**Final Think-Aloud Tasks**

1. Navigation

1.1 A: Navigate to specific parts of the e-textbook

1.2 C: Jump to page 365

1.3 C: Navigate to section 3 of chapter 4 (CREATING AND MANAGING WORK ACTIVITY NOTES)

2. Search ability

2.1 A: Search for some specific contents

2.2 C: Search the word “user experience”

2.3 C: Find out how many times the term “human-computer” appears in this textbook

3. Making notes

3.1 A: Make a note

3.2 C: Make the note "Verify and refine design" on page 300

3.3 C: Export the notes you have made as a text file

4. Contents Extraction

4.1 A: Copy a paragraph to the clipboard

4.2 C: Print the “Preface” of the book

4.3 C: Download the whole e-textbook as pdf file

5. Extra features

5.1 A: Use additional tools

5.2 C: In pdf mode, have the system to read-aloud the page 365

5.3 C: Look up for the word “experience” in the dictionary

**Heuristic Evaluation**

1. Visibility of system status.
2. Match between system and real world.
3. User control and freedom.
4. Consistency and standards.
5. Error prevention.
6. Recognition rather than recall.
7. Flexibility and efficiency of use.
8. Aesthetic and minimalist design.
9. Help users recognize, diagnose, recover from errors.
10. Help and documentation.

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|  | **Tasks** | **Expert Comments** |
| 1.1 | Navigate to specific parts of the e-textbook |  |
| 1.2 | Jump to page 365 |  |
| 1.3 | Navigate to section 3 of chapter 4 (CREATING AND MANAGING WORK ACTIVITY NOTES) | a. Navigation bar is not collapsible  b. Navigation bar is not expandable |
| 2.1 | Search for some specific contents | a. vertical navigation tabs  b. No icons  c. Two search buttons |
| 2.2 | Search the word “user experience” | a. There is no “search” option in right-click context menu for pdf mode  b. There is a progress visibility at GO pressed  c. but no progress shown when clicking into the specific page  d. once into the page, the searched word is not highlighted  e. search results are not highlighted once visited  f. results are not in page order |
| 2.3 | Find out how many times the term “human-computer” appears in this textbook |  |
| 3.1 | Make a note |  |
| 3.2 | Make the note "Verify and refine design" on page 300 | a. difficult to find notes if there are so many of them  b. no indication of notes made on the page |
| 3.3 | Export the notes you have made as a text file | a. notes cannot be exported with the actual pages  b. three options to export are nice (text, endnote, RefWorks) |
| 4.1 | Copy a paragraph to the clipboard | a. no waiting progress shown  b. confusion and misleading about the copy/print allowances (the word "Remaining")  c. no confirmation and number of pages left indicated after a successful copy/print |
| 4.2 | Print the “Preface” of the book | a. long list of sections to print out  b. hard to find specific sections to print --> no  c. print allowance does not change dynamically and consistently |
| 4.3 | Download the whole e-textbook as pdf file |  |
| 5.1 | Use additional tools | a. no icon used  b. additional tools are placed at arbitrary locations |
| 5.2 | In pdf mode, have the system to read-aloud the page 365 | a. no speed adjustment  b. no control over the play except play/pause and volume  c. no indication of read-aloud progress |
| 5.3 | Look up for the word “experience” in the dictionary |  |

**Time: 45 minutes (3 experts)**

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| **Task** | **Description of the Problem** | **Heuristics Violated** | **S1** | **S2** | **S3** |
| 1.3 | a. Navigation bar is not collapsible and not expandable | User control and freedom.  Flexibility and efficiency of use. | 4 | 3 | 3 |
| 2.1 | a. Navigation tabs are placed vertically | Flexibility and efficiency of use. | 3 | 2 | 3 |
|  | b. There is no use of icons | Match between system and real world. | 2 | 1 | 2 |
|  | c. Two “search” buttons lead to confusion | Error prevention. | 4 | 3 | 2 |
| 2.2 | a. There is no “search” option in right-click context menu for pdf mode | User control and freedom.  Flexibility and efficiency of use. | 2 | 2 | 3 |
|  | b. There is a progress visibility at GO pressed, but no progress shown when clicking into the specific page | Visibility of system status. | 2 | 1 | 2 |
|  | c. Once clicked into the page, the searched word is not highlighted | Visibility of system status. | 3 | 2 | 2 |
|  | d. Search results are not highlighted once visited | Visibility of system status.  Error prevention. | 3 | 2 | 2 |
|  | e. Results are not in page order | Flexibility and efficiency of use.  Consistency and standards. | 3 | 3 | 3 |
| 3.2 | a. It becomes very difficult to find notes if there are so many of them | Flexibility and efficiency of use.  Aesthetic and minimalist design. | 3 | 3 | 3 |
|  | b. no indication of notes made on the page | Match between system and real world. | 4 | 4 | 3 |
| 3.3 | a. notes cannot be exported together with the actual pages | Match between system and real world.  User control and freedom.  Flexibility and efficiency of use. | 4 | 3 | 3 |
| 4.1 | a. no waiting progress shown | Visibility of system status. | 3 | 2 | 2 |
|  | b. confusion and misleading about the copy/print allowances (the word "Remaining") | Consistency and standards. | 3 | 3 | 3 |
|  | c. no confirmation and number of pages left indicated after a successful copy/print | Visibility of system status. | 3 | 3 | 3 |
| 4.2 | a. long list of sections to print out makes it hard to find specific sections to print | Flexibility and efficiency of use.  Aesthetic and minimalist design. | 4 | 3 | 2 |
|  | b. print allowance does not change dynamically and consistently | Visibility of system status.  Consistency and standards. | 2 | 3 | 3 |
| 5.1 | a. no icon used | Match between system and real world. | 2 | 2 | 2 |
|  | b. additional tools are placed at arbitrary locations | Consistency and standards.  Aesthetic and minimalist design. | 2 | 2 | 2 |
| 5.2 | a. no speed adjustment | User control and freedom. | 3 | 3 | 3 |
|  | b. no control over the play except play/pause and volume | User control and freedom. | 3 | 3 | 3 |
|  | c. no indication of read-aloud progress | Visibility of system status. | 4 | 3 | 3 |