Peer Review Plus:
A Case for Combining Architectural Design Studios Earlier

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Abstract
Student peer review is an important learning tool used in design courses where the end product or solution is measured in terms of good, better and best as opposed to right or wrong. It allows students the opportunity to receive feedback, give criticism and learn about their designs in context. This paper examines the use of peer review in the first year architectural design studio as a pedagogical tool. Student attitudes and perceptions are measured using a series of controlled experiments showing that real differences exist within defined peer groups as well as in the strategic objective behind the peer review. It promotes the idea of combining first-year architectural design with upper level design studios, something that is usually never considered for many logistical reasons. It develops the concept of "peer review plus," where a more experienced or knowledgeable peer reviews, comments and confirms a novice peer's work. The goal of this paper is to promote greater use of peer review and provide an "outside the box" solution for improving this challenging first year design course.

Introduction
When we talk about peer review, it is important to know that real differences exist within a defined peer group and in the type of review that is being conducted. These differences are a result of an individual's unique experience, knowledge or social status within a peer group and the strategic objectives behind the review. These differences can be observed by the choices peers make in selecting whom they choose to review their work and how they perceive the benefits. These differences and preferences can be shown through a series of controlled peer review experiments, using participant feedback surveys.

The first year architectural design studio is an especially challenging learning environment for students. Everything seems new to students, including how the architectural language itself is presented, the design methodology, the creative studio setting, and the review and criticism process. This learning environment transforms a student's thinking of architecture from one of undisciplined, familiar and unstructured to one that is critical, rigorous and conceptual. Peer review becomes a tool to reinforce and promote the value system of good, better and best in terms of proper architectural design in this new environment.

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This paper will examine use of peer review in the context of first year architectural design. The immediate goal is to propose ways to improve the learning process in this course. The broader goal of this paper is to promote the value of peer review in a creative learning environment.

Background

Peer Review Defined

Any discussion of peer review must start with a basic definition. A peer is a person who has equal standing with another or others, as in rank, class, or age.[1] Ideally, a peer group is composed of similarly identifiable individuals but within any definable peer group real differences exist between individuals. These differences reflect the level of social status, personality, experience or specialized knowledge each individual has within the peer group. If students can freely select their peer reviewer for the purposes of correcting or improving their projects they will, on average, choose the best and or most.

To review is to look over, study, or examine with an eye toward criticism or correction.[2] Within this basic definition there are two primary types of peer review each with a different strategic objectives. The first type of review is assessment driven. It is used to set qualitative standards for measuring and assessing peer work with an emphasis on qualitative productivity. The second type of review is improvement driven. It is used to obtain feedback and commentary toward improving or correcting a peer's work, primarily in terms of method or idea.

There are several social matrices in which peer review is conducted. The first is whether or not the reviewer is known versus blind (unknown) and the second is whether the reviewer's comments are private versus public. Each has its own complex psychological and social interaction that promotes combinations of traits such as honesty, ego, individuality, cultural popularity, etc. The total combination of review types produces a three-dimensional review model as shown below in Figure 1.

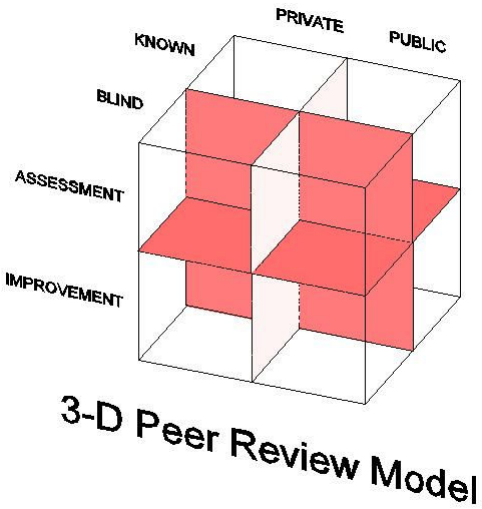

Figure 1

[1] The American Heritage® Dictionary of the English Language, Third Edition, 1992 by Houghton Mifflin Company.
[2] Ibid.

Issues in First Year Architectural Design

In one sense, architecture is a language. Its characteristics include a complex architectonic syntax, rigorous series of design processes and methodologies, functional, cultural and aesthetic requirements that express competing value systems with contextual fit, legal and technological factors, all merging to form an overall idea. An architectural design course also demands on-the-spot creativity, while synthesizing new theory. This new learning environment can be alienating where criticism, usually from an instructor, often challenges the very essence of a student's creative self and thought process. In this environment, student peer review becomes an important pedagogical tool to reinforce and promote proper design value.

The use of "vertical studios" to combine more experienced upper level architectural design students with less experienced ones has had wide currency and acceptance in the academy. Vertical design studios make sense because they typically focus on common issues of design context and building typology. First year design architectural design, sometimes known as design fundamentals, is never part of the vertical studio concept because these issues are too advanced for this introductory course. In addition the new learning environment is often alienating for first year students thereby, making adjustments more difficult. The result has been little appeal for combining and teaching these dissimilar design courses together.

Because Architectural Design I provides such a challenging learning environment, it makes sense to use more experienced design students as peer reviewers here. Experienced or knowledgeable peers are universally sought after for review, comment and confirmation of one's work. The benefit of using these peer reviewers outweighs some of the logistical issues in combining the two courses.

Experiment

Method

Two peer review experiments were conducted. The first experiment compared the attitudes students have toward different groups of peer reviewers. This experiment was designed to show the preferences students have toward peers with additional experience and knowledge. Architectural Design I students were the control group and Architectural Design III students were the experimental group. The second experiment examined the different attitudes students have toward the three different types of peer review used in the Architectural Design I course. This experiment was designed to show what types of peer review students perceive as beneficial.

Subjects

The study used two subject groups of peer reviewers to examine the different attitudes peers have toward reviewers. The groups were:

A. Architectural Design I students, (first semester design) college sophomores: control group.
B. Architectural Design III students, (third semester design) college juniors: experimental group.

Review Type

The study used several types of peer review and examined the different perceptions students have with regard toward the strategic goals of each. The types were:

A. Private one-to-one peer review of student projects.
   (3-D Peer Review Model: private, known, improvement)
B. Public peer review comparing student projects during class presentation.
   (3-D Peer Review Model: public, known, assessment)
C. Blind peer ranking of student projects in journals, shown only to the professor.
   (3-D Peer Review Model: private, blind, assessment)

Procedure

The Architectural Design I studio had five projects comprised of three short one-week projects and two five-week projects. The short one-week projects used two types of peer review: comparisons of student projects during class presentation and the blind peer ranking of student projects in journals. Only the control set of peer reviewers, Architectural Design I students, were used. The longer five-week projects used three types of review: comparisons of student projects during class presentation and the blind peer ranking of student projects in journals plus the private one-to-one peer review of student projects. Two sets of reviewers were used: the Architectural Design I students for the first two review types, and both the Architectural Design I and III students for the private one-to-one peer reviews.

Four surveys were conducted. The actual surveys are located in the Appendix, with results in red, titled Survey Data 1, Survey Data 2, Survey Data 3 and Survey Data 4. Survey 1 surveyed the private one-to-one peer reviews of the Architectural Design I student projects by the Architectural Design III students, dated, 20 Oct. 2003. Survey 2 duplicated the Survey 1 results, dated 05 Nov. 2003. Survey 3 surveyed the private one-to-one peer reviews of the Architectural Design I student projects by the Architectural Design I students, dated 10 Nov. 2003. Survey 4 surveyed the three different types of peer review used by the Architectural Design I students, dated 12 Dec. 2003.

Results

Survey Data 1 and 2

Architectural Design I students overwhelmingly, by a margin of 90% or more, agreed or strongly agreed that the peer reviews by the Architectural Design III students offered the following: helpful analysis, helpful suggestions for future development, explained issues or concepts that made them understand their project better, offered positive or constructive feedback. Students also felt that a review from other than the instructor was helpful. Architectural Design I students also overwhelmingly wanted further peer reviews and would recommend their reviewers in the future. Students indicated they would like this type of peer review once every 1.73 and 1.96 weeks in survey 1 and 2 respectively.

A survey was given to the Architectural Design III students primarily to invest them into the process and to keep track of the number of reviews they did. They unanimously agreed or strongly agreed that the Architectural Design I students took the reviews seriously, were accepting of their analysis and accepted their criticism and suggestions.

Survey Data 3
Architectural Design I students overwhelmingly, by a margin of 90% or more, agreed or strongly agreed that the peer reviews by the Architectural Design I students offered the following: helpful analysis, helpful suggestions for future development and would recommend their reviewers in the future. 80% of the Architectural Design I students disagreed or strongly disagreed that the Design I student peer review was better than the Design III peer review. If students could select a combination of one or two reviewers from the choices of Professor, Design I and or Design III students, they overwhelmingly selected two reviewers with the following preferences: 58% indicated Professor & Design III student, 25% indicated Design I & III students and 8% indicated Professor & Design I. None of the students selected Professor only.

Survey Data 4
Three types of peer review were used in the Architectural Design I course. Students indicated the following preferences. The private one-to-one peer review helped students with their designs the most (75%). The public peer review of comparing student projects during class presentation helped students on the following: best understanding of what a successful design project was (83%); giving them the best overall understanding of their design project (67%); learning the most in terms of theory (83%); learning the most about other's designs (92%); making them best understand the grade they received (67%). Students also indicated by a slight majority that this type of review made them the most diplomatic as a reviewer (42%). The blind peer ranking of student projects in journals helped students with a slim majority on the following: being the most honest as a reviewer (42%); influencing their grade the most (42%); making them think the most as a reviewer (42%). The type of review that make students think the most about their design project was equally divided between the private one-to-one review and the public group review (50% each).

Analysis of Results
The survey evidence gives us some surprising results. First and foremost is the use of peer review itself. Students overwhelmingly said that they wanted a combination of reviewers. They were unanimous that this combination should include student peer reviewers in addition to reviews from the professor as indicated on Survey Data 3. The survey data also indicates that students value and respect the their peers' opinions as indicated on Survey Data 1-3.

Second, the use of "vertical" peer review, having a mix of more experienced and knowledgeable student reviewers, is more valuable to introductory students than that of "flat" peer review where all the reviewers have the same experience and knowledge as indicated on Survey Data 3. This also supports the thesis of combining an Architectural Design I course with any upper level Architectural Design courses. It may be logistically more complicated and unsettling at first for a faculty member to coordinate two courses at once, but it makes for a better learning environment for students; the ideal solution would be to have two faculty teach a combined course.[3] It is important to rethink and retest traditional patterns of educating our students as cultural and social values shift.

[3] This type of experimental classroom, combining students vertically, is also found in some local elementary school programs on a limited basis and uses similar logic.

Third and lastly, no one type of peer review type can do it all as indicated in Survey Data 4. One-to-one peer review may help students with their design projects on a micro level, but most of the macro level thinking and learning comes from public review and criticism from student project presentations. The private ranking in journals also plays an important secondary role in the peer review process, giving some students an alternative way to think and learn.

Conclusion

This paper presents clear evidence that students have a strong desire for student peer review. It creates an interactive student centered learning environment. There is no definitive statement that students learn more; rather it makes the following conclusions. Students perceive real benefits from peer review, and they want it as part of the learning environment. They value peer review, and this value is increased with the amount of experience the reviewer has. Different types of peer review, as outlined, help or benefit students in different ways.

Peer review also has implications for life-long learning. If students learn early that peer review is an important and valuable tool for learning, it then establishes a successful routine that they will use professionally during their entire life. In this sense, student peer review is a larger and richer issue than the course and curriculum argument as originally outlined in this paper.

Biography

JOSEPH A. BETZ is an Associate Professor in the Department of Architecture & Construction Management at the State University of New York at Farmingdale. He received his undergraduate and professional degrees in architecture from the Rensselaer Polytechnic Institute and his post-professional degree in architecture from Columbia University. He is a recipient of the SUNY Chancellor's Award for Excellence in Teaching.

Appendix

The raw survey data has been included in the appendix for the following two reasons. First, this paper is a working paper and additional research and testing is intended. The comment, observation and procedure notes are purposely left in rough form. Second, it provides specific information that other researchers can use to duplicate these results.

Title	-	*Number of attachments*
Survey Data 1	-	*three pages*
Survey Data 2	-	*two pages*
Survey Data 3	-	*two pages*
Survey Data 4	-	*one page*

Student Peer Review Evaluation
Architectural Design

SURVEY DATA - 1

Student Name (Design I): 13 students X 2 reviews (N=26) **Date:** 20 OCT 2003

Student Reviewer (Design III): 5 students X 5 reviews +1 (N=26)

How much time was spent on the peer review?

_ less than 3 min. _ 3-6 min. _ 7-10 min. _ more than 10 min.
N=1 (04%) N=5 (20%) N=12 (48%) N=7 (28%) (1 =null)

The reviewer offered helpful analysis of your project.

_ strongly disagree _ disagree _ agree _ strongly agree
N=1 (04%) N=0 N=4 (15%) N=21 (81%)

The reviewer offered helpful suggestions for future development.

_ strongly disagree _ disagree _ agree _ strongly agree
N=1 (04%) N=0 N=8 (31%) N=17 (65%)

The reviewer explained issues or concepts that made you understand the project better.

_ strongly disagree _ disagree _ agree _ strongly agree
N=1 (04%) N=1 (04%) N=11 (42%) N=13 (50%)

A review from someone other than the instructor helped your project.

_ strongly disagree _ disagree _ agree _ strongly agree
N=1 (04%) N=0 N=11 (42%) N=14 (54%)

This reviewer was knowledgeable about the project goals and objectives.

_ strongly disagree _ disagree _ agree _ strongly agree
N=1 (04%) N=0 N=13 (50%) N=12 (46%)

This reviewer offered positive or constructive feedback.

_ strongly disagree _ disagree _ agree _ strongly agree
N=1 (04%) N=0 N=8 (31%) N=17 (65%)

You would want additional peer review in the future from a Design III student.

_ strongly disagree _ disagree _ agree _ strongly agree
N=1 (04%) N=0 N=9 (35%) N=16 (62%)

You would recommend this individual reviewer in the future.

_ strongly disagree _ disagree _ agree _ strongly agree
N=1 (04%) N=0 N=8 (32%) N=16 (64%) (1 =null)

How often during a 4 week long project would peer review be helpful?

_ 0 not helpful _ 1 time _ 2 times _ 3 times _ 4 times or more
N=0 N=1 (04%) N=13 (50%) N=10 (38%) N=2 (08%)

What was the most important thing you learned about your project during the review?

This question was designed to invest the student in the peer review process

Is there anything that would make the peer review process better?

null = 12; no/nothing = 7; more time = 3; more reviewers = 2; a future second review = 2

Reviewer's Evaluation - Student Peer Review **SURVEY DATA - 1**
Architectural Design

Student Name: 5 students X 5 reviews +1 (N=26) **Date:** 20 OCT 2003

Student Reviewed: 13 students X 2 reviews (N=26)

The student took the review seriously.

_ strongly disagree	_ disagree	_ agree	_ strongly agree	
N=0	**N=0**	**N=10 (40%)**	**N=15 (60%)**	**(1 =null)**

The student was accepting of your analysis.

_ strongly disagree	_ disagree	_ agree	_ strongly agree	
N=0	**N=0**	**N=9 (36%)**	**N=16 (64%)**	**(1 =null)**

The student was accepting of your criticism and suggestions.

_ strongly disagree	_ disagree	_ agree	_ strongly agree	
N=0	**N=0**	**N=9 (36%)**	**N=16 (64%)**	**(1 =null)**

What specific criticism did you offer?

This question was designed to invest the student in the peer review process

What was the most important thing you learned about their project during the review?

This question was designed to invest the student in the peer review process

Is there anything that would make the peer review process better?

"I agree with this idea and format. It should've been introduced a long time ago."

"Dealing with more than one student in order for students with similar problems to learn at the same time."

"More time per person, I didn't know how far I should take each review. I helped with technical issues as well that took away from help in the design concept."

"If students were a little further on, it may be more helpful."

"No, I thought the process was very interesting."

"No, I feel this process works very well."

"Not that I can think of."

Procedure **SURVEY DATA - 1**

Prior to the start of class:

I took the Design III students out of the room and spent about five minutes with them to the review the concept and theory behind the Design I project. I also briefly added some basics in offering focused peer comments as it applied to diagrams (ideas) and architectonics (elements to construct spaces and forms).

Start of class:

Architectural Design I students were given two surveys (for receiving reviews) each and the Architectural Design III students were given five surveys each (for giving reviews). Each survey was introduced on the classroom screen. Students could select their reviewers and visa versa but once each had filled out their allotment of surveys they were could no longer take part in the process. I briefly told the Design I students that this peer review experiment will give them an opportunity to get feedback, analysis and critical suggestions about improving their projects from someone other than the instructor - on their terms in a less formal way.

Faculty Observations

The review process was very focused, students were engaged and the mood in the room was serious.

Architectural Design I Students:

After the review was completed, about a third of the students verbally expressed to me that they would like to do this again and it was "great," "intense," "awesome," etc.

Architectural Design III Students:

Students were very positive. They appeared to enjoy their role and status as advanced or experienced designers offering advice and suggestions. They took the reviews seriously. They commented that they were glad to revisit a project they worked on earlier and it brought ideas to their current project.

Student Peer Review Evaluation
Architectural Design

SURVEY DATA - 2

Student Name (Design I): 11 students X 2 reviews (N=22) **Date:** 05 Nov 2003

Student Reviewer (Design III): 5 students X 4 reviews +2 (N=22)

How much time was spent on the peer review?

_ less than 3 min.	_ 3-6 min.	_ 7-10 min.	_ more than 10 min.
N=0	N=1 (04.5%)	N=7 (32%)	N=14 (64%)

The reviewer offered helpful analysis of your project.

_ strongly disagree	_ disagree	_ agree	_ strongly agree
N=0	N=0	N=8 (36%)	N=14 (64%)

The reviewer offered helpful suggestions for future development.

_ strongly disagree	_ disagree	_ agree	_ strongly agree
N=0	N=0	N=9 (41%)	N=13 (59%)

The reviewer explained issues or concepts that made you understand the project better.

_ strongly disagree	_ disagree	_ agree	_ strongly agree
N=0	N=0	N=12 (55%)	N=10 (45%)

A review from someone other than the instructor helped your project.

_ strongly disagree	_ disagree	_ agree	_ strongly agree
N=0	N=0	N=9 (41%)	N=13 (59%)

This reviewer was knowledgeable about the project goals and objectives.

_ strongly disagree	_ disagree	_ agree	_ strongly agree
N=0	N=0	N=10 (45%)	N=12 (55%)

This reviewer offered positive or constructive feedback.

_ strongly disagree	_ disagree	_ agree	_ strongly agree
N=0	N=0	N=10 (45%)	N=12 (55%)

You would want additional peer review in the future from a Design III student.

_ strongly disagree	_ disagree	_ agree	_ strongly agree
N=0	N=0	N=9 (41%)	N=13 (59%)

You would recommend this individual reviewer in the future.

_ strongly disagree	_ disagree	_ agree	_ strongly agree
N=0	N=0	N=9 (41%)	N=13 (59%)

How often during a 4 week long project would peer review be helpful?

_ 0 not helpful	_ 1 time	_ 2 times	_ 3 times	_ 4 times or more
N=0	N=2 (09%)	N=8 (36%)	N=9 (41%)	N=3 (14%)

What was the most important thing you learned about your project during the review?

This question was designed to invest the student in the peer review process

Is there anything that would make the peer review process better?

null = 8; no/nothing = 7; more times = 1; more reviewers = 1; review was great = 1;

tape recorder = 1; current plan works well = 1; great the way it is = 1; process is working find = 1

Procedure - similar to last time **SURVEY DATA - 2**

Prior to the start of class:

I took the Design III students out of the room and spent about five minutes with them to review the concept and theory behind the Design I project. I also briefly added some basics in offering focused peer comments as it applied to diagrams (ideas) and architectonics (elements to construct spaces and forms).

Start of class:

Architectural Design I students were given two surveys (for receiving reviews) each and the Architectural Design III students were given four surveys each (two were given five surveys for giving reviews). Each survey was introduced on the classroom screen. Students could select their reviewers and visa versa but once each had filled out their allotment of surveys they were could no longer take part in the process. I briefly told the Design I students that this peer review experiment will give them an opportunity to get feedback, analysis and critical suggestions about improving their projects from someone other than the instructor - on their terms in a less formal way.

Faculty Observations

The review process was very focused, students were engaged and the mood in the room was serious. This review was more complex and the average time each reviewer spent increased. The total time for all reviews to be completed was approx. 2.75 hours versus approx. 1.75 hours during the first time review.

Architectural Design I Students:

Students were very positive with similar attitudes about the review process as last time.

Architectural Design III Students:

Students were very positive with similar attitudes about their role as reviewers as last time.

Student Peer Review Evaluation
Architectural Design

SURVEY DATA - 3

Student Name (Design I): 12 students X 2 reviews (N=24) **Date:** 10 Nov 2003

Student Reviewer (Design I): 12 students X 2 reviews (N=24)

How much time was spent on the peer review?

_ less than 3 min. **N=0**
_ 3-6 min. **N=5 (21%)**
_ 7-10 min. **N=7 (29%)**
_ more than 10 min. **N=12 (50%)**

The reviewer offered helpful analysis of your project.

_ strongly disagree **N=0**
_ disagree **N=0**
_ agree **N=14 (58%)**
_ strongly agree **N=9 (38%)** **(1 =null)**

The reviewer offered helpful suggestions for future development.

_ strongly disagree **N=0**
_ disagree **N=1 (04%)**
_ agree **N=14 (58%)**
_ strongly agree **N=9 (38%)**

You would recommend this individual reviewer in the future.

_ strongly disagree **N=0**
_ disagree **N=2 (08%)**
_ agree **N=13 (54%)**
_ strongly agree **N=9 (38%)**

You would want additional one on one peer review in the future from a Design I student.

_ strongly disagree **N=0**
_ disagree **N=4 (17%)**
_ agree **N=13 (54%)**
_ strongly agree **N=7 (29%)**

The review from a Design I student was better than that from a Design III student.

_ strongly disagree **N=4 (17%)**
_ disagree **N=15 (63%)**
_ agree **N=3 (13%)**
_ strongly agree **N=2 (08%)**

If you had a choice of getting future reviews from the following combinations what would it be?

_ Professor only **N=0**
_ Design III students only **N=2 (08%)**
_ Design I students only **N=0**
_ Professor & Design III students **N=14 (58%)**
_ Professor & Design I students **N=2 (08%)**
_ Design I & III students **N=6 (25%)**

What was the most important thing you learned about your project during the review?

This question was designed to invest the student in the peer review process

Is there anything that would make the peer review process better?

null = 4; no = 14; more reviews = 1; reviews from other than design I are helpful = 2;

reverse the order of the reviews, design I first and then design III = 1;

I disagree that design I student reviews were better = 1

Procedure **SURVEY DATA - 3**

Prior to the start of the reviews:
Architectural Design I students were given two surveys (for receiving reviews). The survey was introduced on the classroom screen. Students could select their reviewers but the person they review could not review their project in return. They could only do two reviews. I briefly told the them that this peer review experiment will give them an opportunity to get feedback, analysis and critical suggestions about improving their projects from someone other than the instructor - on their terms in a less formal way.

Faculty Observations
The review process was very focused, students were engaged and the mood in the room was serious.

Architectural Design I Students:
Although the environment seemed positive, I received no verbal comments from students about this review. Three students struggled to fill out the survey saying they wanted to be in-between on the issue of what was better - a review from a Design I or Design III student; I told them they could only check one.

Student Peer Review Survey
Architectural Design

SURVEY DATA - 4

Student Name (Design I): 12 students (N=22) **Date:** 12 Dec 2003

Three types of peer review have been used this semester in class, they are:

D. Private one-to-one peer review of student projects.
E. Public peer review comparing student projects during class presentation.
F. Blind peer ranking of student projects in your journals (shown only to the professor).

Which review type helps your design project the most?

A. Private one-to-one review	B. Public group review	C. Blind ranking in journal
N=9 (75%)	**N=3 (25%)**	**N=0**

Which review type are you the most diplomatic as a reviewer?

A. Private one-to-one review	B. Public group review	C. Blind ranking in journal
N=4 (33%)	**N=5 (42%)**	**N=3 (25%)**

Which review type makes you think the most about your design project?

A. Private one-to-one review	B. Public group review	C. Blind ranking in journal
N=6 (50%)	**N=6 (50%)**	**N=0**

Which review type are you the most honest as a reviewer?

A. Private one-to-one review	B. Public group review	C. Blind ranking in journal
N=4 (33%)	**N=3 (25%)**	**N=5 (42%)**

Which review type do you feel influences your grade the most?

A. Private one-to-one review	B. Public group review	C. Blind ranking in journal
N=3 (25%)	**N=4 (33%)**	**N=5 (42%)**

Which review type gives you the best understanding of what a successful design project is?

A. Private one-to-one review	B. Public group review	C. Blind ranking in journal
N=1 (8.3%)	**N=10 (83%)**	**N=1 (8.3%)**

Which review type gives you the best overall understanding of your design project?

A. Private one-to-one review	B. Public group review	C. Blind ranking in journal
N=3 (25%)	**N=8 (67%)**	**N=1 (8.3%)**

Which review type do you learn the most from in terms of theory?

A. Private one-to-one review	B. Public group review	C. Blind ranking in journal
N=1 (8.3%)	**N=10 (83%)**	**N=1 (8.3%)**

Which review type do you learn the most about other's designs?

A. Private one-to-one review	B. Public group review	C. Blind ranking in journal
N=1 (8.3%)	**N=11 (92%)**	**N=0**

Which review type best makes you understand the grade you receive?

A. Private one-to-one review	B. Public group review	C. Blind ranking in journal
N=3 (25%)	**N=8 (67%)**	**N=1 (8.3%)**

Which review type makes you think the most as a reviewer?

A. Private one-to-one review	B. Public group review	C. Blind ranking in journal
N=4 (33%)	**N=3 (25%)**	**N=5 (42%)**

What is the most positive or negative aspect about any of these peer review processes?