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Course : Human Computer Interaction

C2 Slot

DA-2

Perform GOMS analysis and Keyboard analysis for any online application of your choice. Evaluate the same using Shneiderman's eight golden rules, Norman's seven principle, Norman's model of interaction.

1) Eight Golden Rules

Application : Plagiarism Checker

<http://smallseotools.com/plagiarism-checker/>

1) Eight Golden Rules

Rules	Evaluation	Remarks
1. For Stevie for consistency	Present	Consistent sequence of actions followed every time a user visits.

2. Cater to universal usability	Absent	No shortcuts available, same steps for both novice and expert
3. Offer informative feedback	Present	Remarks are given for every action like file uploaded.
4. Design dialogue to yield closure	Present	After every action, the user is informed about the result.
5. Prevent errors	Present	It informs user to upload a file only of .doc/.text format or word limit should not exceed 1000.
6. Permit easy reversal of actions	Present	The actions can be easily reversed.
7. Support of internal locus of control	Present	The web app performs only the actions specified by the user.

8. Reduce short-term memory load

Present

It is easy to use and instructions given.

2) Norman's seven principles

Principles	Evaluation	Remarks
1. Use both knowledge in the world and in head	Present	The information required to complete task is readily available and are easy.
2. Simplify the structure of tasks	Present	It is very easy to use.
3. Make things visible	Present	The steps to be carried out are closely mentioned and links and buttons are used for the same.

4. Get the mappings ready	Present	The buttons perform the task they are created for.
5. Exploit the power of constraints, both natural and artificial	Present	Constraints are available to make sure file uploaded is .doc/.text and word limit is 1000.
6. Design for error	Present	If the user does some mistake, he is notified about the same and can correct it.
7. When all else fails, standardize	Present	

3) Norman's model of interaction

i) Forming the goal
- To check plagiarism

ii) Forming the intention
- A set of words within 1000 on a

.doc/.text file

iii) Specifying an action

- Paste the text in the text box making sure it is within 1000 words or upload files in .doc/.text format to check plagiarism.

iv) Executing the action

- Click on check plagiarism button

v) Perceiving the state of the world

- A response is given for every input of the user like file uploaded, word limit exceeded, etc.

vi) Interpreting the state of the world

- Understanding the response for each action.

vii) Evaluating the outcome

- To test whether goal has been achieved and plagiarism percentage obtained.

4) Keystroke

Method - I (Uploading file)

Step	Symbol	Time
1. Mental preparation -	M	1.35s
2. Moving [hand to mouse]	H	0.36s
3. Point to upload a document	P	1.10s
4. Mouse click	B	0.2s
5. Mental preparation (collecting searching file to upload)	M	1.35s
6. Point to file with mouse	P	1.10s
7. Mouse click to select file	B	0.2s

8. Point to open button	P	1.10s
9. Mental preparation (dialog box)	M	1.35s
10. Button press to select open	B	0.2s
11. Point to check plagiarism button	P	1.10s
12. Button press to select plagiarism button	B	0.2s

Time taken = 9.61s

M[3] H[1] P[4] B[4]

Method-2 (Typing text in text box)

Steps	Symbol	Time
1. Mental preparation	M	1.35s

2. Homing (hand to mouse)	H	0.36s
3. Point to textbox using mouse	P	1.10s
4. Button click to have cursor	B	0.2s
5. Homing (hand to keyboard)	H	0.36s
6. Keystroke. Let the number of characters entered be x . Max limit 1000.	K	0.28s $\times x$
7. Homing (hand to mouse)	H	0.36s
8. Point to check plagiarism button	P	1.10s
9. Mouse click to select	B	0.2s

Time taken = $5.03 + 0.28x$

MEI[3] P[2] B[2] K[n]

5) GOMS analysis

Goal: Get plagiarism report

Upload document

Enter text

Operator: Reach <text> box

Enter <key> words

Reach <upload> button

Click <upload> button

Select <type> file

Click <open> button

Reach <plagiarism> button

Click <plagiarism> button

Method 1 for sub-goal: Upload document

Step 1: Reach <upload> button

Click <upload> button

Reach <file> ~~two~~ upload

Select <open> button

Reach <plagiarism> button

click ~~Select~~ <plagiarism> button

Return with goal accomplished

Method 2 from sub-goal: Enter text

Reach <text> box

Enter <key> text

Reach <plagiarism> button

Click <plagiarism> button

Return with task accomplished

Selection

If the user wants to upload a document to check plagiarism, select method 1.

If the user wants to enter text and check plagiarism, select method 2.

6) State Transition Network

