

Implementation of Online Student Evaluation of Teachers

Comparison of Pilot Study vs Implementation

Purpose

The purpose of this study is to compare a pilot study of online student opinion of teacher effectiveness (SOTE) to the campus-wide implementation of online SOTEs.

- Are they comparable?
- What are the differences?

Why is this important?

- Salary, promotion, and tenure
- Monetary savings
- Other advantages
- Disadvantages
 - Response rates
 - Anonymity
 - Security
 - Accuracy

Background – Pilot Study

	Online Evaluation (OE)	Paper Evaluation (PE)
Response Rate	31% (Spring 2009)	73% (Five most recent semesters prior to Sp '09)
Samples: Course Sections	152 sections (52%)	138 section (48%)
Total Responses	1,477 responses (32%)	3,177 responses (68%)
Inclusion	More than 3 responses	
Exclusion	<ul style="list-style-type: none">• Response with 'Not Applicable/No Opportunity to Observe'• Without matching instructor/courses	
Voluntary for Teachers:	<ul style="list-style-type: none">• Yes	
Voluntary for Students:	<ul style="list-style-type: none">• Yes	

Background – Implementation Evaluation

	Online Evaluation (OE)	Paper Evaluation (PE)
Response Rate	80% (Spring 2013)	80% (Spring 2012 & Fall 2012)
Samples: Course Sections	1,206 sections (42%)	1,632 section (58%)
Total Responses	31,513 responses (41%)	45,625 responses (59%)
Inclusion	More than 3 responses	
Exclusion	* Response with ‘Not Applicable/No Opportunity to Observe’ * Without matching instructor/courses	
Mandatory for Teachers	<ul style="list-style-type: none"> • Yes 	
Mandatory for Students	<ul style="list-style-type: none"> • No, but grades will be given two weeks earlier if you participate 	

Table 1. Summary of Course Sections by College and Survey Delivery Mode

College	Pilot Study			
	OE	OE %	PE	PE %
Applied Arts & Sciences	17	52%	16	48%
Business	2	50%	2	50%
Education	55	53%	49	47%
Engineering	8	57%	6	43%
Humanities & the Arts	2	50%	2	50%
Science	17	55%	14	45%
Social Sciences	51	50%	50	50%
Total	152	52%	139	48%

Table 1. Summary of Course Sections by College and Survey Delivery Mode

College	Pilot Study				Campus-wide Implementation			
	OE	OE %	PE	PE %	OE	OE %	PE	PE %
Applied Arts & Sciences	17	52%	16	48%	263	43%	342	57%
Business	2	50%	2	50%	137	42%	186	58%
Education	55	53%	49	47%	158	46%	188	54%
Engineering	8	57%	6	43%	102	43%	137	57%
Humanities & the Arts	2	50%	2	50%	170	46%	199	54%
Science	17	55%	14	45%	102	40%	150	60%
Social Sciences	51	50%	50	50%	273	39%	430	61%
Total	152	52%	139	48%	1,206	42%	1,632	58%

Table 2. Summary of Student Responses by College and Survey Delivery Mode

College	Pilot Study			
	OE	OE %	PE	PE %
Applied Arts & Sciences	175 (28%)	23%	461 (72%)	58%
Business	34 (27%)	25%	94 (73%)	62%
Education	533 (33%)	34%	1,059 (67%)	77%
Engineering	98 (45%)	51%	119 (55%)	94%
Humanities & the Arts	12 (16%)	10%	62 (84%)	89%
Science	102 (27%)	27%	271 (73%)	72%
Social Sciences	523 (32%)	31%	1,111 (68%)	76%
Total	1,477 (32%)	31%	3,177 (68%)	73%

Table 2. Summary of Student Responses by College and Survey Delivery Mode

College	Pilot Study				Campus-wide Implementation			
	OE	OE %	PE	PE %	OE	OE %	PE	PE %
Applied Arts & Sciences	175 (28%)	23%	461 (72%)	58%	6,577 (42%)	83%	8,959 (58%)	86%
Business	34 (27%)	25%	94 (73%)	62%	5,024 (42%)	81%	6,841 (58%)	77%
Education	533 (33%)	34%	1,059 (67%)	77%	2,774 (39%)	79%	4,377 (61%)	84%
Engineering	98 (45%)	51%	119 (55%)	94%	3,174 (44%)	87%	4,018 (56%)	76%
Humanities & the Arts	12 (16%)	10%	62 (84%)	89%	3,783 (41%)	77%	5,430 (59%)	87%
Science	102 (27%)	27%	271 (73%)	72%	2,851 (41%)	80%	4,068 (59%)	75%
Social Sciences	523 (32%)	31%	1,111 (68%)	76%	7,330 (38%)	78%	11,932 (62%)	78%
Total	1,477 (32%)	31%	3,177 (68%)	73%	31,513 (41%)	80%	45,625 (59%)	80%

Research Questions

- Is there a difference in average SOTE scores between online and paper evaluations?

In comparison between online and paper evaluations:

- Are there differences in SOTE scores by course levels (Lower Division, Upper Division, and Graduate)?
- Are there differences in SOTE scores by college?
- Are there differences in SOTE scores by subject areas?

Question 1: Is there a difference in average SOTE scores between online and paper evaluations?

- One Predictor Variable: Delivery Mode (Online vs. Paper)
- One Dependent Variable: SOTE scores

Question 1: Is there a difference in average SOTE scores between online and paper evaluations?

Table 3. Mean Comparisons of SOTE Questions

Question	Pilot Study		
	OE Mean	PE Mean	t-test
1. Demonstrated relevance of the course content	4.40	4.40	0.25
2. Used assignments to enhance learning	4.20	4.16	1.28
3. Summarized/emphasized important points	4.29	4.25	1.53
4. Was responsive to questions and comments from students	4.43	4.35	2.611 ¹
5. Established an atmosphere that facilitated learning	4.29	4.23	2.041 ¹
6. Was approachable for assistance	4.40	4.32	2.855 ²
7. Was responsive to the diversity of students in this class	4.44	4.38	2.177 ¹
8. Showed strong interest in teaching this class	4.51	4.49	0.78
9. Used intellectually challenging teaching methods	4.14	4.12	0.73
10. Used fair grading methods	4.23	4.20	0.78
11. Helped student analyze complex/abstract ideas	4.19	4.13	1.93
12. Provided meaningful feedback about student work	4.15	4.10	1.32
13. Overall, this instructor's teaching was	4.38	4.37	0.21

¹p < 0.05; ²p < 0.005; ³p < 0.0005

Question 1: Is there a difference in average SOTE scores between online and paper evaluations?

Table 3. Mean Comparisons of SOTE Questions

Question	Pilot Study			Campus-wide Implementation		
	OE Mean	PE Mean	t-test	OE Mean	PE Mean	t-test
1. Demonstrated relevance of the course content	4.40	4.40	0.25	4.35	4.46	605.469 ³
2. Used assignments to enhance learning	4.20	4.16	1.28	4.14	4.23	99.506 ³
3. Summarized/emphasized important points	4.29	4.25	1.53	4.21	4.35	270.471 ³
4. Was responsive to questions and comments from students	4.43	4.35	2.611 ¹	4.28	4.42	462.253 ³
5. Established an atmosphere that facilitated learning	4.29	4.23	2.041 ¹	4.17	4.30	262.676 ³
6. Was approachable for assistance	4.40	4.32	2.855 ²	4.24	4.38	355.779 ³
7. Was responsive to the diversity of students in this class	4.44	4.38	2.177 ¹	4.33	4.45	521.201 ³
8. Showed strong interest in teaching this class	4.51	4.49	0.78	4.39	4.54	1055.524 ³
9. Used intellectually challenging teaching methods	4.14	4.12	0.73	4.05	4.18	64.789 ³
10. Used fair grading methods	4.23	4.20	0.78	4.17	4.30	122.006 ³
11. Helped student analyze complex/abstract ideas	4.19	4.13	1.93	4.11	4.23	75.449 ³
12. Provided meaningful feedback about student work	4.15	4.10	1.32	4.02	4.16	44.166 ³
13. Overall, this instructor's teaching was	4.38	4.37	0.21	4.22	4.43	658.262 ³

¹p < 0.05; ²p < 0.005; ³p < 0.0005

Question 1: Is there a difference in average SOTE scores between online and paper evaluations?

Table 3. Mean Comparisons of SOTE Questions

Question	Pilot Study			Campus-wide Implementation			
	OE Mean	PE Mean	t-test	OE Mean	PE Mean	t-test	Effect Size
1. Demonstrated relevance of the course content	4.40	4.40	0.25	4.35	4.46	605.469 ³	0.13
2. Used assignments to enhance learning	4.20	4.16	1.28	4.14	4.23	99.506 ³	0.09
3. Summarized/emphasized important points	4.29	4.25	1.53	4.21	4.35	270.471 ³	0.14
4. Was responsive to questions and comments from students	4.43	4.35	2.611 ¹	4.28	4.42	462.253 ³	0.14
5. Established an atmosphere that facilitated learning	4.29	4.23	2.041 ¹	4.17	4.30	262.676 ³	0.13
6. Was approachable for assistance	4.40	4.32	2.855 ²	4.24	4.38	355.779 ³	0.14
7. Was responsive to the diversity of students in this class	4.44	4.38	2.177 ¹	4.33	4.45	521.201 ³	0.13
8. Showed strong interest in teaching this class	4.51	4.49	0.78	4.39	4.54	1055.524 ³	0.16
9. Used intellectually challenging teaching methods	4.14	4.12	0.73	4.05	4.18	64.789 ³	0.13
10. Used fair grading methods	4.23	4.20	0.78	4.17	4.30	122.006 ³	0.13
11. Helped student analyze complex/abstract ideas	4.19	4.13	1.93	4.11	4.23	75.449 ³	0.12
12. Provided meaningful feedback about student work	4.15	4.10	1.32	4.02	4.16	44.166 ³	0.13
13. Overall, this instructor's teaching was	4.38	4.37	0.21	4.22	4.43	658.262 ³	0.23

¹p < 0.05; ²p < 0.005; ³p < 0.0005

Question 1: Is there a difference in average SOTE scores between online and paper evaluations?

- Pilot Study
 - OE students rated their faculty more favorably in four questions
 - The remaining nine questions rated no significant difference between these two delivery modes (including Question 13)
- Campus-wide Implementation
 - PE students rated their faculty more favorably in all thirteen questions
 - The effect size for each question was small to very small.

Question 2a: Are there differences in SOTE by course level?

- Two Predictor Variables:
 - Delivery Mode (Online vs. Paper)
 - Course Level (Lower Div, Upper Div, & Graduate)
- One Dependent Variable: SOTE scores

Question 2a: Are there differences in SOTE by course level?

Table 4. Analysis of Variance: Survey Delivery Mode and Course Level - F values

Question	Pilot Study		
	Main Effect		Interactive Effect
	Survey Delivery Mode	Course Level	
1. Demonstrated relevance of the course content	0.09	3.15 ¹	1.42
2. Used assignments to enhance learning	0.06	2.98	4.97 ¹
3. Summarized/emphasized important points	0.91	2.78	0.16
4. Was responsive to questions and comments from students	2.33	0.56	1.41
5. Established an atmosphere that facilitated learning	0.46	0.48	3.22 ¹
6. Was approachable for assistance	6.55 ¹	2.41	2.52
7. Was responsive to the diversity of students in this class	2.68	0.56	2.62
8. Showed strong interest in teaching this class	0.04	1.37	1.18
9. Used intellectually challenging teaching methods	0.09	4.64 ¹	2.57
10. Used fair grading methods	0.43	0.40	7.07 ²
11. Helped student analyze complex/abstract ideas	1.29	0.56	3.32 ¹
12. Provided meaningful feedback about student work	1.19	0.35	1.36
13. Overall, this instructor's teaching was	0.04	5.20 ¹	0.17

p < 0.05; ² p < 0.005; ³ p < 0.0005

Question 2a: Are there differences in SOTE by course level?

Table 4. Analysis of Variance: Survey Delivery Mode and Course Level - F values

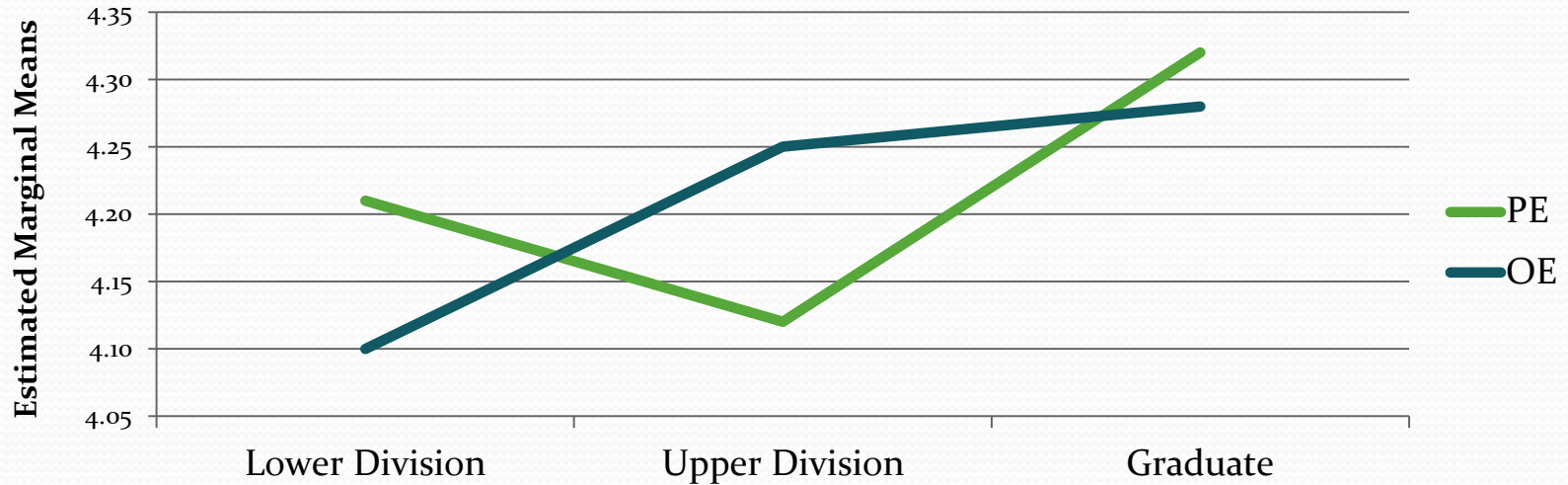
Question	Pilot Study			Implementation Evaluation		
	Main Effect		Interactive Effect	Main Effect		Interactive Effect
	Survey Delivery Mode	Course Level		Survey Delivery Mode	Course Level	
1. Demonstrated relevance of the course content	0.09	3.15 ¹	1.42	195.24 ³	41.64 ³	0.01
2. Used assignments to enhance learning	0.06	2.98	4.97 ¹	97.27 ³	50.87 ³	0.44
3. Summarized/emphasized important points	0.91	2.78	0.16	226.99 ³	26.09 ³	2.06
4. Was responsive to questions and comments from students	2.33	0.56	1.41	283.32 ³	24.18 ³	4.88 ¹
5. Established an atmosphere that facilitated learning	0.46	0.48	3.22 ¹	235.49 ³	19.40 ³	3.12 ¹
6. Was approachable for assistance	6.55 ¹	2.41	2.52	271.00 ³	31.17 ³	5.21 ¹
7. Was responsive to the diversity of students in this class	2.68	0.56	2.62	242.12 ³	46.38 ³	3.58 ¹
8. Showed strong interest in teaching this class	0.04	1.37	1.18	334.10 ³	16.75 ³	1.76
9. Used intellectually challenging teaching methods	0.09	4.64 ¹	2.57	202.86 ³	75.78 ³	1.84
10. Used fair grading methods	0.43	0.40	7.07 ²	173.31 ³	16.41 ³	3.17 ¹
11. Helped student analyze complex/abstract ideas	1.29	0.56	3.32 ¹	160.12 ³	43.54 ³	0.99
12. Provided meaningful feedback about student work	1.19	0.35	1.36	164.64 ³	34.22 ³	0.86
13. Overall, this instructor's teaching was	0.04	5.20 ¹	0.17	604.56 ³	19.39 ³	4.56 ¹

p < 0.05; ²p < 0.005; ³p < 0.0005

Question 2b: Is there a significant interaction between delivery modes and course level on SOTE scores?

Question 2b: Is there a significant interaction between delivery modes and course level on SOTE scores?

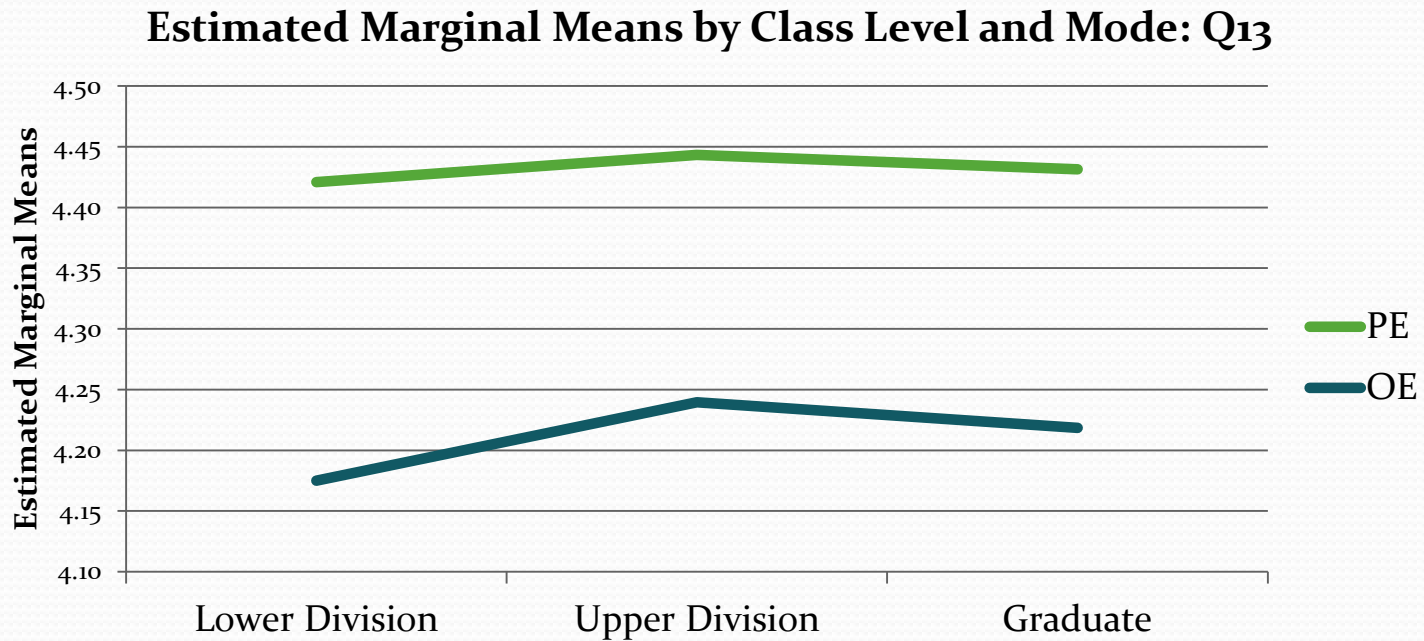
Estimated Marginal Means by Class Level and Mode: Q₂



Pilot Survey:

- “Effect” of survey delivery mode on SOTE test scores for these questions depends on which course level is being considered
- Four questions are significantly different
- SOTE scores for Q₂ from OE students were relatively lower for lower division course and higher for upper division courses

Question 2b: Is there a significant interaction between delivery modes and course level on SOTE scores?



Campus-wide Implementation

- “Effect” of survey delivery mode on SOTE test scores for these questions depends on which course level is being considered
- PE evaluations were higher than OE

Question 3a: Are there differences in SOTE by college?

- Two Predictor Variables:
 - Delivery Mode (Online vs. Paper)
 - College (7)
- One Dependent Variable: SOTE scores

Question 3a: Are there differences in SOTE by college?

TABLE 5. Analysis of Variance: Survey Delivery Mode vs. College - F values

Question	Pilot Study		
	Main Effect		Interactive Effect
	Survey Delivery Mode	College	
1. Demonstrated relevance of the course content	0.08	4.77 ³	0.25
2. Used assignments to enhance learning	0.87	3.69 ²	0.41
3. Summarized/emphasized important points	0.51	7.15 ³	1.38
4. Was responsive to questions and comments from students	1.45	3.44 ²	1.19
5. Established an atmosphere that facilitated learning	0.36	5.88 ³	1.59
6. Was approachable for assistance	4.86 ¹	3.66 ²	1.05
7. Was responsive to the diversity of students in this class	1.75	7.40 ³	0.63
8. Showed strong interest in teaching this class	0.34	6.46 ³	1.43
9. Used intellectually challenging teaching methods	1.78	2.42 ¹	1.02
10. Used fair grading methods	0.17	9.70 ³	0.32
11. Helped student analyze complex/abstract ideas	1.61	4.93 ³	1.14
12. Provided meaningful feedback about student work	0.29	5.99 ³	2.40 ¹
13. Overall, this instructor's teaching was	0.40	6.87 ³	1.02

¹p < 0.05; ²p < 0.005; ³p < 0.0005

Question 3a: Are there differences in SOTE by college?

TABLE 5. Analysis of Variance: Survey Delivery Mode vs. College - F values

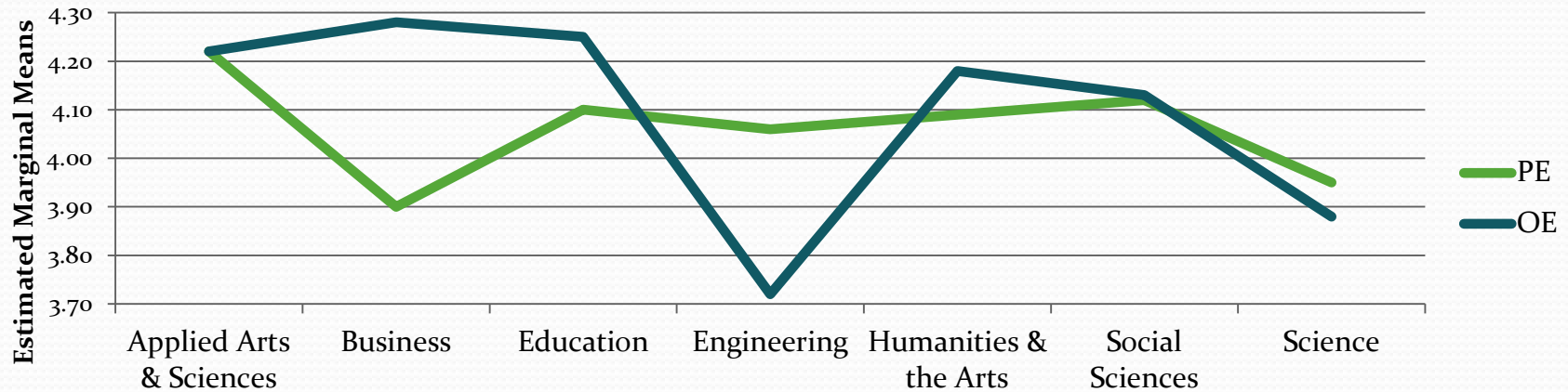
Question	Pilot Study			Campus-wide Implementation		
	Main Effect		Interactive Effect	Main Effect		Interactive Effect
	Survey Delivery Mode	College		Survey Delivery Mode	College	
1. Demonstrated relevance of the course content	0.08	4.77 ³	0.25	261.70 ³	123.27 ³	3.23 ²
2. Used assignments to enhance learning	0.87	3.69 ²	0.41	112.38 ³	90.98 ³	4.04 ³
3. Summarized/emphasized important points	0.51	7.15 ³	1.38	273.75 ³	102.56 ³	5.17 ³
4. Was responsive to questions and comments from students	1.45	3.44 ²	1.19	305.88 ³	115.55 ³	4.75 ³
5. Established an atmosphere that facilitated learning	0.36	5.88 ³	1.59	270.68 ³	142.65 ³	5.22 ³
6. Was approachable for assistance	4.86	3.66 ²	1.05	295.82 ³	114.55 ³	4.69 ³
7. Was responsive to the diversity of students in this class	1.75	7.40 ³	0.63	265.46 ³	133.28 ³	3.43 ²
8. Showed strong interest in teaching this class	0.34	6.46 ³	1.43	420.84 ³	141.85 ³	4.07 ³
9. Used intellectually challenging teaching methods	1.78	2.42 ¹	1.02	231.93 ³	70.39 ³	4.31 ³
10. Used fair grading methods	0.17	9.70 ³	0.32	227.57 ³	109.09	3.63
11. Helped student analyze complex/abstract ideas	1.61	4.93 ³	1.14	212.42 ³	125.64 ³	4.15 ³
12. Provided meaningful feedback about student work	0.29	5.99 ³	2.40 ¹	229.05 ³	177.67 ³	7.68 ³
13. Overall, this instructor's teaching was	0.40	6.87 ³	1.02	895.84 ³	160.28 ³	8.78 ³

¹p < 0.05; ²p < 0.005; ³p < 0.0005

Question 3b: Is there a significant interaction between delivery modes and colleges on SOTE scores?

Question 3b: Is there a significant interaction between delivery modes and colleges on SOTE scores?

Estimated Marginal Means by College and Mode: Q12

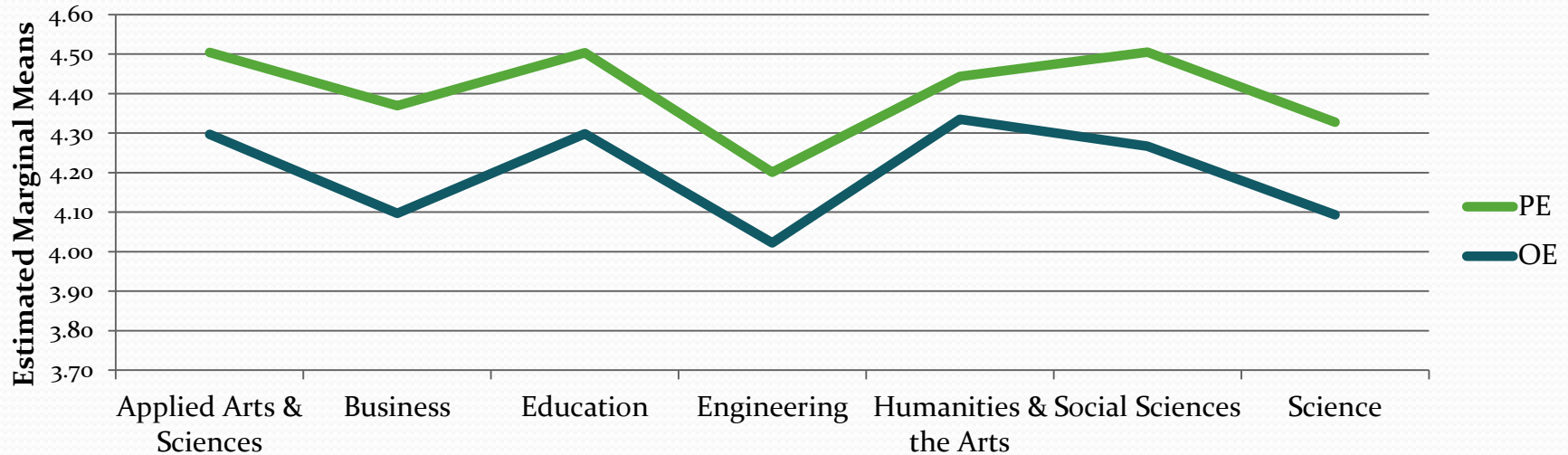


● Pilot Study

- “Effect” of survey delivery mode on SOTE scores for these questions depends on which college.
- Only one question (Q12) is significantly different
- SOTE scores for Q12 were higher for OE students who took courses offered by Business, Education, H&A, and Social Science

Question 3b: Is there a significant interaction between delivery modes and colleges on SOTE scores?

Estimated Marginal Means by College and Mode: Q₁₃



- Campus-wide Implementation
 - 12 out of 13 significantly different
 - PE is always higher than OE

Question 4a: Are there differences in SOTE by department?

- Two Predictor Variables:
 - Delivery Mode (Online vs. Paper)
 - Department(33 for Pilot; 59 for Implementation)
- One Dependent Variable: SOTE scores

Question 4a: Are there differences in SOTE by department?

Table 6. Analysis of Variance: Survey Delivery Modes vs. Subject areas - F values

Question	Pilot Study		
	Main Effect		Interactive Effect
	Survey Delivery Mode	Subject area	
1. Demonstrated relevance of the course content	0.57	5.93 ³	2.23 ³
2. Used assignments to enhance learning	1.02	5.48 ³	1.90 ²
3. Summarized/emphasized important points	1.59	7.40 ³	2.18 ³
4. Was responsive to questions and comments from students	1.26	9.97 ³	2.48 ³
5. Established an atmosphere that facilitated learning	0.15	10.77 ³	2.78 ³
6. Was approachable for assistance	1.65	10.80 ³	1.80 ²
7. Was responsive to the diversity of students in this class	1.38	7.15 ³	1.98 ²
8. Showed strong interest in teaching this class	0.00	7.25 ³	2.61 ³
9. Used intellectually challenging teaching methods	0.30	6.14 ³	1.77 ¹
10. Used fair grading methods	0.05	9.38 ³	2.01 ²
11. Helped student analyze complex/abstract ideas	0.36	8.66 ³	1.92 ²
12. Provided meaningful feedback about student work	0.20	11.39 ³	2.51 ³
13. Overall, this instructor's teaching was	0.02	10.02 ³	3.38 ³

¹p < 0.05; ²p < 0.005; ³p < 0.0005

Question 4a: Are there differences in SOTE by department?

Table 6. Analysis of Variance: Survey Delivery Modes vs. Subject areas - F values

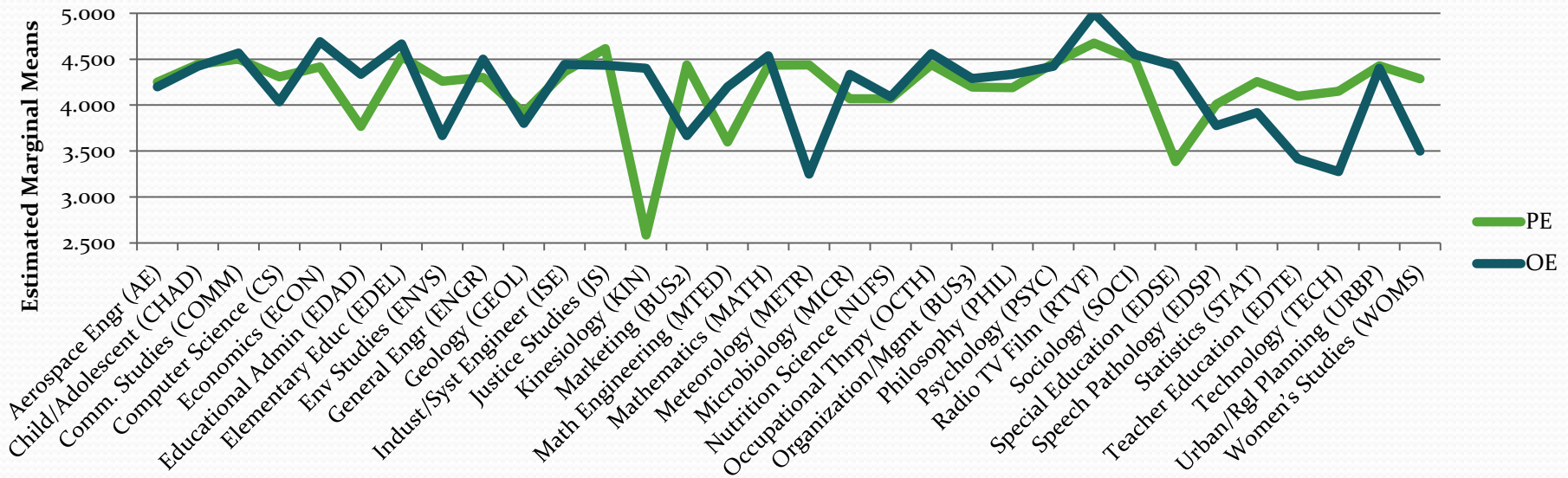
Question	Pilot Study			Campus-wide Implementation		
	Main Effect		Interactive Effect	Main Effect		Interactive Effect
	Survey Delivery Mode	Subject area		Survey Delivery Mode	Subject area	
1. Demonstrated relevance of the course content	0.57	5.93 ³	2.23 ³	13.67 ³	25.94 ³	2.36 ³
2. Used assignments to enhance learning	1.02	5.48 ³	1.90 ²	2.67	21.67 ³	2.69 ³
3. Summarized/emphasized important points	1.59	7.40 ³	2.18 ³	14.51 ³	24.72 ³	2.99 ³
4. Was responsive to questions and comments from students	1.26	9.97 ³	2.48 ³	31.24 ³	24.74 ³	3.16 ³
5. Established an atmosphere that facilitated learning	0.15	10.77 ³	2.78 ³	21.40 ³	30.10 ³	2.89 ³
6. Was approachable for assistance	1.65	10.80 ³	1.80 ²	38.63 ³	24.22 ³	2.71 ³
7. Was responsive to the diversity of students in this class	1.38	7.15 ³	1.98 ²	15.68 ³	24.66 ³	2.08 ³
8. Showed strong interest in teaching this class	0.00	7.25 ³	2.61 ³	34.06 ³	27.80 ³	3.09 ³
9. Used intellectually challenging teaching methods	0.30	6.14 ³	1.77 ¹	11.12 ²	20.05 ³	2.67 ³
10. Used fair grading methods	0.05	9.38 ³	2.01 ²	15.98 ³	24.55 ³	2.45 ³
11. Helped student analyze complex/abstract ideas	0.36	8.66 ³	1.92 ²	13.56 ³	25.26 ³	2.80 ³
12. Provided meaningful feedback about student work	0.20	11.39 ³	2.51 ³	26.41 ³	35.19 ³	3.97 ³
13. Overall, this instructor's teaching was	0.02	10.02 ³	3.38 ³	90.58 ³	31.35 ³	3.53 ³

¹p < 0.05; ²p < 0.005; ³p < 0.0005

Question 4 b: Is there a significant interaction between survey delivery mode and subject areas on SOTE scores?

Question 4 b: Is there a significant interaction between survey delivery mode and subject areas on SOTE scores?

Estimated Marginal Means by Department and Mode: Q13

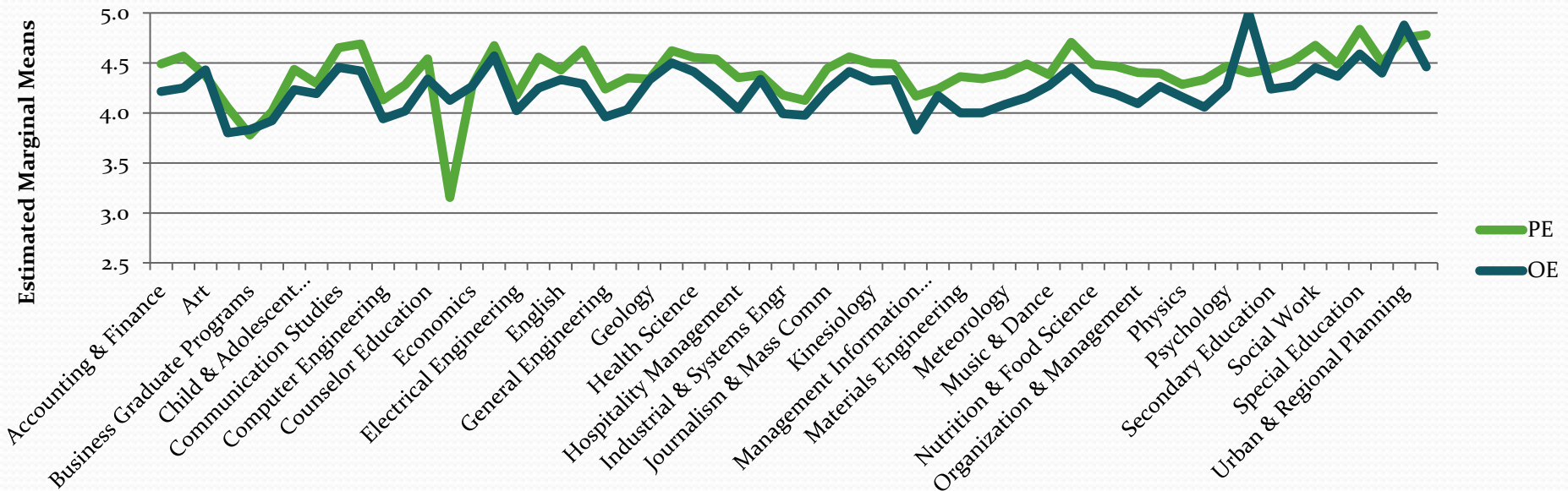


- Pilot Study

- All thirteen question have a significant difference
- The “effect” of survey delivery modes on SOTE scores depends on which subject area is being considered

Question 4b: Is there a significant interaction between survey delivery mode and subject areas on SOTE scores?

Estimated Marginal Means by Department and Mode: Q13




- Campus-wide Implementation
 - The “effect” of survey delivery modes on SOTE scores depends on which subject area is being considered

Question 4b: Is there a significant interaction between survey delivery mode and subject areas on SOTE scores?

Subject Area	PE	OE	Mean Diff	Subject Area	PE	OE	Mean Diff
Accounting & Finance	4.489	4.215	-0.274 ³	Industrial Technology	4.123	3.976	-0.148 ¹
Anthropology	4.567	4.250	-0.317 ³	Journalism & Mass Comm	4.443	4.227	-0.215 ²
Art	4.373	4.430	0.057	Justice Studies	4.560	4.414	-0.146 ³
Aviation	4.053	3.800	-0.253	Kinesiology	4.494	4.319	-0.175 ³
Business Graduate Programs	3.778	3.833	0.056	Linguistic & Language Dev	4.489	4.333	-0.156
Chemical Engineering	4.013	3.922	-0.091	Management Information Systems	4.169	3.829	-0.340 ³
Child & Adolescent Development	4.435	4.233	-0.202 ³	Marketing	4.242	4.172	-0.069
Civil & Environ Engineering	4.295	4.192	-0.104	Materials Engineering	4.364	4.000	-0.364
Communication Studies	4.652	4.453	-0.199 ³	Mathematics	4.342	4.000	-0.342 ³
Communicative Disorders & Sciences	4.689	4.420	-0.269 ³	Meteorology	4.387	4.084	-0.303
Computer Engineering	4.130	3.941	-0.188 ¹	Mexican American Studies	4.491	4.153	-0.337 ²
Computer Science	4.281	4.019	-0.262	Music & Dance	4.380	4.274	-0.106
Counselor Education	4.542	4.339	-0.203 ³	Nursing	4.705	4.451	-0.254 ³
Design	3.154	4.125	0.971	Nutrition & Food Science	4.485	4.252	-0.233 ³
Economics	4.269	4.265	-0.004	Occupational Therapy	4.465	4.187	-0.278 ³
Educational Leadership	4.674	4.571	-0.103 ¹	Organization & Management	4.403	4.091	-0.313 ³
Electrical Engineering	4.177	4.022	-0.155	Philosophy	4.395	4.266	-0.129 ¹
Elementary Education	4.556	4.248	-0.308 ²	Physics	4.285	4.160	-0.125
English	4.427	4.334	-0.093 ¹	Political Science	4.334	4.057	-0.277
Environmental Studies	4.630	4.289	-0.341 ³	Psychology	4.468	4.256	-0.212 ³
General Engineering	4.237	3.961	-0.277	Science	4.400	5.000	0.600 ³
Geography	4.348	4.033	-0.315 ¹	Secondary Education	4.439	4.239	-0.200
Geology	4.339	4.331	-0.008	Social Sciences	4.521	4.269	-0.252 ¹
Health Professions	4.621	4.500	-0.121	Social Work	4.675	4.453	-0.223 ³
Health Science	4.555	4.412	-0.143 ³	Sociology	4.488	4.365	-0.123 ³
History	4.538	4.237	-0.301 ³	Special Education	4.835	4.588	-0.246 ³
Hospitality Management	4.351	4.039	-0.312	TV, Radio, Film & Theatre	4.505	4.399	-0.106 ³
Humanities	4.382	4.336	-0.046	Urban & Regional Planning	4.750	4.880	0.130 ²
Industrial & Systems Engr	4.178	3.992	-0.186	World Languages and Literatures	4.780	4.461	-0.320 ³

Comparison

- There are significant differences in paper vs. online mode
 - Small Effect size
- Class levels, colleges, and subject areas
 - Significant differences
 - Comparing SOTE scores across colleges and subject areas can be difficult



Are there differences in response rates between paper and online SOTES?

Are there differences in response rates between paper and online SOTES?


Table 7: Percentage of Responses by College

College	Pilot Study	
	OE Response Rate	PE Response Rate
Applied Arts & Sciences	23%	58%
Business	25%	62%
Education	34%	77%
Engineering	51%	94%
Humanities & the Arts	10%	89%
Social Sciences	31%	76%
Science	27%	72%
Total	31%	73%

Are there differences in response rates between paper and online SOTES?

Table 7: Percentage of Responses by College

College	Pilot Study		Campus-wide Implementation	
	OE Response Rate	PE Response Rate	OE Response Rate	PE Response Rate
Applied Arts & Sciences	23%	58%	83%	86%
Business	25%	62%	81%	77%
Education	34%	77%	79%	84%
Engineering	51%	94%	87%	76%
Humanities & the Arts	10%	89%	77%	87%
Social Sciences	31%	76%	80%	75%
Science	27%	72%	78%	78%
Total	31%	73%	80%	80%



What are the differences in confidence intervals between paper and online SOTES?

What are the differences in confidence intervals between paper and online SOTES?


Table 8: Q13 - % Rating Somewhat Effective, Effective, and Very Effective and Confidence Interval

College	Pilot Study				t-test (p)
	OE		PE		
	% Selected	Confid Interval	% Selected	Confid Interval	
Applied Arts & Sciences	99%	± 5%	96%	± 4%	0.214
Business	97%	± 7%	97%	± 3%	0.992
Education	97%	± 8%	97%	± 3%	0.186
Engineering	91%	± 11%	98%	± 1%	0.070
Humanities & the Arts	100%	± 7%	98%	± 2%	0.325
Social Sciences	98%	± 7%	97%	± 4%	0.343
Science	93%	± 17%	96%	± 5%	0.075
Total	97%	± 9%	97%	± 4%	0.751

What are the differences in confidence intervals between paper and online SOTES?

Table 8: Q13 - % Rating Somewhat Effective, Effective, and Very Effective and Confidence Interval

College	Pilot Study					Campus-wide Implementation				
	OE		PE		t-test	OE		PE		t-test
	% Selected	Confid Interval	% Selected	Confid Interval	(p)	% Selected	Confid Interval	% Selected	Confidence Interval	(p)
Applied Arts & Sciences	99%	± 5%	96%	± 4%	0.214	96%	± 0.5%	98%	± 0.3%	0.000
Business	97%	± 7%	97%	± 3%	0.992	93%	± 0.7%	97%	± 0.4%	0.000
Education	97%	± 8%	97%	± 3%	0.186	96%	± 0.7%	98%	± 0.5%	0.000
Engineering	91%	± 11%	98%	± 1%	0.070	93%	± 0.9%	96%	± 0.7%	0.000
Humanities & the Arts	100%	± 7%	98%	± 2%	0.325	96%	± 0.6%	97%	± 0.4%	0.000
Social Sciences	98%	± 7%	97%	± 4%	0.343	93%	± 1.0%	96%	± 0.6%	0.000
Science	93%	± 17%	96%	± 5%	0.075	96%	± 0.5%	98%	± 0.2%	0.000
Total	97%	± 9%	97%	± 4%	0.751	95%	± 0.3%	97%	± 0.2%	0.000



Is there a difference in grades students believe they will receive between paper and online SOTES?

Is there a difference in grades students believe they will receive between paper and online SOTES?

Table 9. Current estimate of overall grade in class

Grade	Pilot Study				Total
	OE	OE%	PE	PE%	
A (4)	416	38%	824	33%	1,240
B (3)	498	46%	1,170	47%	1,668
C (2)	160	15%	472	19%	632
Either D or F (1)	16	1%	47	2%	63
Total	1,090	100%	2,513	100%	3,603
Mean	3.2		3.1		t-test = 6.050 ¹

¹p < 0.0005

Is there a difference in grades students believe they will receive between paper and online SOTES?

Table 9. Current estimate of overall grade in class

Grade	Pilot Study					Campus-wide Implementation				
	OE	OE%	PE	PE%	Total	OE	OE%	PE	PE%	Total
A (4)	416	38%	824	33%	1,240	13,391	44%	18,676	43%	32,067
B (3)	498	46%	1,170	47%	1,668	12,824	42%	19,252	44%	32,076
C (2)	160	15%	472	19%	632	3,919	13%	5,301	12%	9,220
Either D or F (1)	16	1%	47	2%	63	434	1%	478	1%	912
Total	1,090	100%	2,513	100%	3,603	30,568	100%	43,707	100%	74,275
Mean	3.20		3.10		t-test = 6.050 ¹	3.28		3.28		t-test = 40.104 ¹

¹p < 0.0005



Is there a difference in student classification (grade level) between paper and online SOTES?

Is there a difference in student classification (grade level) between paper and online SOTES?

Table 10. Self identification of grade (classification) level

Classification	Pilot Study				Total
	OE	OE%	PE	PE%	
Senior (4)	357	33%	959	37%	1,316
Junior (3)	379	35%	866	34%	1,245
Sophomore (2)	110	10%	309	12%	419
Freshman (1)	250	23%	425	17%	675
Total	1,096	100%	2,559	100%	3,655
Mean	2.77		2.92		t-test = 3.871 ¹

¹p < 0.0005

Is there a difference in student classification (grade level) between paper and online SOTES?

Table 10. Self identification of grade (classification) level

Classification	Pilot Study					Campus-wide Implementation				
	OE	OE%	PE	PE%	Total	OE	OE%	PE	PE%	Total
Senior (4)	357	33%	959	37%	1,316	10,666	39%	16,459	41%	27,125
Junior (3)	379	35%	866	34%	1,245	8,689	32%	12,937	33%	21,626
Sophomore (2)	110	10%	309	12%	419	3,845	14%	4,763	12%	8,608
Freshman (1)	250	23%	425	17%	675	4,291	16%	5,556	14%	9,847
Total	1,096	100%	2,559	100%	3,655	27,491	100%	39,715	100%	67,206
Mean	2.77		2.92		t-test = 3.871 ¹	2.94		3.01		t-test = 95.90 ¹

¹p < 0.0005

Why the difference in OE and PE in campus-wide implementation?

“Nothing incites rebellion more than to be required to do a thing once done willingly” Wilde

- Perception of being forced to complete SOTE
- Resentment towards faculty

Is this something to worry about?

- Norming of data
- Effect will probably fade away with time



The End

Any Questions?

Thank you.