Project 3 User & Task Analysis

Group 3: Pictorial Building Blocks

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**User Analysis:**

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| **General characteristics of users** | | |
| **Question** | **Answer** | **Implications** |
| What is their age? | 65+ | More methodical than other age ranges of users. |
| What is their gender? | Male and female, in equal proportions | Do not provide any imagery that suggests favoring of one gender over the other |
| What culture do they come from? | Can be any culture; communicating users are likely to come from different ones | Cannot assume users have same associations between physical and abstract ideas. Review interface choices and tools (i.e., use of buttons, arrows, direction of sentence structure) to ensure the principles used are universal human ones, not Western cultural ones |
| What physical abilities/disabilities do they have? | More likely to have disabilities: Poor hearing, vision, use of hands, reaction time, memory | Must adequately provide support for users with any of these disabilities: large, clear text, labelled icons and buttons, distinct color contrast between background and interactive features, minimal use of sounds or required scrolling, multisensory feedback |
| What is their background education? | Varied levels/types of education | Cannot assume user knowledge in many areas, so ensure the sentences can be followed without background knowledge |
| How much computer experience do they have? | In general, below average experience | Need to make system more beginner-friendly. Do not rely upon conventional interface objects (scroll buttons, menus, OS dialogue boxes) that first-time users may have never seen and cannot understand |
| **Psychological Characteristics** | | |
| **Question** | **Answer** | **Implications** |
| What is their cognitive style? | Potentially all classifications | Should make an easily-learned interface for all types of mental structures; do not favor one over others |
| What is their attitudes? Likes/dislikes? | Uncomfortable trying new things; blame themselves for errors | Interface should be inviting and have easy error recovery. Absolutely do not change the interface’s menu arrangements or steps to completing a task during a user’s session (to maintain locus of control) |
| What is their motivation? | Goal: trying to communicate | Users may be more willing to try and learn interface because communication is a vital important activity |
| **Knowledge and experience** | | |
| **Question** | **Answer** | **Implications** |
| What is the typing skill of users? | Varied skill levels should be expected | Cannot rely upon high-speed inputs. Do not require the user to type multi-key commands to perform tasks |
| How much system experience should they have? | Assumed that they do not have much experience | Need to be beginner-friendly (see “How much computer experience do they have?” above) |
| How much task experience should they have? | They likely have little experience with the task | Need to be beginner-friendly (see “How much computer experience do they have?” above) |
| How much application experience should they have? | They likely have little experience with the application | Need to be beginner-friendly (see “How much computer experience do they have?” above) |
| What is their native language? | Any generally-used native language | Need to make implementation work without relying on linguistic peculiarities of any given language |
| How much experience with other systems do they have? | Assumed that they do not have much experience with other systems | Cannot rely on previous connections made in other systems. Cannot assume knowledge gained from other applications |
| What is their level of computer literacy? | Computer literacy is most likely low | Need to make UI simple and intuitive enough for beginners, relying on metaphors to convey meaning |
| **Physical Characteristics** | | |
| **Question** | **Answer** | **Implications** |
| What handedness will the user have? | Could be either right- or left- handed | Will need to ensure that the system works well for both handedness |
| Will the users have color confusion problems? | The ratio between people with color confusion and without should be standard | Should be designing with possible color confusions in mind. It shouldn't be first priority, but making sure that the design works for people with color confusion would be good. |

**Task Analysis:**

Main Task: Communication between two users

Sub Tasks: Sending sentences, Adding/Removing images, connecting images, Creating/Deleting Sentences

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| **Task Object** | **Attributes** | **Actions** |
| Conversation | “Sentences” which make up the conversation  Members | Create New  Disconnect |
| “Sentence” | “Pictorial words” which make up the sentence  Sender | Create New  Edit  Delete  Send  Receive |
| “Pictorial Word” | Image/icon  Classification (i.e. part of speech) | Select  Add/Remove to/from sentence  Connect with other pictorial words |

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| **Question** | **Answer** | **Implication** |
| How frequent is the Main task? | Infrequent | Dedicate screen space and guidance to other sub-tasks |
| Which sub-tasks are most frequent? | Adding/Removing images, Connecting images, Creating/Deleting sentences, sending sentences (in descending order of frequency) | Dedicate more screen space and guidance to the most frequent sub-tasks. The most frequent sub-tasks need to be readily accessible |
| What training does the user have in the tasks? | Very basic training in their language | Cannot assume much understanding of the system |
| How important is the task to the user? | Non-Vital | Errors and delays are not disastrous |
| Who are the actors? | The two users |  |
| How are the task objects grouped? | The pictorial words are grouped by broad categories | Need to select useful, recognizable categories; utilize Gestalt grouping and white space to clearly partition categories |
| What are the information sources for the task objects? | The word images are found from online image sources | Must have clearly defined sources for images; avoid cultural issues with international image hosting |
| What is the result of the main task? | The two users communicate |  |
| How does the system communicate with the user? | The system must not use textual language to communicate | System must use alternative (image-based) methods to communicate with the users |
| What likely errors will the system have? | Misinterpretations, Incorrect connections, Incorrect Selections | Must be easy to undo moves and understand how to use the system |
| What is the system terminology? | Conversations are groups of sentences; Sentences are groups of pictorial words; Pictorial words are image representations of an expression | The interface should follow the metaphor of communicating through pictorial “building blocks” of words to make the task clear and intuitive for users |
| What are the relationships between tasks? | Images must be added to a sentence to be connected; A sentence must be created before you can add images to it | There must be easy transitions between adding and connecting images (which will happen most frequently and usually sequentially) |

Works Cited

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