

Using Focus Groups for Peer Evaluation in Industrial Design Education

Author/Contributor:

Ward, Stephen

Publication details:

Proceedings of ConnectED 2007 International Conference on Design Education
9780646481470 (ISBN)

Event details:

ConnectED 2007 International Conference on Design Education
Sydney, Australia

Publication Date:

2007

DOI:

<https://doi.org/10.26190/unsworks/491>

License:

<https://creativecommons.org/licenses/by-nc-nd/3.0/au/>

Link to license to see what you are allowed to do with this resource.

Downloaded from <http://hdl.handle.net/1959.4/39622> in <https://unsworks.unsw.edu.au> on 2023-03-25

Using Focus Groups for Peer Evaluation in Industrial Design Education.

Stephen Ward

Faculty of the Built Environment, University of New South Wales, Sydney, Australia

ABSTRACT

Focus groups are widely used as a qualitative tool in social research and marketing research. Adaptations of focus group techniques have also been used by design teams at various stages in the product development process. Additionally, focus groups can be useful in the educational design studio setting as a means of engaging students in peer review.

A focus group technique has been used with industrial design students at the University of New South Wales (UNSW) and was found to offer several benefits. The aim of adopting the focus group format discussed in this paper was to create a learning experience that resembles the way designers might encounter focus groups in industry.

The technique involved students working in groups of about five, to which each student brought a design concept represented by a sketch model and some illustrations. Within each group students took turns at facilitating the discussion of another student's work, using a given set of questions. The designer of the work being discussed was not permitted to speak until near the end of the discussion. Each project was discussed for about 15 minutes.

Students have responded very positively to the focus group process they experienced in their design studio courses and there is evidence that design improvements resulted from the comments they received.

The focus groups allowed students to gain more feedback and diversity of ideas than could be provided by tutors alone. An additional benefit is that the experience helped students develop skills for running their own focus group discussions in the future.

INTRODUCTION

A. *What is a focus group?*

A focus group in market or social research usually takes the form of a moderated discussion among 5 to 12 participants who have been selected to represent a target sector of the broader population. A key characteristic of the focus group method is interaction among group members and a synergistic effect whereby participants respond to and build upon contributions by others (Cameron, 2000). Ideally, focus groups should have a relaxed and friendly social setting to encourage interaction and candour among participants. As a result they are particularly suited to revealing perceptions of and, feelings about a product, service or opportunity (Krueger, 1994). The discussion is often captured for later

analysis by means of video or audio recordings together with notes taken during the discussion by the moderator or an assistant. The focus group method has been widely used as a qualitative tool in market research and social research. It also has applications throughout the product design process.

B. *Focus groups in product design.*

Focus groups are sometimes used after a product is developed to help refine the advertising and marketing strategies. They can, however, be used effectively at any stage of the design process to get responses to design concepts or to reveal opportunities for new approaches. To stimulate discussion, focus groups conducted during the design process can use product representations from different stages of the design process – for example, concept sketches or appearance models. In general, “sketchy” representations are better at stirring up controversy and prompting suggestions whereas more accurate models allow more detailed evaluation and observation of simulated use (Ives, 2003).

Designers of products being discussed can be involved to varying degrees in these focus groups. For example the designer can be:

- Remote – designer receives report or briefing from another person who conducts the focus group.
- An observer – designer is outside the focus group, but observes either directly through a two-way mirror or via a video recording.
- A participant – designer sits with participants in a focus group moderated by someone else and is able to provide information about the design and engage in discussion of hypothetical alternatives.
- A moderator – designer organises and moderates the focus group discussion.

Although the running of focus groups is often left to specialist facilitators, there are benefits to having the designers present as observers or participants. For example, when objects are used as stimuli in the discussions it is particularly valuable for the designer to see how group members handle the objects as well as hear what they say (Ward, 2006).

Bruseberg and McDonagh-Philp (2002) investigated applications of focus groups in product design by reviewing case studies in the literature and interviewing designers. Their study identified modifications and additions to conventional focus group techniques for the purpose of

adapting focus groups to the specific needs of design. These adaptations generally fell into two categories:

- Use of products – participants respond to products or product concepts, which may be presented in 2D and/or 3D formats. Responses can be collected through discussion and, where mock-ups are provided, through observation of product handling or simulated use.
- Creative activities – participants are involved in drawing, modelling and acting out scenarios. These approaches seek to reveal user needs and contexts of use rather than a response to a particular design.

I. USING FOCUS GROUPS IN THE EDUCATIONAL SETTING

An adapted form of focus group method has been trialled within some industrial design studio courses at the University of New South Wales (UNSW). The reasons for doing this are to:

- Give students experience of focus group so that they can learn to use the method as a part of design process.
- Address students' need for more feedback and guidance than can be given by tutors during their projects.
- Provide a positive peer-to-peer experience to reinforce understanding of the potential of collaboration in the design studio.

A. *Industrial Design Studio at UNSW*

At UNSW a Design Studio course (subject) is a requirement in most semesters of the Industrial Design program. Students typically undertake about three design projects in each one-semester Design Studio course. There are 45-60 students in each cohort, with three tutors each working with a group of 15 to 20. The class time of four hours per week is used for various activities including critiques of work in progress. Critique, discussion and assessment take place in groups so that students see and hear commentary on each other's work. As well as receiving direct comment from the tutor, students can self-assess the relative merits of their work by seeing it in comparison with the work of their peers.

B. *The need for feedback*

Despite the opportunities presented in studio courses, a common student perception is that they do not receive enough feedback on their design work in progress or at the final assessment of a project.

The standard UNSW Course and Teaching Evaluation Instrument (CATEI), which is a questionnaire completed by students at the end of each course, provides evidence of this perception. The statement "I was given helpful feedback on how I was going in the course" has consistently met with lower levels of agreement in design studio courses than the average for other statements. Open-ended questions about best course features and areas for course improvement have commonly generated suggestions such as allowing more individual consultation time with tutors during a project and more detailed feedback at the final project assessment.

Unfortunately, current resource constraints mean that longer contact hours or additional tutors in design studio are not available as a solution to the apparent problem. In any case, increasing consultation time might not be desirable from a learning point of view as students can become too dependent on their tutors' advice and correspondingly reluctant to seek evaluation from experts or representative users outside the studio.

C. *Trialling focus groups*

In response to the context and issues outlined above, the author has trialled focus group techniques as a structure for peer review of students' work. This exercise is conducted about half way through a design project, when students have established concepts for their designs but there is still time for change and refinement. After an introductory talk about focus groups and their application in design practice, students are assigned to groups of four to six and are given the following rules for running their group discussions:

1. The group discusses each student's design in turn. (Students have been told what types of representations of their design to bring – usually including a model and some 2D visual material)
2. During each discussion two group members (neither being the designer of the work being discussed) adopt the roles of moderator and note-taker. These roles are rotated after each discussion so that every student takes a turn in each role.
3. The moderator guides their group discussion through a set of given questions.
4. The designer whose work is being discussed is a silent observer, sitting in the group but not speaking until the final questions are addressed.

It takes about an hour and a half (15 to 20 minutes for each student's work) for the focus groups to complete their discussions.

Sample questions used by the moderator of a discussion are shown in Fig. 1. The questions are always tailored to suit the project requirements and the same questions and discussion format are used for each student's work. Open-ended questions are used to promote discussion of feelings and impressions.

While the focus group discussions are in progress the tutors go from one group to another, picking up the thread of the discussion and adding their own comments. At the same time the tutors can see whether the discussion protocol is being followed and offer advice to the group if necessary.

D. *Evaluation*

It is clear from seeing the groups in action that the focus groups "work" at a functional level. The students adopt the assigned roles in their groups and follow the protocol provided. There is a lively flow of discussion and notes are taken by the students.

<p>Without the designer speaking</p> <p>Describe the target market you would associate with this design</p> <p>If the product was a person, what would he/she be like? Eg, age, job, personality, lifestyle?</p> <p>What other brands or products would you associate with this design?</p> <p>How would you use this product? (Ask participants to act out the use of the model or other imaginary prop)</p> <p>What colours and surface finishes would suit this design?</p> <p>Are there any elements of the design that don't seem right, or which need an explanation?</p> <p>With the designer participating in the discussion</p> <p>How could the design be improved?</p> <p>What are the main messages to be conveyed in the presentation or packaging of this product?</p>
--

Fig. 1 Sample discussion questions for student focus groups in a project to design a consumer electrical appliance.

After the focus group discussions we have always debriefed and sought student feedback and so far this has been strongly positive. Following a recent use of the focus group process, the students were asked to reflect on the process and provide anonymous written responses to some questions.

Thirty-one students out of a class of about 50 returned their responses and all of them replied “yes” to the question “Would you want to use this process again in the future?” Reasons given indicated they valued the wide range of comments and a different type of feedback to that offered by tutors. Asked “What did you gain from the focus group discussion when your design was discussed?” the most commonly used words and phrases, occurring in nearly all the responses, were “different perspectives” or “more ideas”. Guidance on how to improve a design was mentioned in about a third of responses.

Another question asked “What made this focus group process effective (or not effective)?”. On the positive side, the most common phrase found in the responses was “team effort”. The process was considered honest, critical and friendly. Some students identified the structured questions among the things that made the process effective. On the other hand a few students expressed the reservation that it may have been “not critical enough” to show problems a lecturer might have identified.

Tutors who have been involved in these trials have remarked on the benefits of the designer being silent as their work is discussed. This prevents the student designer from taking a defensive or argumentative stance and tests the

effectiveness of the visual representations the designer has provided.

The studio course in 2006 in which this form of peer review was first trialled was evaluated with the CATEI instrument at the end of the semester, 6 weeks after the focus group exercise. The evaluation covered the whole course, which included two other projects in which focus groups had not been used. Of 22 students who responded to the question about the best features of the course, four made clear and positive remarks about the focus group experience.

Twenty five students offered comments on how the course could be improved. Although there were no negative comments about the focus group exercise, seven stated that there should be more individual feedback (presumably from tutors).

It would be desirable to somehow evaluate the impact of the focus groups on the final design outcomes of the project but this is difficult as the focus groups are only part of the mix of influences on student choices. Some students did refer to the focus groups when explaining their design at the final project assessment.

II DISCUSSION

The evidence so far suggests that the focus group method of peer review is a valuable tool in design studio courses when used in addition to other forms of feedback such as consultation and assessment by tutors. Tutor critique is still essential as the student peer groups lack the experience to identify some types of problems in the design presented for discussion.

A general limitation of focus groups as a research method must be acknowledged. A focus group provides qualitative data from a small sample and it should not be assumed that the comments of a group would represent the responses of a broader population. For this reason, in marketing or social research, it is usual to run a series of groups with different participants until consistencies in responses are found. Even then, focus groups are often used in conjunction with other research methods. The students should understand that their peer review groups do not represent “the market” for the product being evaluated. Nevertheless, student focus groups provide an opportunity for each student to hear opinions and reactions from design-literate peers. Open, frank and non-judgemental responses are possible because the questions do not prompt a “good/bad” evaluation. Rather they should provide the designers with insights into how the design, and materials presented for discussion, could be perceived by others. The process is good at drawing attention to inconsistencies or “mixed messages” in a student’s design.

III CONCLUSION AND RECOMMENDATIONS

Any form of feedback, whether from peers or tutors, depends largely on the clarity with which the students communicate their ideas and intentions through sketches, models or other design representations. Planning for a focus group should encourage students to think about how to

communicate their design by visual means, particularly if they know in advance they will not be able to speak.

One of the most useful forms of feedback students can gain in the design studio is self-evaluation when their work is seen in comparison with that of other students. The focus groups require students to give close attention to one another's work and potentially learn from the comparison and by seeing others' successes and shortfalls.

In summary, the benefits of using student focus groups in the industrial design studio are:

- They supplement other forms of feedback and provide more time for each student's work to receive attentive response.
- They provide an opportunity for students to learn about how focus groups and thus to consider their value as a design research tool outside the studio.
- They provide a positive peer-to-peer experience for the students where comments can be frank without being perceived as judgmental.

For those who might consider using focus groups, the following recommendations are made:

- Plan the focus groups to occur at a stage in the design process when there is something to respond to but still time for students to make changes.
- Provide information in advance and specify the types of design representations students should bring to communicate their ideas.
- Groups of five or six seem to work well. With fewer than this it can be harder to sustain discussion, especially if the designer is not allowed to speak. With more than six designs to discuss the exercise may seem too long or repetitive.
- Questions should be open-ended and prompt participants to reveal reactions and feelings towards the proposed design.
- Don't use focus groups too often in the same student cohort. The impact of the process can be lost when the novelty wears off. Once per semester may be enough.
- Always monitor the focus groups and have a debriefing discussion afterwards.
- Try variations to the procedure described above. The focus group method is quite robust and seems to work with various adaptations and additions (Bruseberg and McDonagh, 2003)

REFERENCES

- Bruseberg, A. and D. McDonagh-Philp (2002). Focus groups to support the industrial/product designer: a review based on current literature and designers' feedback. *Applied Ergonomics* **33**(1): 27-38.
- Bruseberg, A and D. McDonagh (2003) Organising and Conducting a Focus Group: The Logistics *Focus Groups: supporting effective product development*. J. Langford and D. McDonagh (Eds) London, Taylor and Francis: 21-45.
- Cameron, J. (2000). Focussing on the focus group. *Qualitative Research Methods in Human Geography*. I. Hay. Melbourne, Oxford University Press: 83-102.
- Ives, W. (2003). Focus Groups in Market Research. *Focus Groups: supporting effective product development*. J. Langford and D. McDonagh.(Eds) London, Taylor and Francis: 51-62.
- Krueger, R. A. (1994). *Focus Groups: a practical guide for applied research (2nd edition)*, Sage Publications.
- Ward, S. J. (2006). *Designers and Users: A survey of user research methods employed by Australian industrial designers*. MSc thesis. University of New South Wales