

PEERRS USER SURVEY RESULTS

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FEBRUARY 16, 2006

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Overview

This is a compilation of results gathered from a survey conducted for the University of Michigan's **Program for Education and Evaluation in Responsible Research and Scholarship (PEERRS)**. The survey was designed to gather feedback from PEERRS users regarding affect (how users felt about the system), functionality (whether users' goals could be accomplished), and usability (how easy the system was to navigate and how easy it was for users to accomplish their goals).

Demographic information for the survey participants was also gathered. The PEERRS system has a finite user base and the research team gathered demographic information to a) help generalize results from the survey to the PEERRS user population as a whole and b) ensure that a random sample from the total population asked to participate did not over-represent certain types of PEERRS users.

PEERRS Description

The Program for Education and Evaluation in Responsible Research and Scholarship (PEERRS) online system was created to provide efficient delivery of information, training, and certification testing to the University of Michigan research community. It is specifically designed to inform, train, and test researchers in a variety of areas relating to responsible research practices.

The system consists of information links, training modules, and test modules. Each training module consists of 20-30 pages of content and additional case studies. Lists of additional resources are also provided. Users can either utilize the training modules prior to testing or choose immediate testing. A user can retake the tests until a passing score is achieved. All users who have successfully passed one or more module certification tests are listed in a database accessible by any user with a valid UM Kerberos username and password, or appropriate UM *Friends* account.

The University of Michigan requires that all Principal Investigators (PIs) and Co-Principal Investigators (Co-PIs) in research projects with start dates of June 1, 2005 and later, be certified through the online PEERRS system. Individual schools and departments may have additional requirements. Furthermore, supplementary faculty, staff, and students *may be required* to complete PEERRS training and certification *as determined* by project PIs on an individual basis. UM PEERRS certification is valid for three (3) years and only for University of Michigan requirements. Research projects spanning additional universities may require researchers to be certified at those institutions, in addition to UM PEERRS certification completion. The PEERRS system begins sending automatic email notification of impending certification expiration beginning thirty (30) days prior to that date.

The National Institutes of Health (NIH) also requires training and certification for PIs, Co-PIs and other "key personnel" (as defined on the NIH Website) in research projects involving human subjects. Not fulfilling this requirement results in the withholding of funds allocated by the NIH. The U of M PEERRS system was designed to comply with NIH guidelines and currently fulfills NIH requirements.

Goals of the Survey

The researchers wanted to obtain feedback from members of the University community who used PEERRS to help evaluate the system on three metrics: affect (how users felt about the system), functionality (what users could do with the system) and usability (did the system make it easy for users to accomplish their goals).

Based on one-on-one interviews with individuals who fell within the PEERRS user demographic, and the researchers' own experience in creating a navigation map of the PEERRS site, we refined these three metrics into the following areas of interest.

- i. How memorable was the PEERRS experience and what emotions did this memory elicit?
- ii. How useful/valuable was the information presented?
- iii. What goals were users trying to accomplish on the PEERRS site?
- iv. Were users able to accomplish their goals and accomplish them in the time frame and setting preferable?
- v. How easily were users able to accomplish their goals?

Survey Methodology

The pool of survey participants was randomly selected from the entire population of more than 7500 registered PEERRS users. One hundred names were selected and invited via e-mail to participate in an online survey. The following message was sent to the selected addresses:

You are invited to participate in a short survey evaluation of PEERRS: Program for Education and Evaluation in Responsible Research and Scholarship. You have been randomly selected from the PEERRS certification database to participate. The survey should take less than 10 minutes. Please complete the survey by Tuesday, February 14 by 5:00 p.m. EST.

Please click the following link to access the survey:

www.agrude.com/peerrs.php

=====
This is part of a School of Information student project in Evaluation of Systems and Services. Your participation is greatly appreciated.

Thank you,
SI 622 Students

Of the one hundred invitees twenty-six participated in the survey (a 26% response rate). All of the twenty-five participants completed the survey (a 100% completion rate).

Possible respondents were given five business days to take the survey. The survey took less than ten minutes to complete.

The survey was hosted online and consisted of 22 questions. Possible methods of response were a mix of Likert Scale answers and free response depending on the type of information the researchers were trying to find with the question. Respondents could choose to not answer any question and default answers were not used.

The data was analyzed using TTests for comparative analysis, averages, and modes. Data was converted as needed to chart various findings.

Questions

The questions were divided into four categories: demographic, affect, functionality, and usability. The researchers asked demographic questions to help generalize results from the survey to the PEERRS user population as a whole and ensure a representative sample. The affect questions were used to gain an understanding of how users felt about the PEERRS experience. In the area of functionality we examined the system notification processes. In terms of usability we examined the user's perceptions of the navigation experience in the modules and quizzes, how the users used the system, and their location while they used the system.

The questions related to affect, functionality, and usability were generated to gain an understanding of how users used the system and how they felt about the system. There were no questions regarding the content of the modules or the quizzes.

Demographic Questions

Researchers asked demographic questions to help generalize results from the survey to the PEERRS user population as a whole and ensure a representative sample of respondents. There were six demographic questions:

- What is your primary affiliation with the University of Michigan?
- What is your sex?
- What is your age range?
- What is your department?
- What role did you play in your most recent research project?
- Is that the role you most frequently play?

Affect Questions

Affect questions were asked to determine the feelings respondents had regarding the PEERRS system. There were five affect questions:

- To what degree do you remember completing the PEERRS certification process?

From interviews with the PEERRS staff the researchers learned most PEERRS users use the site only infrequently because certification is only necessary once in a three year period. The researchers wanted to discover if the PEERRS users remembered their experience with the system and if this correlated with other findings.

- Did you find the learning modules useful?

The learning modules account for the majority of content on the PEERRS site and are intended to be material that prepares PEERRS users for each certification test; because of the varying degree of skill and knowledge in the main demographic areas (Student, Staff, and Faculty) the researchers wanted to discover if participants found the information contained in the learning modules useful.

- Did you find this process valuable?

Participants were asked to rate their perception of how valuable the process of using the learning module and taking the certification exam was. Researchers wanted to see if perceptions of usefulness varied by demographic area.

- Do you feel you are more qualified to complete research after completing these modules?
- Do you feel you are more qualified to complete research after the subsequent certification process (quizzes)?

The researchers used these questions to determine if users found the PEERRS process helped them to be better able to do research. We also wanted to see if this perception varied among the different demographic groups.

Functionality Questions

Functionality questions were asked to determine if users could accomplish their goals on the PEERRS site. The goals we identified were related to the use of modules and the ability to determine if certification is needed and when it is necessary to recertify.

- How did you find out you needed to be certified? (i.e. complete PEERRS modules and certification quizzes)

An important part of the PEERRS process is knowing that you need certification. Researchers were interested in what methods PEERRS users utilize to determine their certification needs.

- Are you aware of when your certifications expire?
- Do you know how you will be notified of impending expiration?

PEERRS certification is valid for a period of three years. Users whose certifications is going to expire are notified by email three months before the expiration. Given the amount of email that many people received, researchers wanted to know if users were aware of a) when their certification would expire and b) aware of how they would be notified.

- Did you learn something new from the materials?
- Do you ever go back to review module content to refresh your memory?

A major goal of the PEERRS system is the continuing education of research professionals and those associated with the research process. The researchers wanted to see if users were obtaining useful information from the modules and certification exams and if this varied by demographic group.

Usability Questions

Usability questions focused on the ease with which users were able to accomplish their goals on the PEERRS site. There were five usability questions:

- Did you find the learning modules easy to navigate?
- Did you find the quiz easy to navigate?

Based on our experience with the PEERRS site as we developed a site navigation module navigation is an important element to the PEERRS process because information in later portions of a module builds on information learned in previous portions. Quiz navigation is important because once you submit your answers you cannot go back and change them; in this instance a non-recoverable action needs to display adequate warning to the user.

- Which of the following scenarios best describes your experience?

Response options for this question were: *Read Through Module, Took Quiz; Skimmed Module, Took Quiz; Did Not Read Module, Took Quiz;* and *Other*. Researchers were interested in how users used the PEERRS modules and quizzes in their attempts to attain certification and if this varied between demographic groups.

- Where were you when you reviewed the module content?
- Where were you when you took the subsequent quiz?

Researchers were interested in where users reviewed module and quiz content and if location affected other usability responses.

Results

Demographic

Of the twenty-six respondents, only twenty-five answered the question regarding University affiliation. Of the 25 who answered, 12 were faculty, 10 were staff, and 3 were students. (Fig. 1) Of the 26 respondents, 12 were male and 14 were female. The majority of the respondents fell into two significant age ranges: 9 respondents were 35-44 and 12 respondents were 45-54. Of the remaining respondents, 2 were 18-24, 1 was 25-34, 1 was 55-64, and 1 was 65-74. There were not respondents over 75 years of age. (Fig. 2)

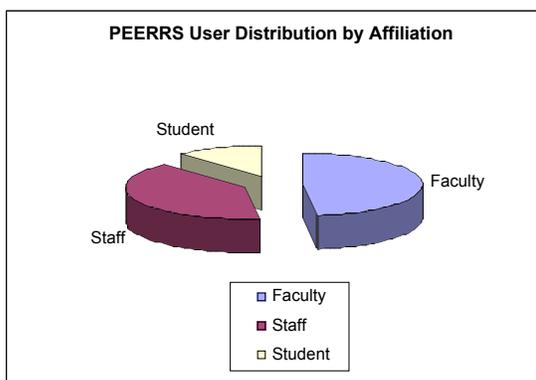


Fig. 1

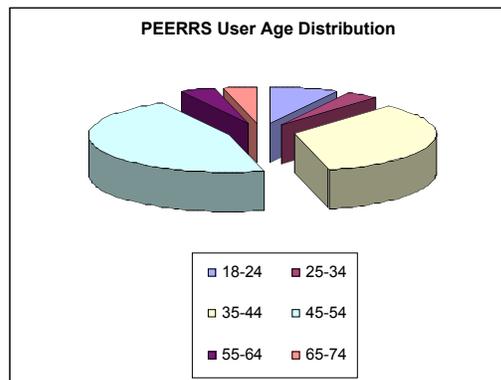


Fig. 2

The participants entered their department information into a free-text response box. Based on the PEERS classification of research areas, the researchers analyzed the free-responses and assigned the PEERS classification to them. Sixty percent of the respondents fell into the Health Sciences arena, twenty-eight percent in the Social Behavioral sciences, and the final twelve percent in Clinical Research. (Fig. 3)

Forty-two percent of the respondents identified themselves as Principle Investigators (PI), 19% as Co-Investigators (CI), 12% as Assistants, and the remaining 27% as Other. Ninety-six percent of the respondents this is the role they most frequently play. (Fig. 4)

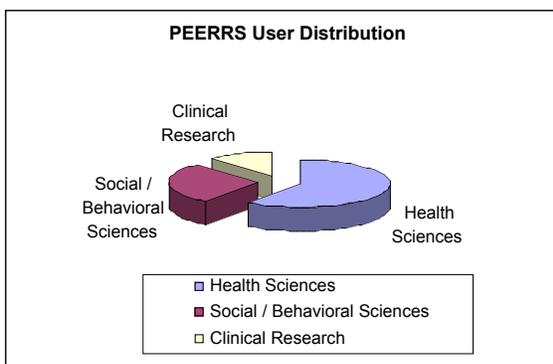


Fig. 3

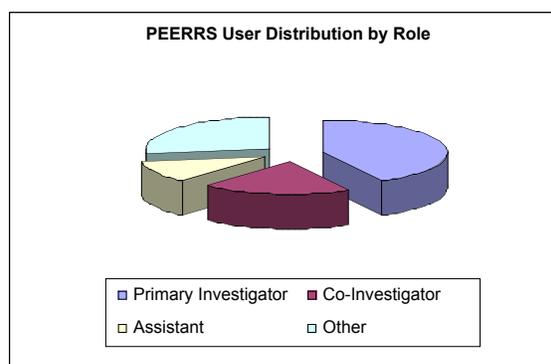


Fig. 4

The final demographic the researchers collected was an estimate of the last time respondents took a quiz on the PEERRS system. Seventy-one percent took a quiz within the past year, 8% within the past two years, 4% within the last three years, while 17% did not know when they took the last quiz.

Affect

The survey was designed to gain an understanding of the impact of the PEERRS certification process on the participants. Only 8% of the respondents replied they remembered completing the

PEERRS certification process extremely well. Forty-four percent remembered well, thirty-two percent remembered the experience moderately, twelve percent remembered the experience somewhat, and four percent did not remember the experience at all.

When asked if they found the learning modules useful, 58% responded affirmatively, while 13% found the modules only moderately useful, and 17% found them not at all useful. Of the remaining 12%, 4% answered they did Not Know and 8% responded Not Applicable. Fifty-four percent of respondents found the PEERRS process valuable. Twenty-one percent found it somewhat valuable, while an additional twenty-one percent did not find it valuable, and four percent didn't know. (Fig. 5)

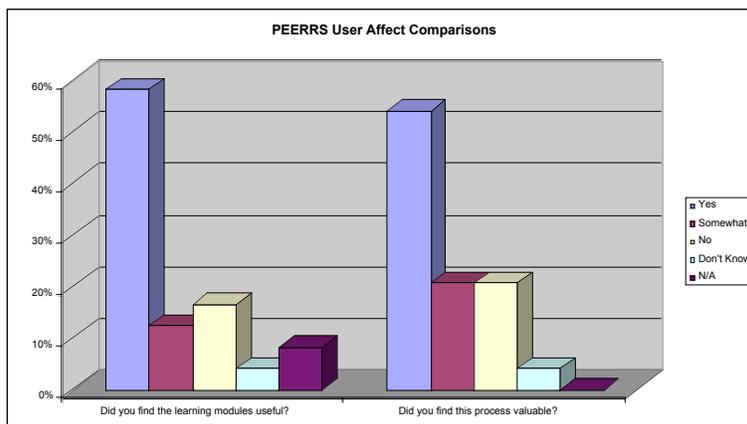


Fig. 5

Respondents were asked whether they felt more qualified to complete research after completing the PEERRS modules. Thirty-nine percent of the respondents answered they did not feel more qualified to perform research after completing PEERRS. Twenty-six percent felt they were somewhat more qualified and thirty percent felt they were more qualified. When asked whether the subsequent certification process (quizzes) resulted in higher confidence in the respondent's ability to complete research. The same number of participants answered yes (43%) as answered no (43%). Only two people felt somewhat more qualified.

Functionality

Twenty-four respondents replied to the question regarding did you learn something new and sixteen responded yes. Two respondents answered they learned somewhat and three responded no, while three did not know if they learned anything or not. Conversely, only one person went back to review the content of the PEERRS modules. The remainder of the respondents (88%) did not go back to review the modules. (Fig. 6)

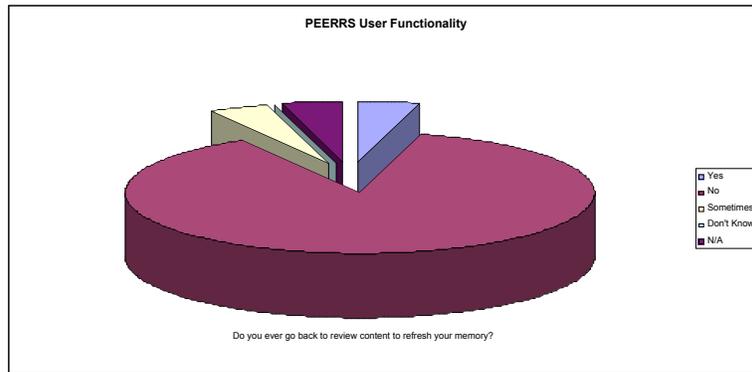


Fig. 6

Thirty percent of the respondents knew when their certifications expire. Fifty-seven percent did not know when their certifications expire, while 13% were unsure. When asked if they knew how they will be notified, 29% said yes, 50% said no, and 21% were unsure. When asked how they found out they needed to be certified (complete PEERRS modules and certified), 17% of the respondents replied from the IRB, 39% through their department, 4% from the University, 4% did not know, 35% through email. (Fig. 7)

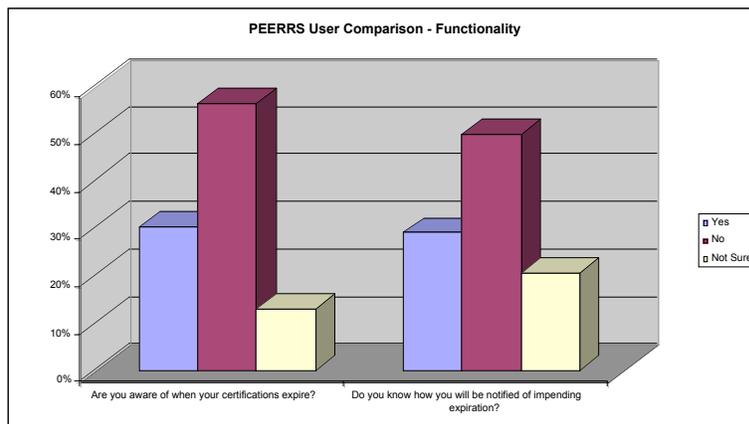


Fig. 7

Usability

When asked to describe their experience using the PEERRS certification system, respondents were asked to select from the following choices: Read Through Modules, Took Quiz; Skimmed Modules, Took Quiz; Did Not Read Modules, Took Quiz; and Other. The majority of users, 50%, Skimmed Modules, Took Quiz followed by those who Read Through Modules, Took Quiz at 38%. Twelve percent went directly to the quiz. (Fig. 8)

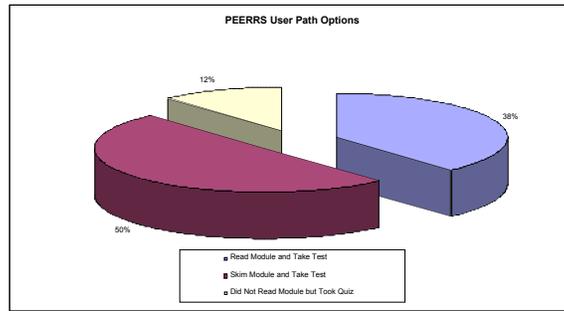


Fig. 8

Seventy-nine percent of the respondents found the modules easy to navigate. Eighty-eight percent of the respondents found the quizzes easy to navigate. (Fig. 9) Nineteen people took the quiz from work and two people took the quiz from home.

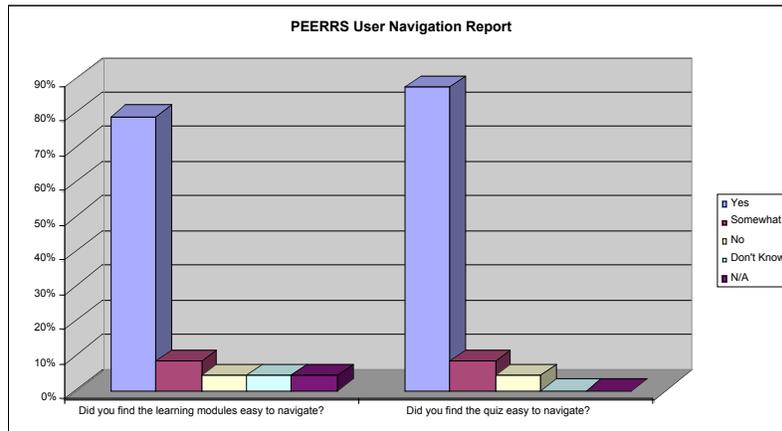


Fig.9

Summary and Recommendations

Though most survey respondents felt that the modules were easy to use and navigate, most either skimmed or did not read the modules at all. This indicates that there is a lack of incentive for many researchers to fully read through the information in the modules. The lack of incentive to complete all of the reading may be partially due to the nature of the quizzes. The quizzes can be taken as many times as necessary, with each failed attempt pointing out the incorrect answers to questions. Additionally, there is no penalty for incorrect responses. The site should be further evaluated to understand the incentive or lack thereof to read the modules and consider design or content changes that would provide incentive to read.

Using TTest analysis, researchers found that there is a significant, but understandable difference in perceived value of PEERRS between the three groups surveyed. Faculty consistently report

finding less value than Staff, Students, or others. This could be because faculty has deeper experience with these types of research requirements and therefore may find the process less informative. Another example of the discrepancy between these groups can be found in residual affect resulting from PEERRS when comparing respondents' feelings of qualification subsequent to using the modules and taking the quizzes.

The respondents found out through a wide variety of sources that they needed to complete the PEERRS modules and quizzes to receive a certification. In addition, many also did not know how they would know or be notified with regard to expiration and renewal of certifications. Both of these statistics indicate that the PEERRS entity lacks effective communication standards. It should be noted that this is the first three-year renewal cycle for the PEERRS system. Previous users of the system will need to be notified of their upcoming certification expirations. At this time, results indicate that users are unaware of the fact that they need to re-certify, as well as unclear as to how they will be notified of the requirement.

Question wording was found to be an issue in question number 20. The question was intended to reveal how respondents are notified of the need to certify through PEERRS. It was incorrectly assumed by the researchers that respondents would understand that answers should range from IRB to Department to University. However, by allowing respondents to answer this question through a text box, researchers found that some interpreted the question to mean how the notification would arrive, as opposed to from whom it would arrive. This gave answers that included entities and email.

Though the survey contained a great deal of useful information regarding peoples' experiences with the PEERRS system, it should be run again with the questions re-worded to correctly account for the difference between functionality and usability.

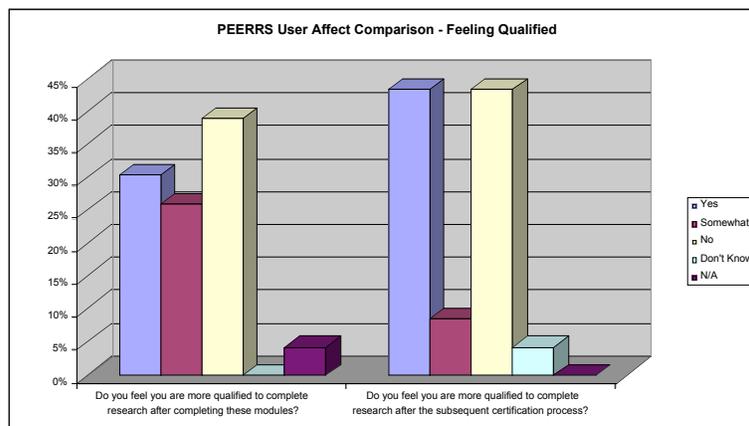


Fig. 10

In conclusion, researchers found that this survey is limited in its scope with regard to comparisons. This is due to the fact that PEERRS is a unique entity that is not widely used, distributed, nor known. It serves the needs of a very specific population at only one university. Therefore, comparing results statistically is a limited endeavor. Although PEERRS is meeting its primary objective to provide researchers with an accessible, navigable, usable, and functional

system, users do not report the experience as memorable. (Fig. 10) The diverse audience made up of faculty, staff, and students from a wide variety of departments impacts the significance of perceived value toward the information presented. Though users accomplish their goal of obtaining certification via the PEERRS site, and improvements can be made in communication, incentives could be incorporated to encourage revisiting the site during the three years between certifications, and to improve users' emotional response to the process..

Appendices

Appendix 1

Survey Question Categories

Question No.	Question	Category
1	Affiliation	D
2	Sex	D
3	Age Range	D
4	Department	D
5	Role	D
6	Role Frequency	D
7	Remember	A
8	Usage Scenario	A
9	Useful?	A
10	Navigation of Modules Easy?	F
11	Navigation of Quiz Easy?	F
12	Learn Anything?	F
13	Valuable?	A
14	Last Time Taking Quiz?	D
15	Where Take Module?	U
16	Where Take Quiz?	U
17	Ever Review?	F
18	Know When it Expires?	F
19	Know how notification?	F
20	How did you know certification?	F
21	More Qualified Modules?	A
22	More Qualified Quizzes?	A

D = Demographic

U = Usability

F = Functionality

A = Affect

Appendix 2

Survey Questions

1. What is your primary affiliation with the University of Michigan?
2. What is your sex?
3. What is your age range?
4. What is your department?
5. What role did you play in your most recent research project?
6. Is that the role you most frequently play?
7. To what degree do you remember completing the PEERRS certification process?
8. Which of the following scenarios best describes your experience?
9. Did you find the learning modules useful?
10. Did you find the learning modules easy to navigate?
11. Did you find the quiz easy to navigate?
12. Did you learn something new from the materials?
13. Did you find this process valuable?
14. When was the last time you took a quiz on PEERRS?
15. Where were you when you reviewed the module content?
16. Where were you when you took the subsequent quiz?
17. Do you ever go back to review module content to refresh your memory?
18. Are you aware of when your certifications expire?
19. Do you know how you will be notified of impending expiration?
20. How did you find out you needed to be certified? (i.e. complete PEERRS modules and certification quizzes)
21. Do you feel you are more qualified to complete research after completing these modules?
22. Do you feel you are more qualified to complete research after the subsequent certification process (quizzes)?

Conversion Scale Went Here

Appendix 3

Statistics

