

Designing Instructions



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ENGLISH 314

Instructions and Tech Comm



- Instructions have been the primary public genre of the field of technical communication for the past 50 years.
- All of us have used instructions at some time in our lives. Frustrating, when badly done. Transparent, when done well.
- Goals of instructions:
 - Operation of equipment or software
 - Assembly of objects or mechanisms
 - Actions or behavior of personnel
 - Implementation of a process

Instructions vs. Process Overviews



- Instructions provide detailed, step-by-step explanations that allow users to complete an action.
- Process overview provides general framework for carrying out actions, but not enough detail to actually complete them.

Instructions in Engineering



- Instructions are more than an afterthought. They are viewed more and more as an essential part of both products and services.
- As such, many companies begin design of instructions early in the product development cycle, where writers help with generation of ideas and arrangement of emerging technical details.
- If you work on a product development team, insist on getting the writers on board early to help with project management and technical writing.

“User Friendly” Instructions



- Implies that the designer has taken a personal interest in users and in helping them complete task.
- Writing such instructions requires:
 - Deep empathy for first-time users, ensuring they are not “driven over a cliff.”
 - Thorough understanding of audience members and their information needs.
 - Thoughtful adaptation of tasks to audience needs, using general principles of document design in representation of overall task and essential steps.
 - Consistent, modular design that is helpful for grounding users.

Task Analysis



- *Representing the task* – history, knowledge, steps, details, and outcomes.
- *Understanding task context* – situation, environment, interference, help.
- *Identifying constraints on task completion* – safety precautions, complications, time, costs and tools.
- *Relating task and audience* – attitude, understanding, preparation, resources, and skill.

Problems of Audience



- RTFM vs “Consulting the manual is admitting defeat”
- Latter reflects the attitude of many people suffering from two literacy problems:
 - *Limited Literacy* – 50 percent of adults in the US are unable to complete simple literacy tasks such as locating information in a table.
 - *Aliteracy* – People who can read, but prefer not to, either because they don’t like it or are in hurry. Strategies:
 - Scanning text on regular basis
 - Depending on visuals or symbols
 - Substituting electronic media when possible

Anxiety of the Learning Situation



- Performing a task for the first time is fraught with peril.
- Users enter unfamiliar situation with unknown outcome.
- Different users have different attitudes toward learning new information.
- Different users have different types of intelligence that reflect how they learn via printed word:
 - linguistic
 - logical-mathematical
 - musical
 - bodily-kinesthetic
 - spatial, etc.

Content Elements



- Purpose with a title and goal statement or objective
- Necessary components: parts list, tools, etc.
- Accurate chronology, with time factors
- Clear, direct wording – second person voice, verbs in imperative mood
- Accurate, relevant details
- Rationale
- Stylistic conventions
- Warnings and cautions

Stylistic Conventions - Mood



- Indicative Mood

- The specimen is clamped onto the flat plate

- Imperative Mood

- Clamp the specimen onto the flat plate.

Stylistic Conventions – Second Person



- [You should] Use only properly functioning tools.
- [You should] Ensure that you place tools back into storage bin after completing all tasks.
- [You should] Wear safety glasses during all tasks.

Stylistic Conventions – Parallel Structure



- Nonparallel Structure

- Wearing of safety glasses
- Proper tool for the job
- Use only tools that are functioning.
- Maintain a clean, organized work area.
- Questions relating to procedures or the proper handling of tools should be presented to your group leader.

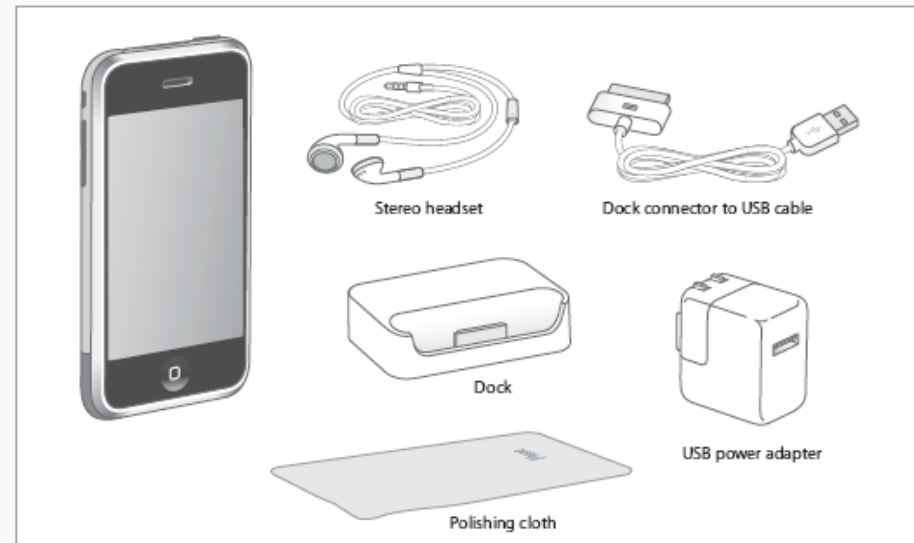
- Parallel Structure

- Wear safety glasses.
- Select proper tool for job.
- Use only functioning tools.
- Maintain a clean, organized work area.
- Ask your group leader questions about procedures and tool handling.

Use of Visuals



- Make sure you provide appropriate level of detail – not too much or too little.
- Use visuals if you suspect complexity of task might cause confusion or requires grounding in overall context.



Screen Capture Utilities



- Windows – use Print Screen and then edit in Photoshop. Hold down Alt key to capture only active window.
- Macintosh –
 - Entire screen – Command-Shift-3 (PNG to desktop)
 - Screen section – Command-Shift-4 (marquee tool)
 - Active Window – Command-Shift-4 then Spacebar.
- SnagIt (Windows) and Jing (Macintosh) – take still image captures of your screen.
- Camtasia (both) – video screen capture
<http://www.techsmith.com/camtasia/>

Sketch Programs



- Google's Sketchup - <http://sketchup.google.com/>



Modular Design Example

Even Page

Title

Purpose overview

Callouts

Screenshots
and
Captions

Warnings

Content Paragraphs
and Bulleted/
Numbered Lists



Odd Page

Content Paragraphs
and Bulleted/
Numbered Lists

Callouts

Screenshots
and
Captions

Warnings

Usability Testing



- Be sure to test, because even the most empathetic writer cannot anticipate all the information needs of various users.
- Have people perform tasks using your instructions and have them “talk aloud” about their thoughts. Reflection of cognitive breakdowns in comprehension.
- *Test early, test often* – the number of people tested is not as important as the need to test *as* you develop materials.
- One tester better than none. Three to four adequate.

Cross-cultural Blunders



- In a Belgrade hotel elevator: “To move the cabin, push the button for wishing floor. If the cabin should enter more persons, each one should press a number of wishing floor. Driving is then going alphabetically by national order.”
- American medical containers distributed in England with instructions that read, “Take off top and push in bottom,” which had very strong sexual connotations for the British.
- Instructions for Chinese scooter: “When driving please you keep the relaxing moon and wear comfortable clothes, obey the traffic rule and prohibit making the moon impatient.”