

The UD Photo Workshop: the Seven Principles

The variant I have used the most. Concrete guidelines in hand. It fits people who are new to Universal Design, and it always works.

WHAT IT IS

A photographic field exercise: **for each of the seven principles, photograph one example that aligns with it and one that breaks it** (Connell et al., 1997). Fourteen photographs per participant. Fourteen interpretations of Universal Design. Participants carry the seven principles, quoted in full with their guidelines on pages 2–3. Then gather and look at what everyone found.

HOW TO RUN IT

1. **Hand out all three pages** and give the task: for each of the seven principles, one example that aligns with it and one that breaks it.
2. **Walk:** wherever the exercise is set. A workshop venue works, and so do your everyday environments: where you live, where you shop, the routes you already know. Give it enough time to get past the obvious.
3. **Gather and show:** each participant shows a selection of their pairs and tells the story behind them: what made you raise the camera at exactly that moment, and what makes the example align with or break the principle?
4. **Close:** how was it to do the exercise? Which principles were easy to photograph, and which were hard?
What do you take with you?

The Seven Principles of Universal Design

The principles were developed in 1997 by a working group of architects, product designers, engineers and environmental design researchers at the Center for Universal Design, North Carolina State University, led by Ronald Mace. Each principle and its guidelines are quoted below in their published form.

1. Equitable use. The design is useful and marketable to people with diverse abilities.

1a Provide the same means of use for all users: identical whenever possible; equivalent when not.

1b Avoid segregating or stigmatizing any users.

1c Provisions for privacy, security, and safety should be equally available to all users.

1d Make the design appealing to all users.

2. Flexibility in use. The design accommodates a wide range of individual preferences and abilities.

2a Provide choice in methods of use.

2b Accommodate right- or left-handed access and use.

2c Facilitate the user's accuracy and precision.

2d Provide adaptability to the user's pace.

3. Simple and intuitive use. Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.

3a Eliminate unnecessary complexity.

3b Be consistent with user expectations and intuition.

3c Accommodate a wide range of literacy and language skills.

3d Arrange information consistent with its importance.

3e Provide effective prompting and feedback during and after task completion.

4. Perceptible information. The design communicates necessary information effectively to the user, regardless of ambient conditions or the user's sensory abilities.

4a Use different modes (pictorial, verbal, tactile) for redundant presentation of essential information.

4b Provide adequate contrast between essential information and its surroundings.

4c Maximize "legibility" of essential information.

4d Differentiate elements in ways that can be described (i.e., make it easy to give instructions or directions).

4e Provide compatibility with a variety of techniques or devices used by people with sensory limitations.

5. Tolerance for error. The design minimizes hazards and the adverse consequences of accidental or unintended actions.

- 5a** Arrange elements to minimize hazards and errors: most used elements, most accessible; hazardous elements eliminated, isolated, or shielded.
- 5b** Provide warnings of hazards and errors.
- 5c** Provide fail safe features.
- 5d** Discourage unconscious action in tasks that require vigilance.

6. Low physical effort. The design can be used efficiently and comfortably and with a minimum of fatigue.

- 6a** Allow user to maintain a neutral body position.
- 6b** Use reasonable operating forces.
- 6c** Minimize repetitive actions.
- 6d** Minimize sustained physical effort.

7. Size and space for approach and use. Appropriate size and space is provided for approach, reach, manipulation, and use regardless of user's body size, posture, or mobility.

- 7a** Provide a clear line of sight to important elements for any seated or standing user.
- 7b** Make reach to all components comfortable for any seated or standing user.
- 7c** Accommodate variations in hand and grip size.
- 7d** Provide adequate space for the use of assistive devices or personal assistance.

REFERENCE

Connell, B. R., Jones, M., Mace, R., Mueller, J., Mullick, A., Ostroff, E., Sanford, J., Steinfeld, E., Story, M., & Vanderheiden, G. (1997). **The Principles of Universal Design, Version 2.0.** Raleigh, NC: The Center for Universal Design, North Carolina State University. Principle and guideline texts © 1997 NC State University, The Center for Universal Design. Reproduced with attribution.