



Cornell University

CORNELL ERGONOMIC SEATING EVALUATION ADMINISTRATION INSTRUCTIONS

Background

The seating evaluation is designed as a practical guide to help practitioners make comparative design decisions about different ergonomic chairs. The form started life as a >50 item list that was compiled based on published literature on seating evaluation research studies. Through iterative use and analysis the form was revised to a 25 items version that in turn eventually was refined to the current 15 items. This short evaluation form is designed to be quick and easy to use by non-ergonomists as well as ergonomists.

The content of the evaluation form is based on those questions that most differentiate between chairs (or sitting experiences) and those that relate to ergonomic design considerations. The form does not value design issues, such as color, style etc., nor does it cover esthetic or economic considerations, it only addresses those features of greatest ergonomic importance.

How to score the evaluation form

The form is to be used to compare different chairs rather than as an absolute evaluation tool. Say that 4 chairs are being compared, then each user would be allowed to sit in each chair for a specified period of time (it may be as brief as a few minutes, but this will limit some reactions, e.g. to seat pan comfort, and it is preferably that this is at least 90 minutes, unless the user really doesn't like the chair). At the end of this test period for each chair the user then rates their experiences of sitting in that chair.

The use of the 11 point scale is based on a 10cm linear rating scale design, but the defined intervals are given to speed scoring.

The use of 11 points gives a true mid-point value of 5 that represents a user rating that their experience is average for the chair, and the extremes are the scale bipolar anchors with a minimum of 0 defined as unacceptable and 10 as exceptional on the same acceptability scale so that responses to all items can be directly compared.

The rating responses are subjective but focus on factors such as the usability and comfort of the chair. The scale is organized into 5 Separate sections (4 component sections: chair adjustments, seat comfort, ease of use, and body support, and 1 overall comfort rating section). The scores for each section can either be totaled or averaged, and the same is true for all of the sections so that a total chair score is available.

In this way different chairs can be compared on individual items, on each of the 4 feature sections and on overall subjective performance, and then the total chair performance can be computed (an overall average score is the easiest summary).

CORNELL ERGONOMIC SEATING EVALUATION FORM

This form can help you to evaluate the ergonomic design of a chair. You should answer each question by giving a rating out of 10, with higher scores indicating better performance. This form can be used as part of your chair evaluation process and to compare the designs of different chairs. You can copy this form without permission for noncommercial and educational purposes. If you have any questions or comments please contact Professor Alan Hedge at the Department of Design & Environmental Analysis at Cornell University (ah29@cornell.edu).

Evaluator Name: _____	Date: _____
Chair Manufacturer _____	Model _____
Evaluation Criteria	Marks out of 10
A: Chair Adjustments (are these available and how usable are they?)	Unacceptable(0) ---- Average(5) ---- Excellent(10)
1. Usability of seat pan depth adjustment	0-1-2-3-4-5-6-7-8-9-10
2. Usability of back height adjustment while sitting	0-1-2-3-4-5-6-7-8-9-10
3. Adequacy of arm support width or width adjustment	0-1-2-3-4-5-6-7-8-9-10
	A: Chair Adjustments Score =
B: Seat Comfort	Unacceptable(0) ---- Average(5) ---- Excellent(10)
4. Seat Cushion Comfort (evaluate after at least 90 min. of sitting)	0-1-2-3-4-5-6-7-8-9-10
5. Backrest Cushion Comfort (at various recline positions)	0-1-2-3-4-5-6-7-8-9-10
6. Armrest comfort (when leaning on elbow)	0-1-2-3-4-5-6-7-8-9-10
	B: Comfort Score =
C: Ease of Use	Unacceptable(0) ---- Average(5) ---- Excellent(10)
7. Ease of chair height adjustment	0-1-2-3-4-5-6-7-8-9-10
8. Ease of armrest height adjustment	0-1-2-3-4-5-6-7-8-9-10
9. Ease of recline (without adjustments)	0-1-2-3-4-5-6-7-8-9-10
	C: Ease-of-use Score =
D: Body Support	Unacceptable(0) ---- Average(5) ---- Excellent(10)
10. Back support at various recline positions (no forward push or fall back)	0-1-2-3-4-5-6-7-8-9-10
11. Lumbar support at various recline positions	0-1-2-3-4-5-6-7-8-9-10
12. Armrest height support range (below thigh level to above seated elbow height)	0-1-2-3-4-5-6-7-8-9-10
	D: Body Support Score =
E: Overall Chair Experience	Unacceptable(0) ---- Average(5) ---- Excellent(10)
13. Overall ease of use of the chair	0-1-2-3-4-5-6-7-8-9-10
14. Overall appearance of the chair	0-1-2-3-4-5-6-7-8-9-10
15. Overall comfort of the chair	0-1-2-3-4-5-6-7-8-9-10
	E: Overall Chair Experience Score =
TOTAL SCORE (A+B+C+D+E) =	
Comments:	