displayed

after a search had been performed for either of the two information types, it seemed that respondents did not know whether speeches or media statements had been returned. They were thus required to open the documents from within the results browser to determine which were speeches and which were media statements. Thirdly, there were incomplete listings of speeches and media statements and respondents did not realise that only the latest 25 were listed when linking from the *Speeches & Press Releases* page to listings of speeches in the database. Relevant to this issue is that respondents in the online survey criticised the use of the search engine to list both speeches and media statements. They indicated a preference for an archived directory of speeches and improved chronological categorisation thereof. It is worth noting that on enquiring about respondents' preferences regarding the handling of this information the response was mixed. Three respondents indicated their preference for speeches and media statements to be presented under separate headings, and two did not mind them combined.

Additional to the problems observed in the user tests, the critical evaluator noted that the speeches and media statements of some provincial officials were not grouped with those of national and other provincial government officials.

- Contact information and biographical information. It was not evident to respondents that contact information was provided both per individual category (e.g. *Ministers, Deputy Ministers*) and in a combined format. When this was conveyed to them they found it difficult to find the combined contact list. They did not expect to find it at *National System & Structure*, and were unable to identify the relevant entry in the side navigation bar on pages where this option was available. Respondents who had some knowledge of government structures and information expected existing hard-copy documents to be presented on the site in the format familiar to them. This was demonstrated by the fact that the *Government Directory*, a well-known product within government was searched for at *Documents, Reports & Forms* by two respondents in different circumstances.
- *Documents, Reports & Forms*. Locating specific documents on the website constituted one of the biggest problems for respondents. It is worth noting that some preferred to look for documents on the relevant government department's website or opted to search when difficulties were experienced to find specific documents such as the Nuclear Energy Act. Linking of the individual *Documents, Reports & Forms* sub-categories to pages only containing listings for the latest year's documents (2000) in that sub-category confused respondents. When a specific entry was selected and the

relevant page displayed, respondents immediately accepted that all documents for the sub-category were listed on that page. They did not notice that indexes for the other years were available from the side navigation bar, but immediately scrolled down to find the specific document.

- Links to external websites. Respondents found it unsatisfactory that links were scattered over the site and were only accessible from a deeper layer of the site. When respondents were asked to find links to external websites, their first option was to search for links according to a topical organisational scheme (except in the case of government departments) where all external links were grouped together. Only when such an option was not found, were the 'organisational' indexes consulted. One respondent suggested that all external links be grouped together with a title such as "related links".

Respondents expressed different needs, expectations and preferences for where information should be categorised or accessed from. In addition to the previously mentioned aspects, changes to existing organisational structures suggested were that the Constitution be categorised at *Documents, Reports & Forms*, that the Government Gazette be located at *Documents, Reports & Forms* or *National System & Structure* or *Parliament*, that public service vacancies be available from *National System & Structure* or *Services* or *National Departments*, that government forms be part of *Services* and that the *What's New* listing be on a second level and not on the home page.

4. NAVIGATION AND SEARCH

All the evaluation methods revealed that this category presented many problems and dissatisfaction. In the findings of the online survey the lowest satisfaction level (67,6%) was achieved for the questions relating to navigation and search, a percentage well below that achieved for the other categories of questions, including those on information architecture (see chapter six, paragraph 5.5) and content (see chapter six, paragraph 5.4). The findings of the other evaluation methods confirmed this finding.

4.1 Site navigation

The results of the online survey indicated a relatively high satisfaction level (80,9%) with regard to the specific question about site navigation (indicate how easy/difficult you find it to navigate this website). However, responses to a related question on the ease/difficulty of

finding information on the website showed a much lower satisfaction level – a percentage of only 67,6% of responses indicated that respondents found it either 'very easy' or 'easy' to find information on the website. Despite the fact that many responses concerned the organisation of information, navigation aspects were also indicated as the causing factor. The expert evaluators had conflicting opinions – two found the site easy to navigate, but the others regarded navigation as an aspect that should be improved. The critical evaluation found both positive and negative aspects, but pointed to aspects that could have caused usability problems.

The online survey and both the heuristic evaluation methods pointed to the following positive aspects in this regard:

The online survey and both the heuristic evaluation methods pointed to the following positive aspects in this regard:

- Overall, it was easy to navigate and browse the site.
- Structural and local links were provided, and pages provided easy access to relevant pages.
- Navigation was consistently applied.
- Pages provided links to go back to the home page, as well as access to the search mechanism.
- On most pages, links were provided back to the higher-level pages in the hierarchy.
- Additional cross-referencing was provided by means of the side navigation bar.

The aspects that presented the most problems are discussed in the following paragraphs.

4.1.1 Top navigation bar

The findings indicated that the top navigation bar was not optimally usable and accessible, and did not fulfil expectations.

The critical evaluator found that the sequence of entries in the top navigation bar did not correspond with that of the home page, while the labelling of some entries was not consistent with that on the home page. In addition, the small font size and use of white text against a black background made it difficult to read the text. An expert evaluator was of the opinion that the top navigation bar took up too much space on pages.

Behaviour and comments made during the user tests confirmed that the top navigation bar was not providing effective navigation support. It was interesting to note that in most cases respondents did not make use of the top navigation bar. The general behaviour was to go back to the home page by means of the browser's *Back* button to select the category for

the following question from there. This sometimes occurred even when respondents were already within the relevant category for the next question. The first time that a navigation button other than *Back* was used, was with question five, when three respondents selected *Search*, *Home* and *System & Structure* from the top navigation bar respectively. Reasons for not using the top navigation bar can be derived from comments such as:

- “The top navigation bar is totally inadequate”.
- “It is difficult to read”.
- “It will perhaps be better to put it on the side making use of frames”.
- “Home should not be part of it, but on the page itself, as most users prefer to go back to the home page”.

4.1.2 Side navigation

The critical evaluator referred to the side navigation as a good method to provide local links to relevant information and as a good opportunity to cross-navigate between different types of information without having to go back to the home page or the main categories.

However, during the user tests it was observed that respondents mostly scanned through the options provided in the sidebar, often overlooking the relevant link. Furthermore, the critical evaluation found that the side navigation bar was inconsistently applied – it provided for a variety of link types. For example, links were to related information on the site itself, to more detailed information on a topic, to external websites, to other sub-categories, and to additional indexes.

4.1.3 ‘Previous’ and ‘next’ options

User test respondents and expert evaluators respectively commented that ‘previous’ and ‘next’ buttons would have made navigation easier and would have helped to improve orientation to the website.

4.1.4 Long pages

During the user tests the moderator observed that respondents had trouble to find information contained within longer documents. The critical evaluator commented on the unavailability of bookmark links or an index to assist navigation on most of the longer pages.

4.1.5 Additional navigation aids

All the findings indicated that the website failed to provide sufficient methods to assist the user to form a mental model of the website, such as a site map, cross-references, alphabetical indexes, spatial or graphical overviews and coherent indexes. However, it was interesting to note that during the user tests, limited use was made of the tools that had been provided. Only one respondent made use of the alphabetical index on the top of the *Documents per subject* page. Two respondents found the alphabetical index confusing, expecting it to link to document titles starting with the alphabetical letter selected. In addition, the user test indicated that it was not clear to respondents that alternative listings for the same information had been provided (see chapter six, paragraph 4.4.2).

4.1.6 Description of links

The critical evaluator found that links failed to provide adequate cues to where they lead and how much information was at the other end of the link. This view was confirmed by the user tests in which respondents complained that links were not described. They were of the opinion that this function would be helpful to orientate users about information that was available and about where they would be going. A flag showing the meaning of headings when running mouse-over buttons was suggested.

4.1.7 Additional problems experienced and suggestions made

In addition to above-mentioned aspects, respondents and evaluators experienced the following problems and difficulties:

- The critical evaluator criticised the occasional duplication of structural links. The same entries were found on different levels of the site, while duplication of entries was found between the top and side navigation bars.
- One expert evaluator was of the opinion that the site did not provide clear indications of where users were within the website.
- According to expert evaluators the navigation scheme was not consistently applied. The critical evaluator further found that the principle of applying 'breadcrumb trails' was not followed consistently, while the bottom navigation was omitted from some pages.

- Two user test respondents initially attempted to click on the icons next to main headings. A further problem experienced was that only part of the *Searchable Database* button was active to click on.
- Where photographs were presented with names of officials (for example on the *Presidency* page), user test respondents expected the photograph and text to be one link instead of the photograph being a thumbnail to a bigger image and the title being a link to the profile of the official.
- One expert evaluator found links that were not easily identifiable as links.
- User test respondents criticised the way links were presented on the *National Departments* page. According to one, users might have assumed that they could have clicked on the name of the department to get more information about the department or to go to its home page, and therefore it was not necessary to provide all the other options. Respondents also expected to find a link to government-controlled bodies from the *National Departments* pages.
- Additional cross-referencing was required from all relevant pages to profiles of government officials.
- Both the heuristic evaluation methods indicated that dead links were found. This included internal and external links.

4.2 Search

Overall, the search mechanism was rated and experienced as one of the most negative aspects of the website. With the exception of two expert evaluators who considered the search mechanism as satisfactory, the heuristic evaluators considered the search mechanism as inadequate and as an aspect that should be improved upon. In the online survey the two aspects of the search mechanism tested, i.e. ease/difficulty to use the search mechanism and effectiveness of the search mechanism, returned the lowest individual ratings of all aspects tested (60% and 61,9% respectively). Significant was also that 27% of the responses to the question about the ease/difficulty of finding information on the website concerned the search engine, and that the majority of these (15 out of 17) were negative. In addition, a correlation was found between the ease/difficulty of finding information and ease/difficulty of using the search mechanism. A percentage of 63,6 of the

respondents who found it 'difficult' or 'very difficult' to find information, and 40% of those who found it 'neither easy nor difficult' or who were 'uncertain' referred to the search engine as reason. Above-mentioned finding was confirmed by observations made during the user tests.

Positive features of the search mechanism from the findings included:

- The availability of ranking and weighting.
- The attempt to make simple as well as advanced search functionalities available.
- Both the search mechanisms allowed various search formulation options and provided some options for the refinement of searches as well as for the manipulation of results.
- The *Searchable Database* made provision for the selection of specific data collections, field searching and the sorting of results.
- Documents in both PDF and HTML formats could be retrieved.

The findings indicated the following aspects as contributing to the negative perception of, or experience with the search mechanism:

4.2.1 Two search mechanisms

The critical evaluator criticised the provision of two separate search mechanisms for different parts of the site. According to the evaluator, this made it impossible to do a comprehensive search on all information on the website.

The findings of the expert evaluation, user tests as well as that of the online survey confirmed this observation. Expert evaluators as well as user test respondents were not able to distinguish between the two search mechanisms provided on the site, and did not realise that the two mechanisms provided access to different sets of information.

It became evident that heuristic evaluators and user test respondents perceived the two search mechanisms as an attempt to provide simple and advanced search facilities. Heuristic evaluators indicated that the distinction between the 'simple' and 'advanced' search facilities was not clear, and were of the opinion that the 'advanced' search was hidden and should have been more easily available. As in the case of the heuristic evaluators, user test respondents expressed their perception that the *Search the Government Online World Wide Website* search provided a simple search, while the *Searchable Database* was perceived as an advanced search mechanism where searches entered in the previous mechanism could be manipulated further. Respondents also

expected all information available on the site to be searchable from both search pages. In addition, an expert evaluator commented on the difficulty of determining if there was a distinction between full text retrieval and the indexed database, and could not determine how indexing took place.

General behaviour during the user tests was to go to the search page that was the most easily available at the time. User frustration is expressed in the following quotes: "The two searches made it very difficult" and "I don't know what is in the databases – there should be only one search facility – the web pages and database should be one". Respondents in the online survey also suggested that there should be only one search mechanism.

4.2.2 Search interface and query structuring

The search interface and facilities to structure queries drew the following negative reaction:

- The heuristic evaluators mentioned that descriptions of the different search functions and on how searches should be done were not clear enough. Descriptions were required, for example, on the scale of resources available for searching, the type of terminology used in the site and in the databases, how ranking took place, what terms such as 'power search', 'default', 'simple' and 'standard' meant, and how truncation and wildcards functioned. Comments from respondents in the online survey confirmed that they also experienced problems with these issues.

User test respondents did not try to make use of the help function.

- The findings of all evaluation methods indicated that the search interface was complex and not user-friendly, especially for inexperienced and average users. The user tests revealed that respondents did not notice that more data collections than speeches were available on the *Searchable Database* page and that specific collections could be selected. This observation was confirmed by an expert evaluator, who mentioned that the pull-down menus at the *Searchable Database* page were deceptive as not all the options were visible in one glance. Other observations during the user tests were that some respondents did not notice the sorting option when asked to sort media statements from the latest to the oldest, while specifying specific dates presented problems – including both the formatting of the date as well as defining parameters. The critical evaluator also mentioned that features such as 'default', 'simple' and 'standard' would probably not have been familiar to the average user.

- The critical evaluator pointed out that it was difficult to search for speeches or media statements of specific officials and that it was therefore easier to browse the website to find speeches made by specific officials. The reason for this was ascribed to the fact that although provision was made for date and title fields, no field was available for names of officials.
- The heuristic evaluators remarked that the search mechanism did not allow for phonetic variations, abbreviations or synonyms from a thesaurus, truncation, wildcards, proximity searching, case sensitivity, field searching and natural language searching. It was suggested that proximity and date selections be included as part of the simple search. In addition, an expert evaluator detected inconsistencies with regard to the functioning of boolean operators, while another expressed dissatisfaction with the fact that “separating by commas”, meaning the boolean OR, was used as default. Comments by online survey respondents indicated a need for more options to narrow down information and for having more search options than merely entering a word.
- According to the critical evaluator the attempt to provide a scoped search failed, as the applicable entry linked to the complete *Searchable Database* interface, and not to an interface providing for only a search on the relevant part of the website. However, the need for scoped searching became evident from comments from online survey respondents, inter alia that it would be helpful to search specific information or information categories.

It is worth noting that user test respondents had trouble to formulate logical queries. Formulation of queries followed two main trends:

- Respondents entered the question as provided in the user guideline, for example the Act number or the exact title of the Act – Nuclear Energy Act (Act No. 46 of 1999). The remark was made that one “should be able to type the whole thing in”. This behaviour also confirmed the need for natural language searching.
- Queries were formulated very broadly. Respondents entered very short search strings (one or two words), such as “transport” or “health”, resulting in a large return. In addition, they sometimes overlooked the item they were trying to find, even when it was included in the search results.

Remarks made by online survey respondents indicated that they did not have much experience of search engines and of formulating queries.

4.2.3 Search results

The following aspects regarding the search results were found to be unsatisfactory:

- The critical evaluator found incomprehensive document titles in the result list.
- Use of italics for the summaries in the results list. A comment was also made that the summaries were not descriptive enough of the content of documents.
- The fact that too many documents were returned, many which were irrelevant. It must, however, be noted that as stated in paragraph 4.2.2 of this chapter, queries were often formulated very broadly by user test respondents. In one instance, after a query was entered correctly, a respondent with high Internet exposure commented positively on the results displayed.
- One respondent suggested that an option for refining results be added directly on the results page.

Furthermore, an expert evaluator commented that results neither gave sufficient context, for example the number of keywords/hits after a search, nor an indication of the keywords in the text, nor of the category from where the results originated. Another expert evaluator found different results when entering the same search in lower and upper case. With regard to the aspect of keywords, the critical evaluator found that search terms were highlighted in retrieved documents from the *Searchable Database* but not from the *Search the Government World Wide Website*.

Additional problems highlighted were the lack of functionalities to cluster results, to save results, or to set parameters.

4.2.4 Search other government websites

The critical evaluation as well as comments made by respondents of the online survey indicated the need for an option to search for information available on other government websites from the *SA Government Online* website. The search behaviour of user test

respondents, where they attempted to go directly to other government sites to find specific types of information, confirmed this need.

4.3 Searching versus browsing

The online survey found that the dominant user behaviour was to browse the menu structure. The majority of respondents (77,5%) preferred to browse through the website to find information, while less than a half (47,8%) indicated that they preferred the search engine. Just more than four out of every ten (43%) indicated that they made use of both the browsing and searching methods. In addition, 33 respondents (15,8%) indicated that they never search, and only three (1,4%) that they never browse. In addition, 15,8% of the respondents indicated that they never search and only 1,4% that they never browse.

A comparison of the methods of finding information on the website with frequency of use indicated that 82,2% of the most frequent users (more than eight times a month) browsed the website and 45,8% used the search facility, compared to the less frequent users (first time visitors/less than once a month), where 61,1% indicated that they browsed and 47,2% that they searched (see table 13).

It is significant that a comparison between the easy/difficulty of using the search mechanism and methods of finding information on the website revealed that 76,2% of the respondents who indicated that the search mechanism was "easy" or "very easy" to use still indicated that they browsed to find information, compared to 53,2% of this group who indicated that they used the search mechanism (see table 15).

Observation during the user tests revealed that respondents both browsed and searched the site to find information. The two respondents that often tried to use the search engine were the one with average Internet as well as *Government Online* experience, and the one with high Internet but no *Government Online* experience.

An important observation was that respondents did not have much patience when their attempts to find information through browsing failed, and subsequently switched over to search. They also easily switched back to the browsing mode when search did not quickly provide the desired outcome. It was evident that respondents preferred searching to browsing for specific types of information. It was especially evident when

- searching for specific documents such as the Nuclear Energy Act or for documents on a specific subject

- information was not evident from the home page categorisation, for example when asked to determine what South Africa's national animal was and when Youth Day was celebrated
- the information needed was broad and did not fit one specific category, for example in response to the question on how the media was regulated in South Africa
- locating speeches.

5. DESIGN AND LAYOUT

5.1 Design and layout

In general, the look and feel of the website was commented on positively. This aspect was rated the second highest (80,9%) of all individual aspects evaluated by means of the online survey, while heuristic evaluators and test user respondents regarded the site as visually pleasing in terms of aesthetic qualities. A liking was expressed for the header, the use of colour, the background image and icon used for menu entries (flag), the clean and clear-cut design, and consistency of layout. Furthermore, the design and layout were considered as being user-friendly and not too complex. Both experts and user test respondents expressed the view that the website was representative of South Africa.

One expert evaluator criticised the “drabness” in the look and feel of the site and recommended that added style and flair be integrated into the design of the website. User test respondents commented that the home page should be livelier and that more graphics should be used. One expert evaluator questioned the political correctness of the Khoisan figures, and another remarked that the site design did not cater for the youth. The exclusion of the Coat of Arms as design element was criticised by the critical evaluator and online survey respondents.

The findings identified the following as aspects that could be improved:

- Display of information on pages. As previously reported, the design of the home page in three columns confused some of the user test respondents. They could not determine that the right-hand column presented only the latest information and got confused with the repetition of headings between the right and left columns. Comments were also made that the home page was too cluttered – especially with regard to the presentation of new information. This was confirmed by the critical evaluation.

An expert evaluator found the top navigation bar distracting and remarked that it took up too much space on the screen.

- Length of pages. Heuristic evaluators criticised the long index pages since it necessitated scrolling to see all entries. It did not seem, however, as if user test respondents experienced major problems with scrolling down menu pages that did not fit on to one screen – with the exception of the *National System & Structure* and *SA: An Overview* pages, they scrolled down to locate desired items. In contrast, scrolling through the list of documents on the *Reports and Other Documents* page irritated some respondents, while they also did not want to scroll to the bottom of the home page to find the search button. The critical evaluator and the user test respondents commented that the home page sometimes became too long with the addition of new information or events.

In addition, dissatisfaction was expressed with long documents without additional navigation aids such as indexes and 'top of page' links, as well as long documents that took long to download.

- Use of tables. User test respondents perceived the use of tables, for example at *The Presidency* and where used for contact information, as a neat and effective way to present this information. The lines of the tables were, however, considered unattractive and the type-face (italics) used not suitable, influencing text readability. The treatment of visible tables was also criticised by the heuristic evaluators. They found it busy and cluttered, thus contributing to difficulty in reading the text.
- Consistency in design. The critical evaluator detected some inconsistencies in the layout of the website. These included the display of some features on all pages, such as 'last updated' dates, the sequence of menu entries, and the treatment of main index pages.
- Printing of pages. Some pages that were cut off on printing were found.
- Indication of document formats. No indication was provided of the format in which individual documents were available.

5.2 Text readability and visibility

In general, expert evaluators considered this aspect as satisfactory. They remarked positively on the use of font colour, pitch and visibility of text. The critical evaluator furthermore commented positively on the way that the background image was applied.

In addition to the aspects mentioned in the previous paragraph as part of the discussion about the use of tables, the following aspects were highlighted as issues that should receive attention.

- Choice of font and case. The critical evaluator, one expert evaluator and respondents in the online survey commented on the inconsistent use of font types and sizes in text and document headings. In addition, the user test and critical evaluation revealed that the font used for *What's New* was too small and that the red for new entries was ineffective. The font used for the summaries of search results was also found difficult to read. Furthermore, the unbalanced relationship between text and images on the home page contributed to the difficulty experienced in reading the text.
- Justification and spacing. The inadequate spacing between text or entries, as well as text spanning over the complete width of the screen, were identified in the user tests and critical evaluation as additional aspects which contributed to the difficulty experienced in reading the text.
- Use of colour. The way colour was applied for the side navigation bar was found to be somewhat overwhelming by the critical evaluator, specifically on pages that displayed many sidebar options. The white lettering used on the black background in the top navigation bar was found to be difficult to read by the critical and one expert evaluator. Two expert evaluators recommended that the site be more colourful.

5.3 Graphics, images and animation

The critical evaluator regarded the graphic elements as relevant to the content and as enhancing it. The evaluator commended the use of images on the home page to announce upcoming events, and the use of icons at menu entries. The use of photographs was regarded as contributing to the general appeal of the website and as making government officials more personal to users. Similarly, the photographs of national emblems were

regarded as visualising them for users. The user tests also found the inclusion of photographs of government officials to be a positive aspect of the website. Online survey respondents suggested the inclusion of additional photographs.

One expert evaluator was satisfied with the use of graphics on the website, but two expert evaluators did not react favourably to this aspect. They found that not enough graphics were used and when used, they were not used creatively. One expert evaluator complained that some pages with graphics took too long to download.

5.4 Interaction (forms)

Expert evaluators were satisfied with the treatment of forms as well as of the *Contact Us* functionality, while the critical evaluator found the *Contact us* forms easy to use and expressed a liking for the automatic response received by the user after submitting it. However, the critical evaluator criticised the fact that no indication was given of the time-frame within which users might expect to receive a response, and that the distinction between the functionalities to contact the webmaster and to request further information from the Information Centre was not clear enough. Evaluators and respondents suggested the inclusion of more government forms, while respondents in the online survey expressed a need for more interactive features to enable users to talk to government in various ways. This aspect was not covered by the user tests.

6. PURPOSE AND AUDIENCE

The general view of the expert evaluators was that the site suited its purpose and intended audience, that the content was relevant to the subject domain, and that the site was a good source of government information. This view was confirmed by the findings of the critical evaluator who perceived the website as fulfilling its purpose to act as an entry point to government information on the Internet.

7. THE WEBSITE AS ENTRY POINT TO SOUTH AFRICAN GOVERNMENT INFORMATION

The heuristic evaluators found this aspect to be satisfactory, as the home page provided a good overview of information available on the site, and as the website made it easy to access relevant information on other government websites. However, the critical evaluator criticised the fact that the website did not provide access to all information on other

government sites, but rather focused on duplicating and maintaining content already available on those sites.

The user tests revealed that respondents had a need for easier access to departmental websites. They expected to find government information on specific topics from a central place, i.e. the government website. Users, for example, stated that they did not want to go to the websites of individual departments for government services. Respondents, however, attempted to go to the websites of the relevant government departments to look for specific government documents. Announcements of new information posted on other government sites were also required.

8. ADDITIONAL OBSERVATIONS

8.1 Frequency of use versus satisfaction/dissatisfaction with aspects evaluated

Respondents and evaluators differed with regard to the level of experience they had in using websites. The experts and the critical evaluator could be regarded as more advanced users. Three user test respondents had high Internet exposure, one of whom also had high exposure to the *SA Government Online* website. 6,2% of the online survey respondents did have some previous Internet exposure and just more than a half (51%) used the website frequently.

From the findings of the online survey, it became evident that there was a correlation between the frequency of use and satisfaction with the website. Respondents who used the website more frequently (more than once a month) were generally more positive about the aspects evaluated (comprehensiveness, currency, organisation, ease/difficulty of finding information, navigation, ease/difficulty of using the search mechanism) than the less frequent users (first-time users/less than once a month).

It is also interesting to note that that the biggest gaps between ease/difficulty of finding information and frequency of use were with the aspects organisation, difficulty of finding information, and difficulty of using the search mechanism, where the gaps were 19,3%, 12,4% and 10% respectively.

At this point it is important to point to comments made by respondents during the online survey that indicated that some of them might not have been highly experienced computer

users of very knowledgeable about the use of a search mechanism (see chapter 6 paragraph 5.6.6).

It was also evident that the search mechanism was the biggest problem experienced by both experienced and inexperienced users and that this contributed to the relative difficulty of finding information.

8.2 Government web publishing

Despite the fact that the evaluation instruments did not test this issue, the findings of the online survey indicated that the respondents' experience of other government websites influenced their perception of the *SA Government Online* website. Suggestions were made that other government departments should update their websites more frequently and should include more current and relevant information on their sites. It was also suggested that all national departments and provincial governments should develop websites and that government websites should be standardised.

8.3 Slow downloading time

As with the previous paragraph, this aspect was not included in the evaluation instruments. However, the findings of the heuristic evaluations, user tests and online survey included comments on the slow downloading time of some pages. Mention was specifically made of long documents, graphics and executing searches.

9. CONCLUSION

This chapter provided a consolidation of findings for the four evaluation methods applied for the evaluation of the *SA Government Online* website. The consolidated findings indicate that many aspects of the website were satisfactory and that the website generally fulfilled its purpose. The findings, however, also confirm the comments made in the previous chapter that there are reasons for concern. Defects and problems were found with aspects in all the categories evaluated – content, information architecture/organisation of information, navigation, search, as well as design and layout of the website. The most prominent aspects identified as requiring improvement were the comprehensiveness and currency of the website, handling of the *What's New* feature, long documents without internal navigation support, and the difficulties experienced to find information. The findings show that the latter problem was most probably related to excessive fragmentation of

information, the complex and inconsistent navigation scheme, a poor search mechanism, and the fact that important and much needed information was not easily accessible from higher-level pages.

Furthermore, the consolidated findings demonstrate that the findings of the individual evaluation methods confirmed each other in many respects. However, the author believes that most of the aspects identified by only one or some of the evaluation methods can be considered as relevant concerns and deficiencies, and these, together with the deficiencies that were identified by two or more of the methods, should be regarded as aspects that should be considered for improvement.

The following chapter presents conclusions with regard to certain aspects discussed in this chapter, and poses possible solutions for the problems identified.

3. CONTENT

3.1 Orientation to the website

The site's purpose and intended audience should be declared more clearly. The user will also benefit from a more substantive orientation to the scope and content period that is useful to provide a clearer indication of what information content is available. In some cases links are provided, as well as how linking to other websites is approached. It would be an indication of how far back information on the site dates may contribute to an overall understanding of the breadth and depth of information content on the website.