EXAMINING STUDENT AND TEACHER ATTITUDES OF EDUCATION TECHNOLOGY AND PERCEPTIONS OF EACH OTHER

A DISSERTATION BY: JASON THOMPSON

CHAPTER 1: BACKGROUND

While cyberspace has become increasingly ubiquitous in American society, enormous class, ethnic, and spatial inequalities characterize access to the US Internet (Warf, 2012).

http://www.indexmundi.com/wp-content/uploads/2013/04/visualization-of-internet-distribution1.jpg

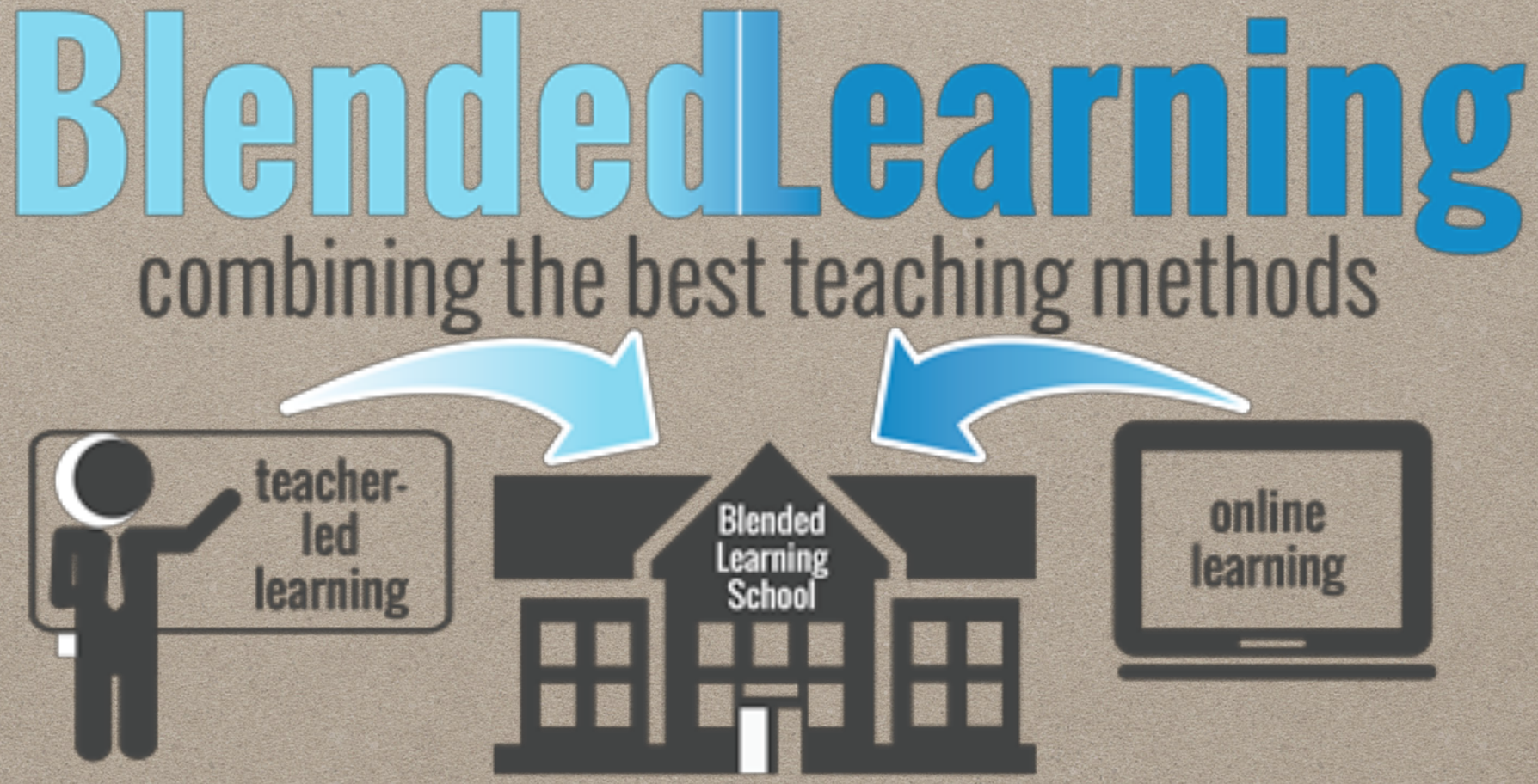
CHAPTER 1: BACKGROUND

The unique affordances of the Internet undermine constraints of social and civic inequality to an extent not achieved through previous means. (Hampton, 2010)

https://media.licdn.com/mpr/mpr/AAEAAQAA

CHAPTER 1: BACKGROUND

Blended learning - the integration of a classroom face-to-face learning experience with an online learning experience (Garrison & Kanuka, 2004).



http://www.greeleyschools.org/cms/lib2/CO01001723/Centricity/Domain/47/blended%20learning%20header-01-01-01.png

STATEMENT OF THE PROBLEM

The expectations of utilizing educational technology for school work exceeds the technological access capabilities of the learners and their families.

PURPOSE OF THE STUDY

The purpose of this study is to examine the attitudes of both teachers and students with respect to education technology usage in a school with a majority low SES population. While the technology and Internet access expectations being placed upon students are necessary to prepare students for the 21st century workplace. Findings from this study will help identify where and how students and teachers feel comfortable within instructional practices using education technology.

LIMITATIONS

1. This study is limited to self-reporting on the part of the students and teachers.

2. There is a relatively small number of teachers and students surveyed, therefore the findings are not generalizable

3. The researcher is a former student and employee of the school where the research was conducted.

DELIMITATIONS

1. This study was conducted at a school where a large percentage of the students qualify for free/reduced lunch status, as they come from a low-income community.

2. A 2013 survey was conducted at this school, at which time 20% of families reported having Internet access in their homes.

3. This district is currently engaging in blended learning professional development amongst their teachers.

4. The researcher, as a former student and employee of the school and district, has numerous years of interactions and understanding of the school culture.

RQS

RQ 1: How does the agreement and disagreement of teachers and students using technology as part of classroom instruction vary from each other?

RQ2: What are the differences between teachers and students in their value of the instructional enhancement of computer use during classroom instruction?

RQ3: What are the differences in how teachers and students rate the impact of education technology enhancements?

RQ4: What are the differences between how teachers and students rate their technology literacy?

RQ5: What are the differences between teachers and students regarding how much access to technology they have?

CHAPTER 2: LIT REVIEW & THEMES SUPPORTED

https://research.phoenix.edu/sites/default/files/carouselhomeslide/literatu[illegible]hero.jpg

LITERATURE REVIEW & THEMES SUPPORTED

Recent History of Education Technology

ADE Requirements

Attitudes Towards Technology

Instructional Enhancements

Perceptions of the Impaction Education Technology Enhancements

Computer Literacy

Access To Technology

Impacts of Poverty On Achievement

https://research.phoenix.edu/sites/default/files/carouselhomeslide/literature-review-hero.jpg

Ethnicity, Gender, and Attitudes toward Technology

CHAPTER 3: METHODOLOGY

GROUPS TO PROVIDE ANALYSIS FOR

Student

Female

Male

Hispanic

African-American

Caucasian

Native-American

Asian-American/Pacific Islander

~~*Reduced Lunch*~~

~~*Free Lunch*~~

Teacher

~~*<3 Years Experience*~~

3-5 Years Experience

6+ Years Experience

RESEARCH LOCATION

Research Procedures

Teachers: Email with Link (Documentation in the Survey)

Students under 18: Parental form sent home by Social Studies Teachers & collected by researcher the day of survey

Students over 18: Showed researcher ID to prove age

From students who had parental permission and indicated willingness to partake in focus group, researcher invited 12 students. 4 participated (33.3%).

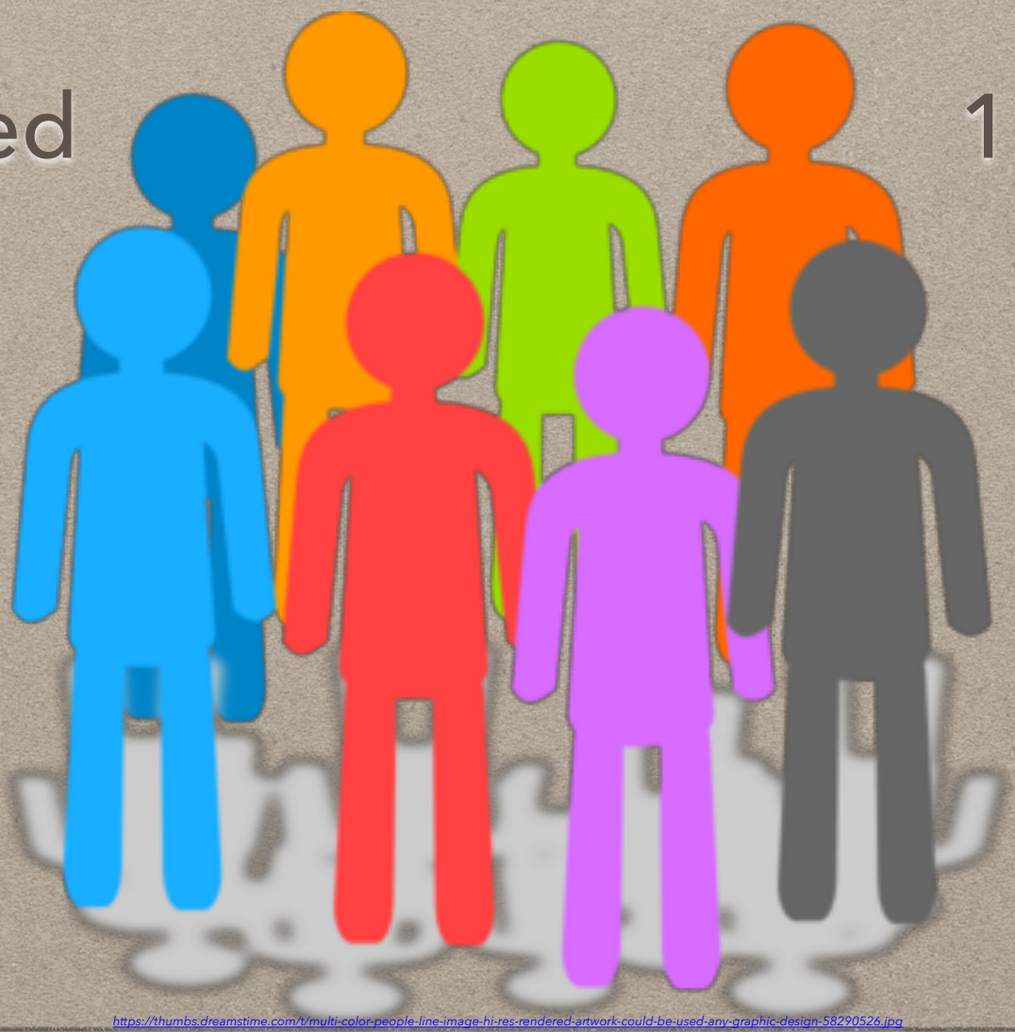
9 teachers expressed interest in focus group and were all invited. 4 participated (44.4%).

SURVEY: TEACHERS & STUDENTS

Juniors + Seniors: Approx. 300

20 Teachers

146 Participated



11 Participated

49%

55%

https://thumbs.dreamstime.com/t/multi-color-people-line-image-hi-res-rendered-artwork-could-be-used-any-graphic-design-58290526.jpg

THEODORE H.S.

2016-2017 Demographic & Sample Info

Ethnicity	School	Sample
Hispanic	69%	73.3%
African-American	14%	14.4%
Caucasian	9%	5.5%
Native-American	5%	4.7%
Asian American/Pacific Islander	1%	2%
Multi-Race	1%	2.7%
Other	1%	0%

SURVEY: TEACHERS & STUDENTS

Toole Employed

qualtrics

Rev

CHAPTER 3: ANALYSIS

Likert Questions (69)

- N-Way ANOVA
- Gender
- Ethnicity
- Participant Role (Teacher/ Student)

Focus Groups (3)

- NVIVO coding

CHAPTER 4: DATA

https://www.oxbridgeessays.com/wordpress/wp-content/uploads/2016/07/cyber1854709_1280.jpg

RESEARCH QUESTION 1

Section 1: Attitudes Towards Technology

1. How does the agreement and disagreement of teachers and students using technology as part of classroom instruction vary from each other?

https://3kzgwm2kd7x6393b8l3r63yu-wpengine.netdna-ssl.com/wp-content/uploads/2016/03/Computer-and-Typewriter.jpg

$H_0$1. There is no statistically significant difference between how teachers and students rate their attitude of using technology as part of classroom instruction.

H1. There is a statistically significant difference between how teachers and students rate their attitude of using technology as part of classroom instruction.

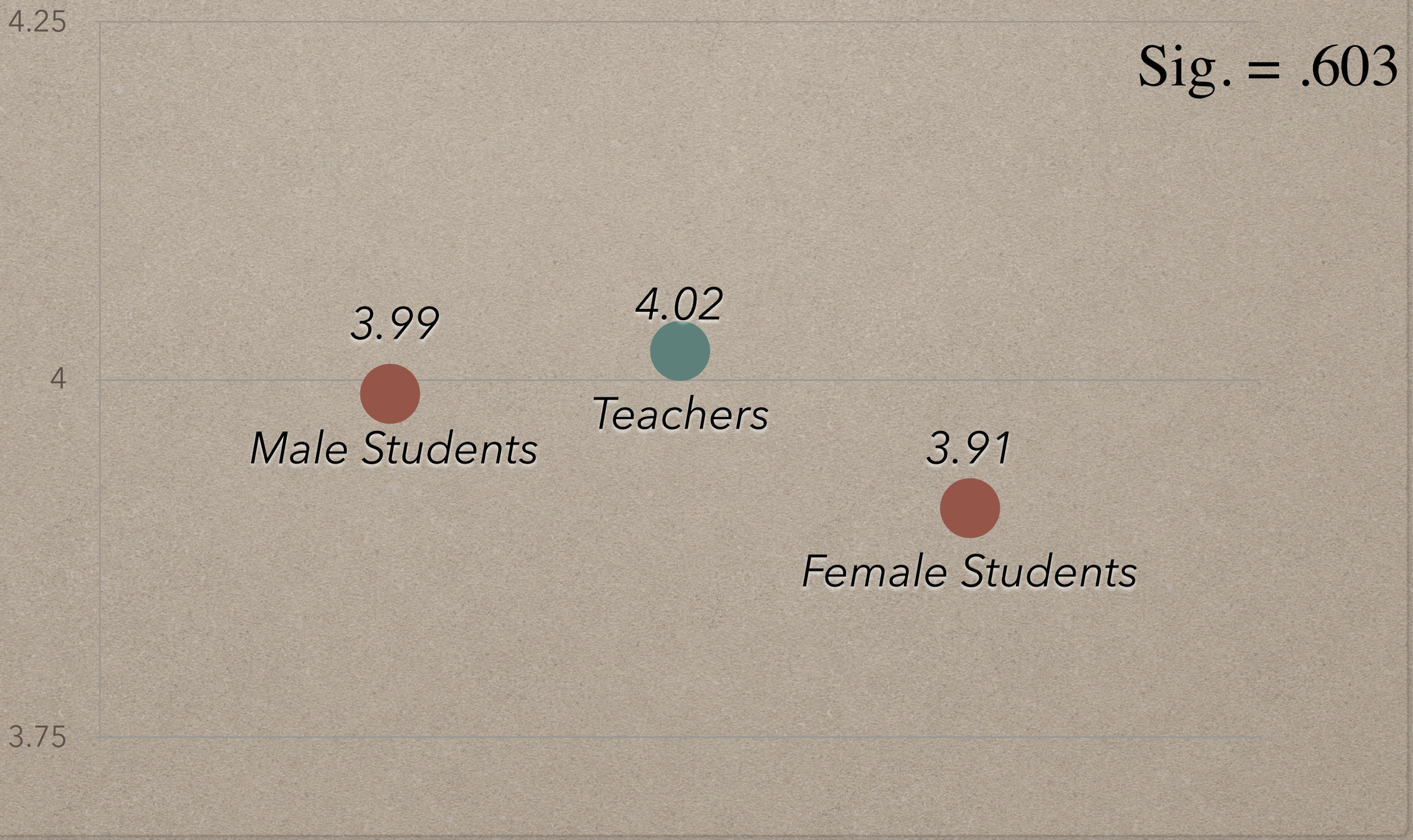
RESEARCH QUESTIONS

Section 1: Attitudes Towards Technology

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1.	Computers do not scare me at all	1	2	3	4	5
2.	Computers make me feel uncomfortable	1	2	3	4	5
3.	I am glad there are more computers these days	1	2	3	4	5
4.	I do not like talking with others about computers	1	2	3	4	5
5.	Using computers is enjoyable	1	2	3	4	5
6.	I dislike using computers in teaching	1	2	3	4	5
7.	Computers save time and effort	1	2	3	4	5
8.	Schools would be a better place without computers	1	2	3	4	5

SURVEY RESULTS (QUANTITATIVE):

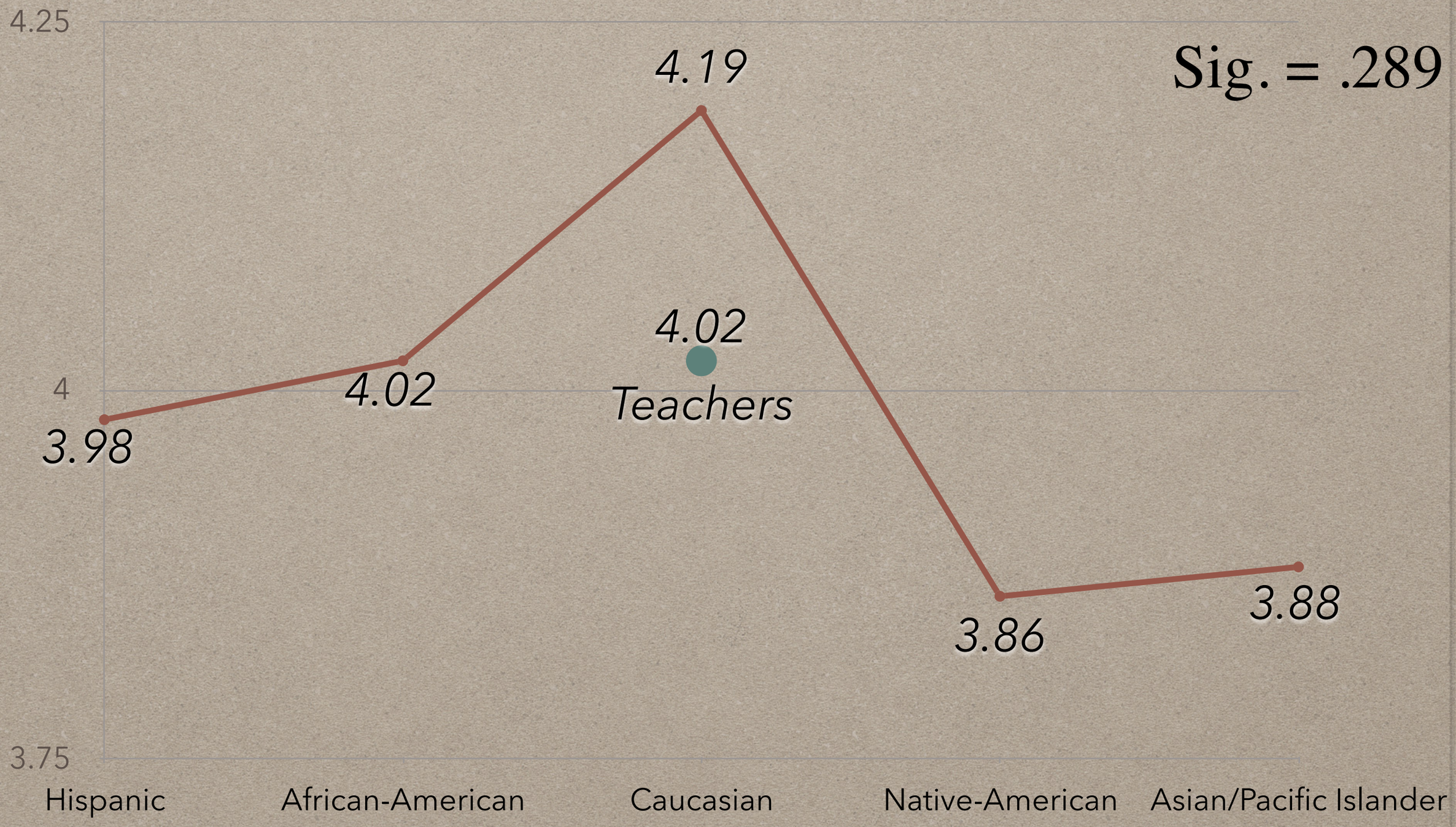
Section 1: Attitudes Towards Technology by Gender



R Squared = .087 (Adjusted R Squared = .003)

SURVEY RESULTS (QUANTITATIVE):

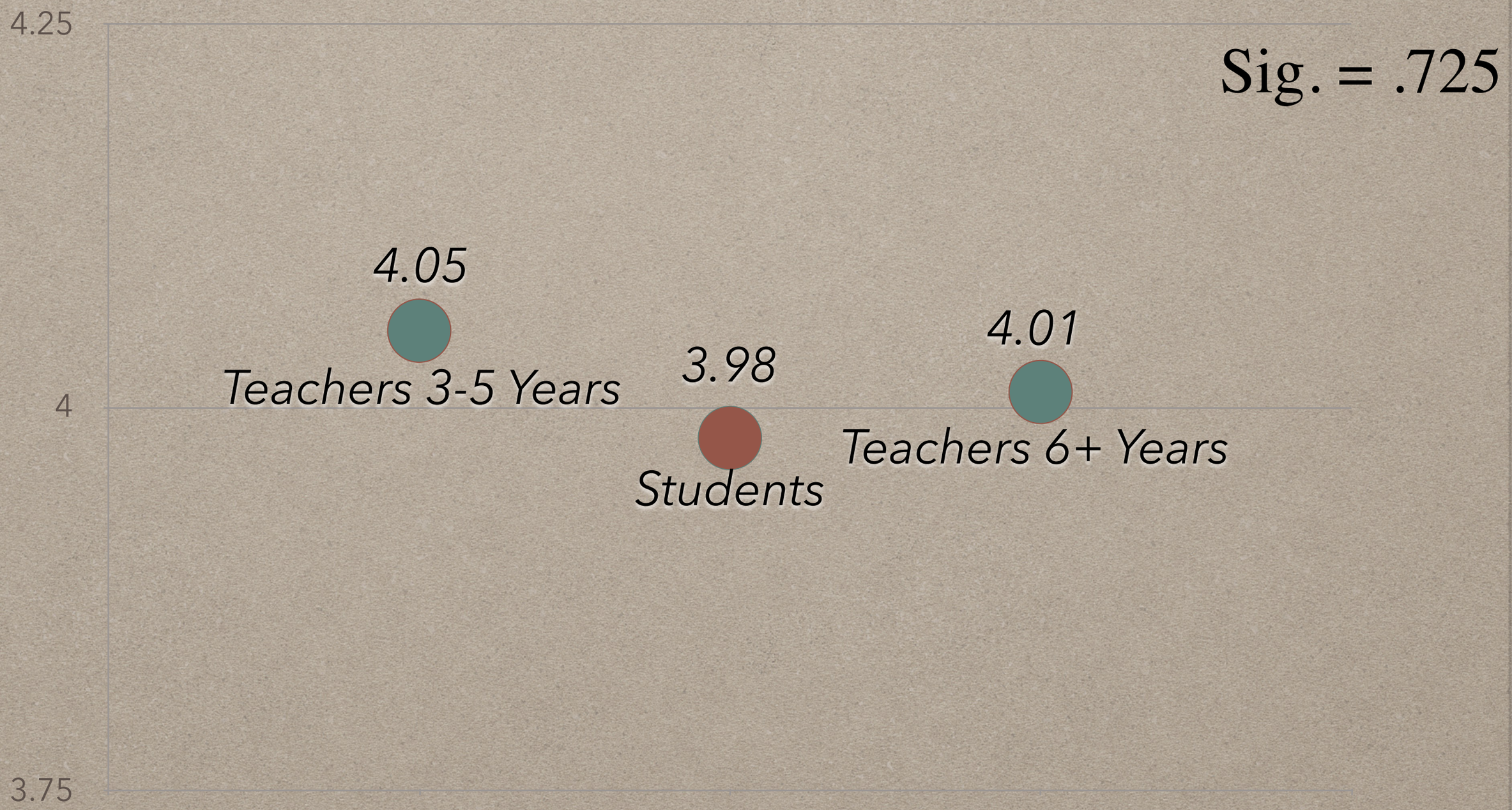
Section 1: Attitudes Towards Technology by Ethnicity



R Squared = .087 (Adjusted R Squared = .003)

SURVEY RESULTS (QUANTITATIVE):

Section 1: Attitudes Towards Technology by Teacher Experience



R Squared = .087 (Adjusted R Squared = .003)

FOCUS GROUP (QUALITATIVE):

Section 1: Attitudes Towards Technology

Teacher Focus Group ***Student Focus Groups***

Can you describe a teacher that has a positive attitude toward the use of technology in the classroom

FOCUS GROUP (QUALITATIVE):

Section 1: Attitudes Towards Technology

Teacher Theme: Decentralized technological usage

Teachers: "Google It," "Check your grades," & "Communications"

Student Theme: "Ease"

Students: "More Interesting" & "Drawn into it"

"Dig Deeper"

"I haven't really had a teacher that goes more on the technology side"

RESEARCH QUESTION 1 SUMMARY

Section 1: Attitudes Towards Technology

Research Questions	Results
1. How does the agreement and disagreement of teachers and students using technology as part of classroom instruction vary from each other?	Null hypothesis retained
1a. How does the agreement and disagreement of teachers and female students using technology as part of classroom instruction vary from each other?	Null hypothesis retained
1b. How does the agreement and disagreement of teachers and male students using technology as part of classroom instruction vary from each other?	Null hypothesis retained

RESEARCH QUESTION 1 SUMMARY

Section 1: Attitudes Towards Technology

1c. How does the agreement and disagreement of teachers and Hispanic students using technology as part of classroom instruction vary from each other?	Null hypothesis retained
1d. How does the agreement and disagreement of teachers and African-American students using technology as part of classroom instruction vary from each other?	Null hypothesis retained
1e. How does the agreement and disagreement of teachers and Caucasian students using technology as part of classroom instruction vary from each other?	Null hypothesis retained
1f. How does the agreement and disagreement of teachers and Native-American students using technology as part of classroom instruction vary from each other?	Null hypothesis retained
1g. How does the agreement and disagreement of teachers and Asian-American/Pacific Islander students using technology as part of classroom instruction vary from each other?	Null hypothesis retained

RESEARCH QUESTION 1 SUMMARY

Section 1: Attitudes Towards Technology

Research Questions	Results
1k. How do teachers who have taught 3-5 years rate their attitude of using technology as part of classroom instruction compared to students?	Null hypothesis retained
1l. How do teachers who have taught 6+ years rate their attitude of using technology as part of classroom instruction compared to students?	Null hypothesis retained

RESEARCH QUESTION 2

Section 2: Instructional Enhancements

2. What are the differences between teachers and students in the value of the instructional enhancement of computer use during classroom instruction?

$H_0$2. There is no statistically significant difference between how teachers and students value the instructional enhancement of computer use during classroom instruction.

H2. There is a statistically significant difference between how teachers and students value the instructional enhancement of computer use during classroom instruction.

RESEARCH QUESTION 2:

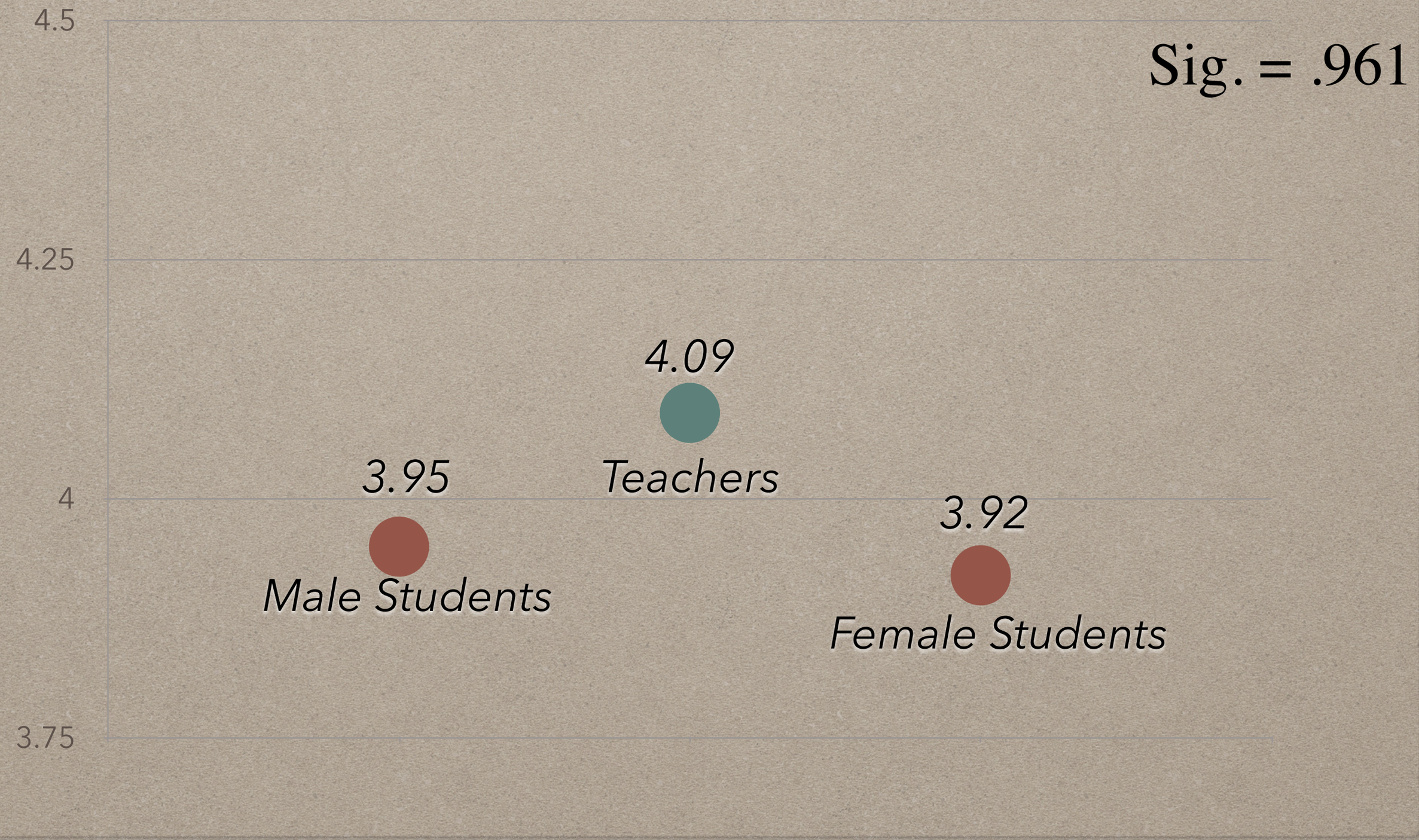
Section 2: Instructional Enhancements

Section (2) Instructions: Please indicate your reaction to each of the following statements by circling the number that represents your level of agreement or disagreement with it. Make sure to respond to every statement

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	Computers will improve education	1	2	3	4	5
2	Teaching with computers offers real advantages over traditional methods of instruction	1	2	3	4	5
3	Computer technology cannot improve the quality of students' learning	1	2	3	4	5
4	Using computer technology in the classroom would make the subject matter more interesting	1	2	3	4	5
5	Computers are not useful for language learning	1	2	3	4	5
6	Computers have no place in schools	1	2	3	4	5
7	Computer use fits well into my curriculum goals	1	2	3	4	5
8	Class time is too limited for computer use	1	2	3	3	5

SURVEY RESULTS (QUANTITATIVE):

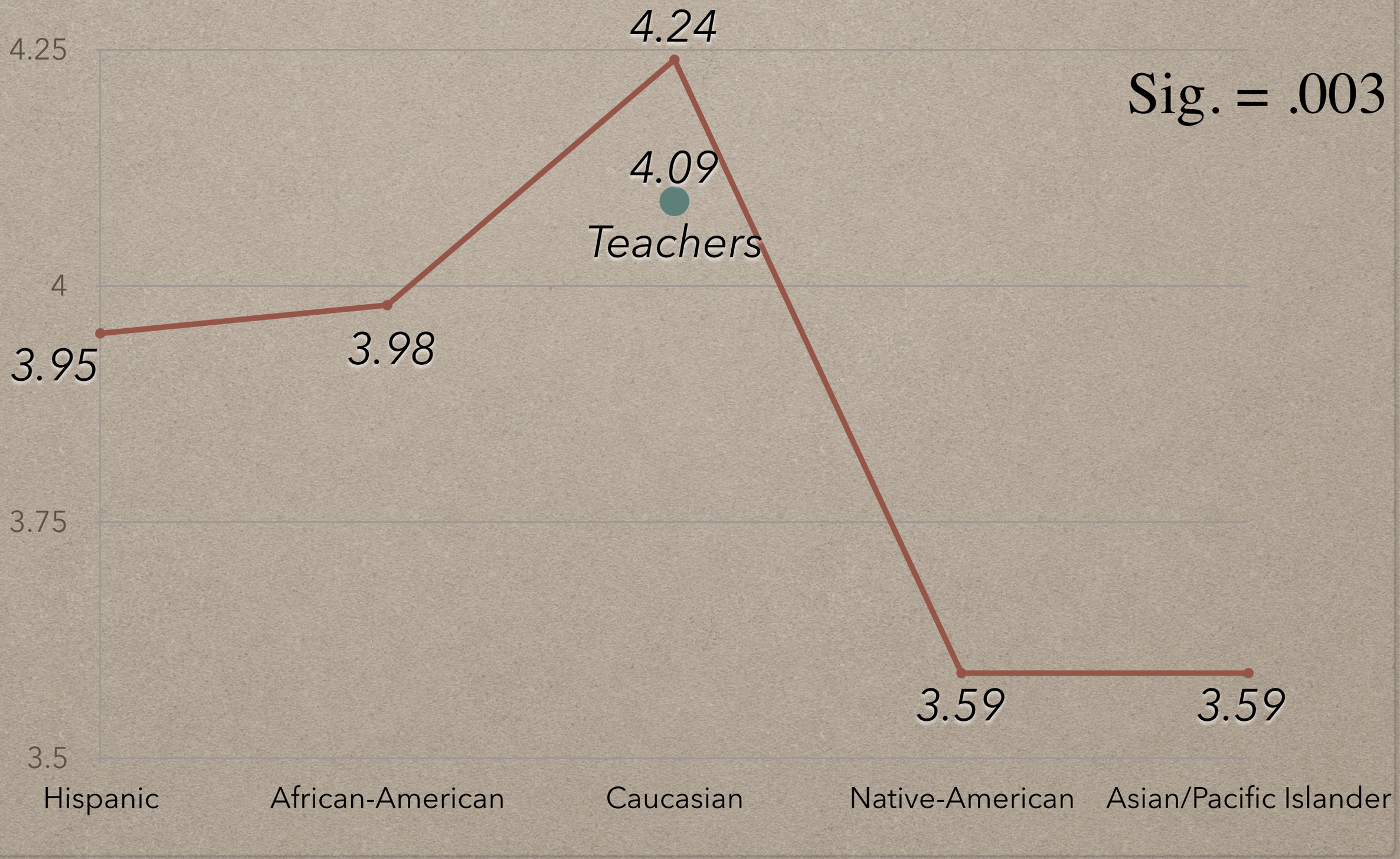
Section 2: Instructional Enhancements by Gender



R Squared = .149 (Adjusted R Squared = .064)

SURVEY RESULTS (QUANTITATIVE):

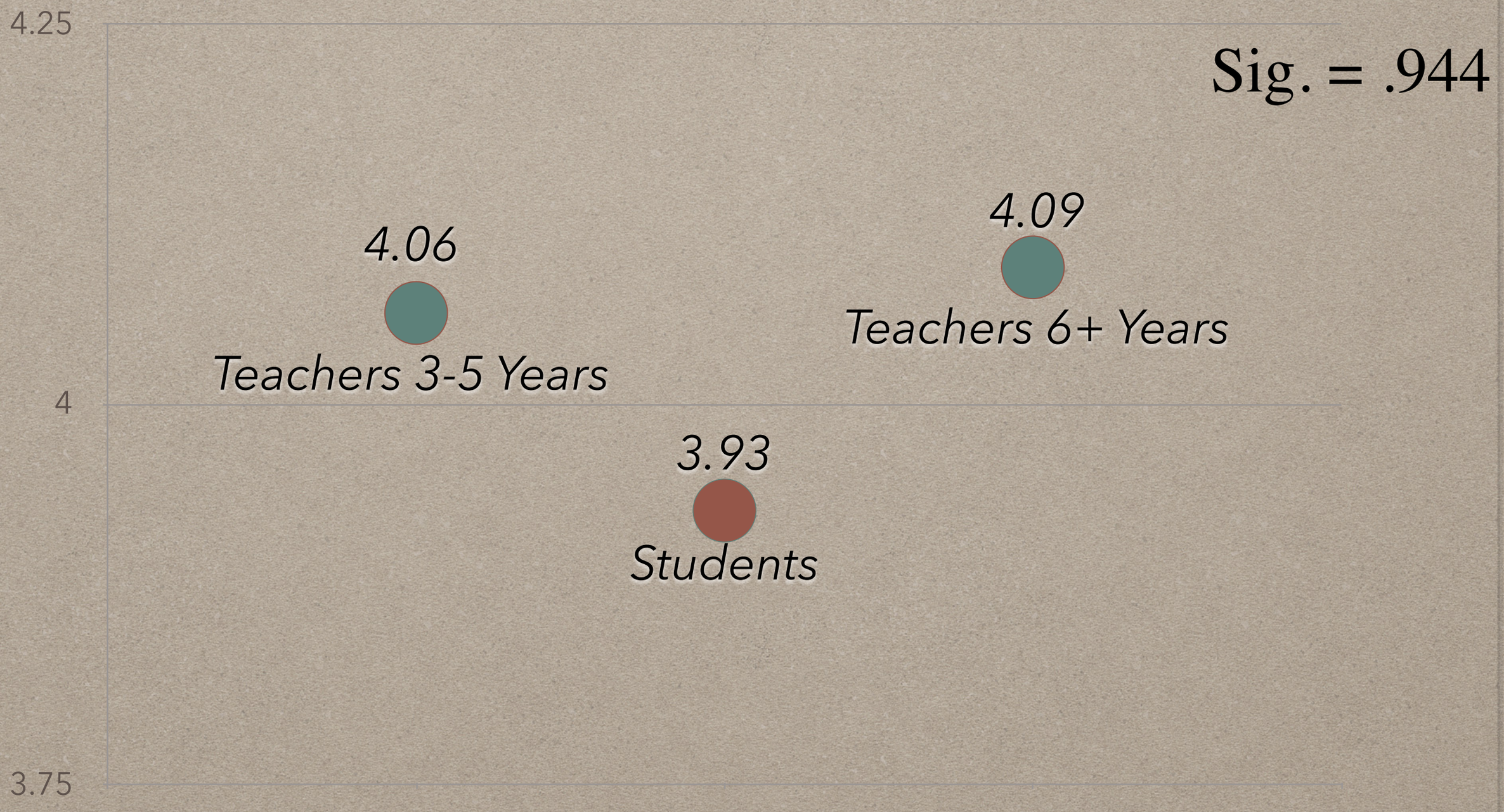
Section 2: Instructional Enhancements by Ethnicity



R Squared = .149 (Adjusted R Squared = .064)

SURVEY RESULTS (QUANTITATIVE):

Section 2: Instructional Enhancements by Teacher Experience



R Squared = .149 (Adjusted R Squared = .064)

FOCUS GROUP (QUALITATIVE):

Section 2: Instructional Enhancements

Teacher Focus Group

How have you used computers and other technology to make classroom instruction more interesting?

Student Focus Groups

How have you used computers and other technology in classroom instruction that made it more interesting?

FOCUS GROUP (QUALITATIVE):

Section 2: Instructional Enhancements

Teacher Theme: Enhancing Instruction

"they find it interesting…but…"

"I don't know if I'm getting results"

Student Theme: Devices Used

"Computers"

"COWS"

"my phone"

J1: "More advanced"

RESEARCH QUESTION 2 SUMMARY

Section 2: Instructional Enhancements

2. What are the differences between teachers and students in the value of the instructional enhancement of computer use during classroom instruction?	Null hypothesis rejected
2a. What are the differences between teachers and female students in the value of the instructional enhancement of computer use during classroom instruction?	Null hypothesis retained
2b. What are the differences between teachers and male students in the value of the instructional enhancement of computer use during classroom instruction?	Null hypothesis retained

RESEARCH QUESTION 2 SUMMARY

Section 2: Instructional Enhancements

2c. What are the differences between teachers and Hispanic students in the value of the instructional enhancement of computer use during classroom instruction?	Null hypothesis rejected
2d. What are the differences between teachers and African-American students in the value of the instructional enhancement of computer use during classroom instruction?	Null hypothesis rejected
2e. What are the differences between teachers and Caucasian students in the value of the instructional enhancement of computer use during classroom instruction?	Null hypothesis rejected
2f. What are the differences between teachers and Native-American students in the value of the instructional enhancement of computer use during classroom instruction?	Null hypothesis rejected
2g. What are the differences between teachers and Asian-American/pacific Islander students in the value of the instructional enhancement of computer use during classroom instruction?	Null hypothesis rejected

RESEARCH QUESTION 2 SUMMARY

Section 2: Instructional Enhancements

2k. What value do teachers who have taught 3-5 years place on the instructional enhancement of computer use during classroom instruction compared to students?	Null hypothesis retained
2l. What value do teachers who have taught 6+ years place on the instructional enhancement of computer use during classroom instruction compared to students?	Null hypothesis retained

RESEARCH QUESTION 3:

Section 3: Perceptions of the Impact of Education Technology Enhancements

3. What are the differences in how teachers and students rate the impact of education technology enhancements?

http://educationaltechnology.net/wp-content/uploads/2016/10/educational-technology.png

$H_0$3. There is no statistically significant difference between how teachers and students rate the impact of education technology enhancements.

H3. There is a statistically significant difference between how teachers and students rate the impact of education technology enhancements.

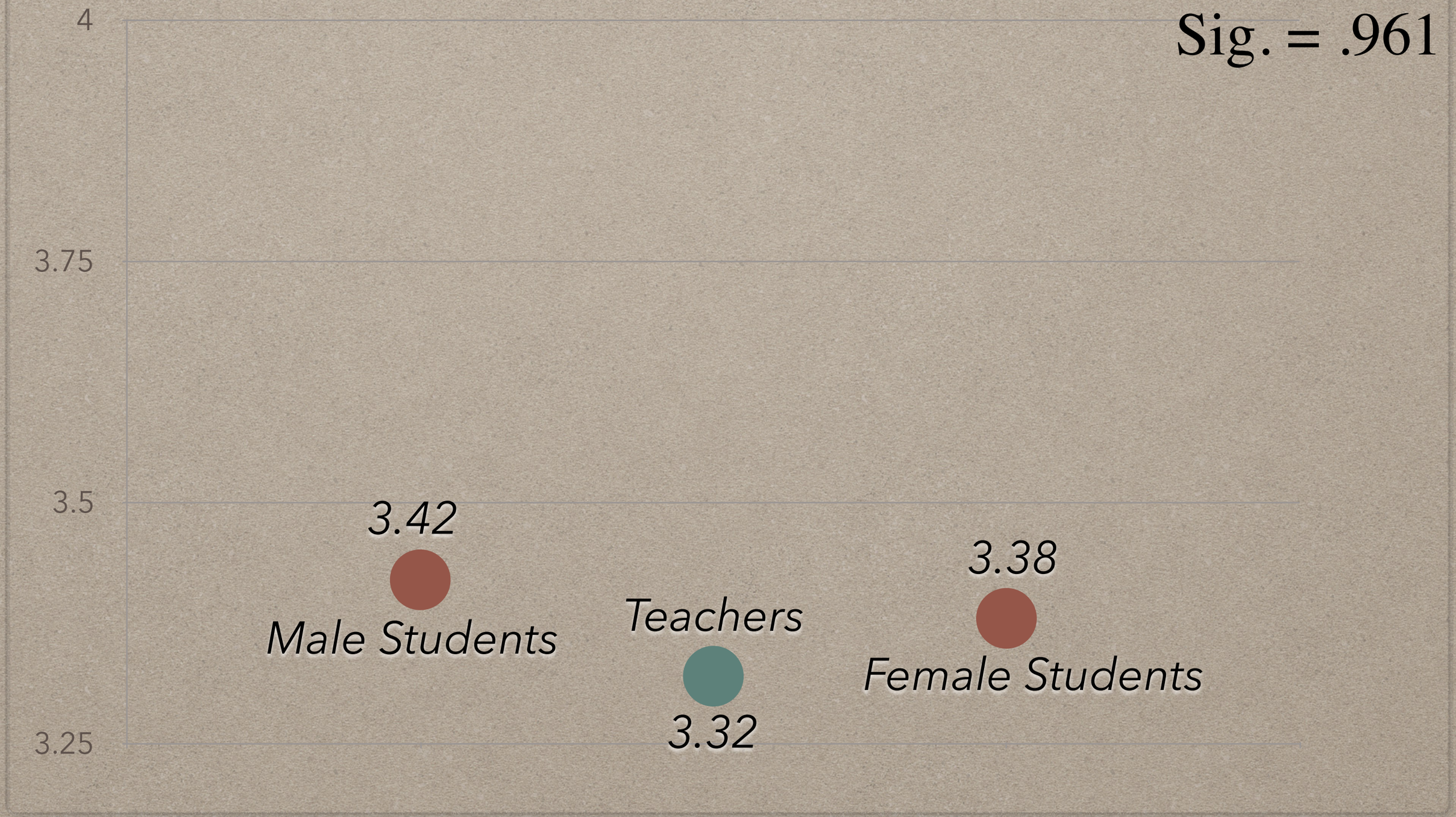
RESEARCH QUESTION 3:

Section 3: Perceptions of the Impact of Education Technology Enhancements

39. Students need to know how to use computers for their future jobs	45. There are other social issues that need to be addressed before implementing computers in education
40. Students prefer learning from teachers to learning from computers	46. The increased proliferation of computers will make our lives easier
41. Knowing about computers earns one the respect of others	47. Computers dehumanize society
42. Computers will improve our standard of living	48. Working with computers does not diminish people relationships with one other
43. Computers are proliferating too fast	49. Computers encourage unethical practices
44. People who are skilled in computers have privileges not available to others	50. Computers should be a priority in education

SURVEY RESULTS (QUANTITATIVE):

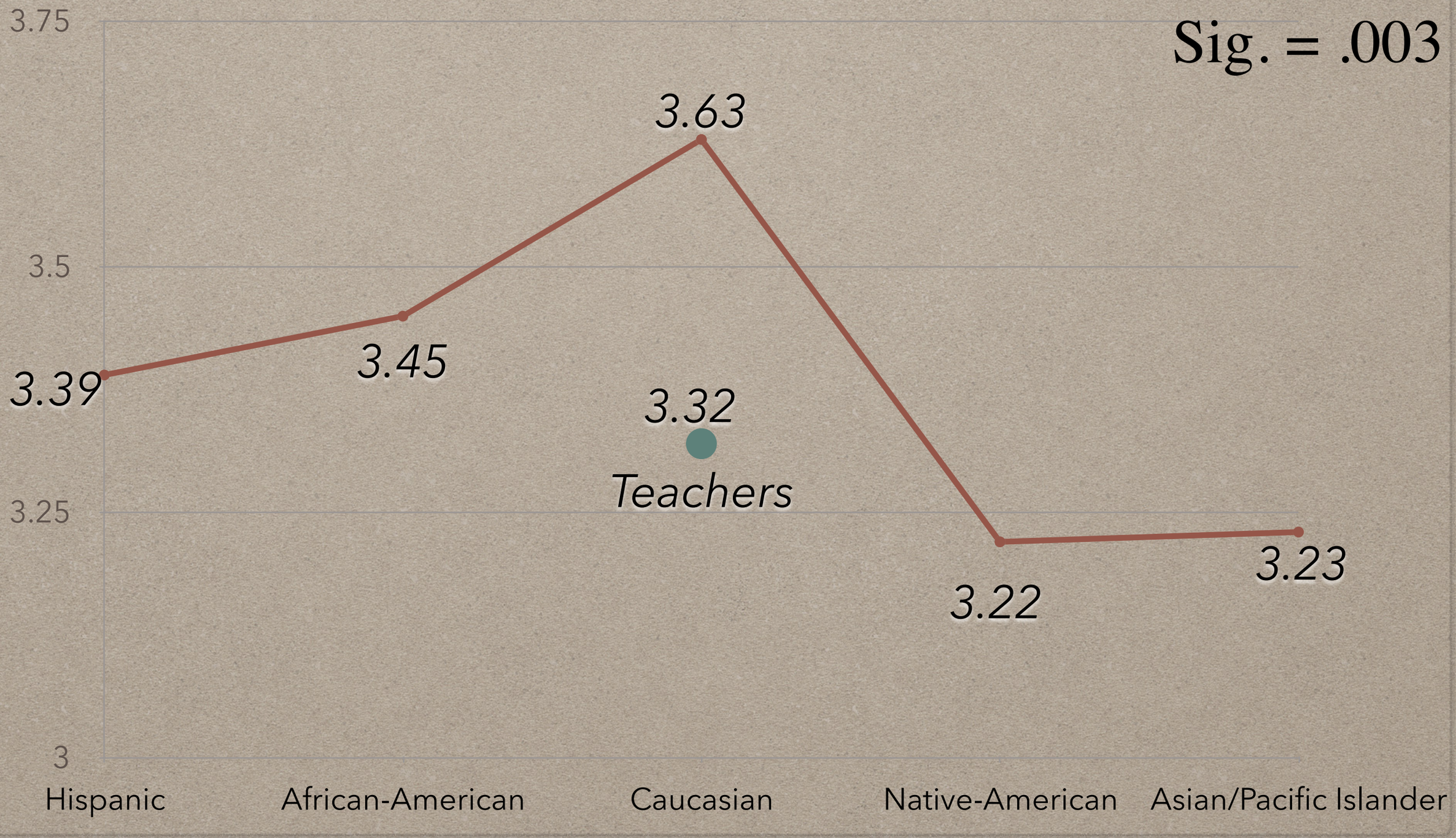
Section 3: Perceptions of the Impact of Education Technology Enhancements



R Squared = .149 (Adjusted R Squared = .064)

SURVEY RESULTS (QUANTITATIVE):

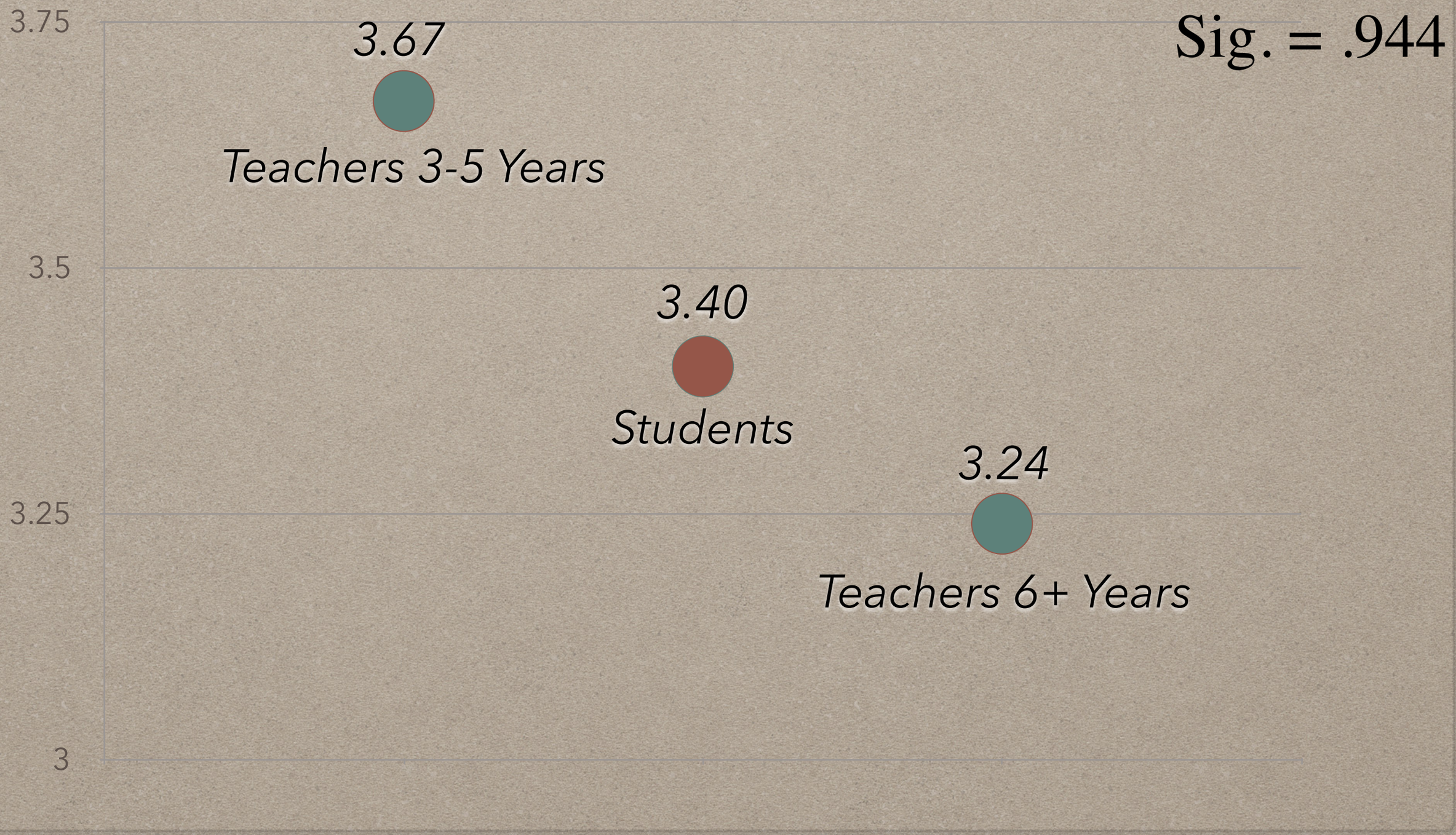
Section 3: Perceptions of the Impact of Education Technology Enhancements



R Squared = .149 (Adjusted R Squared = .064)

SURVEY RESULTS (QUANTITATIVE):

Section 3: Perceptions of the Impact of Education Technology Enhancements



R Squared = .149 (Adjusted R Squared = .064)

RESEARCH QUESTION 3:

Section 3: Perceptions of the Impact of Education Technology Enhancements

Section (3) Instructions: Please indicate your reaction to each of the following statements by circling the number that represents your level of agreement or disagreement with it. Make sure to respond to every statement

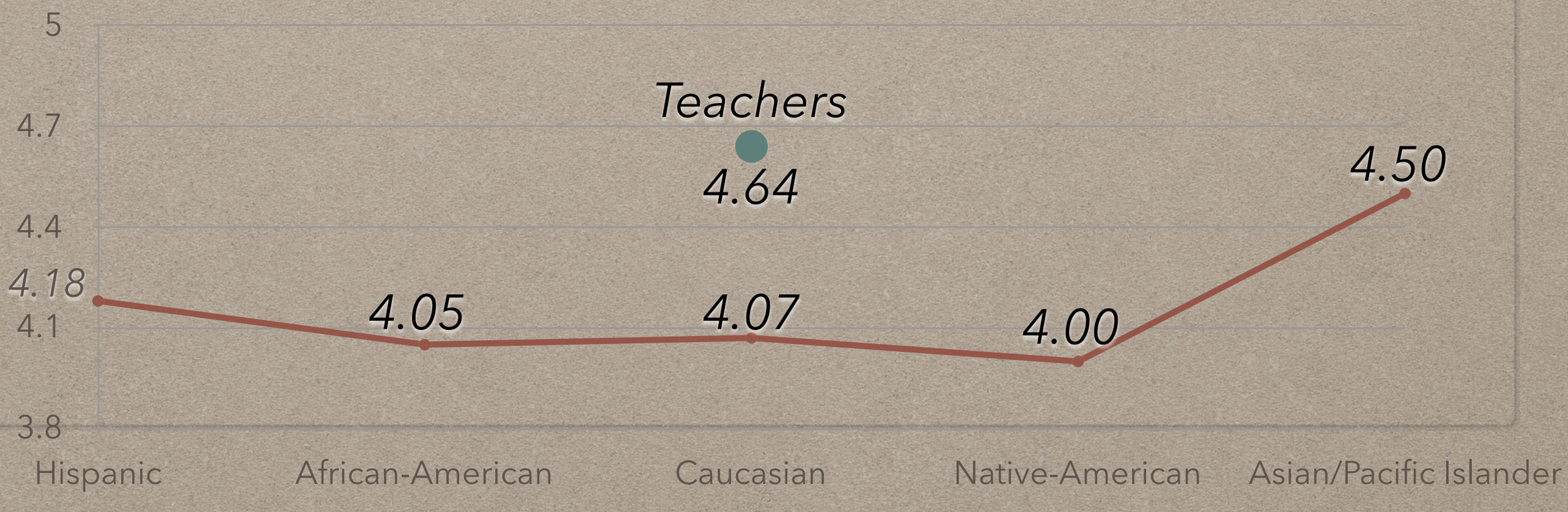
		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	Computers will not make any difference in our classrooms, schools, or lives	1	2	3	4	5
2	Students need to know how to use computers for their future jobs	1	2	3	4	5
3	Students prefer learning from teachers to learning from computers	1	2	3	4	5
4	Knowing about computers earns one the respect of others	1	2	3	4	5

RESEARCH QUESTION 3:

Section 3: Perceptions of the Impact of Education Technology Enhancements

Section (3) Instructions: Please indicate your reaction to each of the following statements by circling the number that represents your level of agreement or disagreement with it. Make sure to respond to every statement

		Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	Computers will not make any difference in our classrooms, schools, or lives	1	2	3	4	5
2	Students need to know how to use computers for their future jobs	1	2	3	4	5



FOCUS GROUP (QUALITATIVE):

Section 3: Perceptions of the Impact of Education Technology Enhancements

Teacher Focus Group

What kind of assignments have you assigned that required the use of technology, and the technology made the assignment more interesting?

Student Focus Groups

What kind of assignments have you been assigned that required the use of technology, and the technology made the assignment more interesting?

FOCUS GROUP (QUALITATIVE):

Section 3: Perceptions of the Impact of Education Technology Enhancements

Teacher Theme: Visibility

See class content

Messaging = students are interested

Student Themes: Interest & Fun

Kahoot & Quizlet

Jeopardy & "Gamify"

"more fun to do"

"dig deeper"

"more meaningful"

RESEARCH QUESTION 3 SUMMARY

Section 3: Perceptions of the Impact of Education Technology Enhancements

3. What are the differences in how teachers and students rate the impact of education technology enhancements?	Null hypothesis retained
3a. What are the differences in how teachers and female students rate the impact of education technology enhancements?	Null hypothesis retained
3b. What are the differences in how teachers and male students rate the impact of education technology enhancements?	Null hypothesis retained

RESEARCH QUESTION 3 SUMMARY

Section 3: Perceptions of the Impact of Education Technology Enhancements

3c. What are the differences in how teachers and male Hispanic students rate the impact of education technology enhancements?	Null hypothesis rejected
3d. What are the differences in how teachers and male African-American students rate the impact of education technology enhancements?	Null hypothesis rejected
3e. What are the differences in how teachers and male Caucasian students rate the impact of education technology enhancements?	Null hypothesis rejected
3f. What are the differences in how teachers and male Native-American students rate the impact of education technology enhancements?	Null hypothesis rejected
3g. What are the differences in how teachers and Asian-American/Pacific Islander students rate the impact of education technology enhancements?	Null hypothesis rejected

RESEARCH QUESTION 3 SUMMARY

Section 3: Perceptions of the Impact of Education Technology Enhancements

3k. How do teachers who have taught 3-5 years rate the impact of education technology enhancements compared to students?	Null hypothesis retained
3l. How do teachers who have taught 6+ years rate the impact of education technology enhancements compared to students?	Null hypothesis retained

RESEARCH QUESTION 4:

Section 4: Technology Literacy

4. What are the differences between how teachers and students rate their technology literacy?

$H_0$4. There is no statistically significant difference between how teachers and students rate their technology literacy.

H4. There is a statistically significant difference between how teachers and students rate their technology literacy.

RESEARCH QUESTIONS

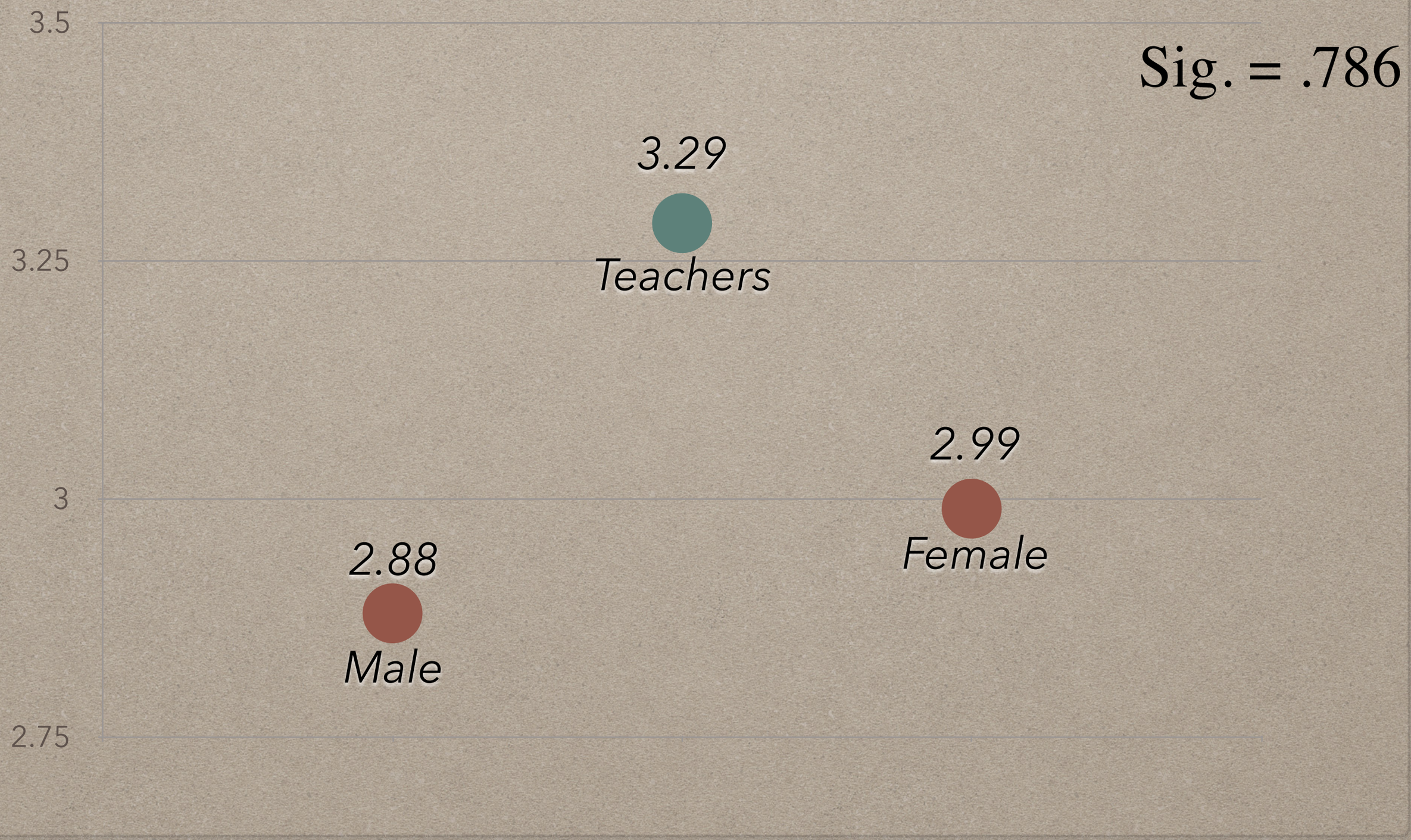
Section 4: Technology Literacy

Section (4) Instructions: Please indicate your current computer competence level (i.e., both your knowledge of and your skill in using computers) regarding each of the following statements. Make sure to respond to every statement

		No competence	Little competence	Moderate competence	Much competence
1	Install new software on a computer	1	2	3	4
2	Use a printer	1	2	3	4
3	Use a computer keyboard	1	2	3	4
4	Operate a word processing program (e.g., Word)	1	2	3	4
5	Operate a presentation program (e.g., PowerPoint)	1	2	3	4
6	Operate a spreadsheet program (e.g., Excel)				
7	Operate a database program (e.g., Access)	1	2	3	4
8	Use the Internet for communication (e.g., email & chatroom)	1	2	3	4
9	Use the World Wide Web to access different types of information	1	2	3	4

SURVEY RESULTS (QUANTITATIVE):

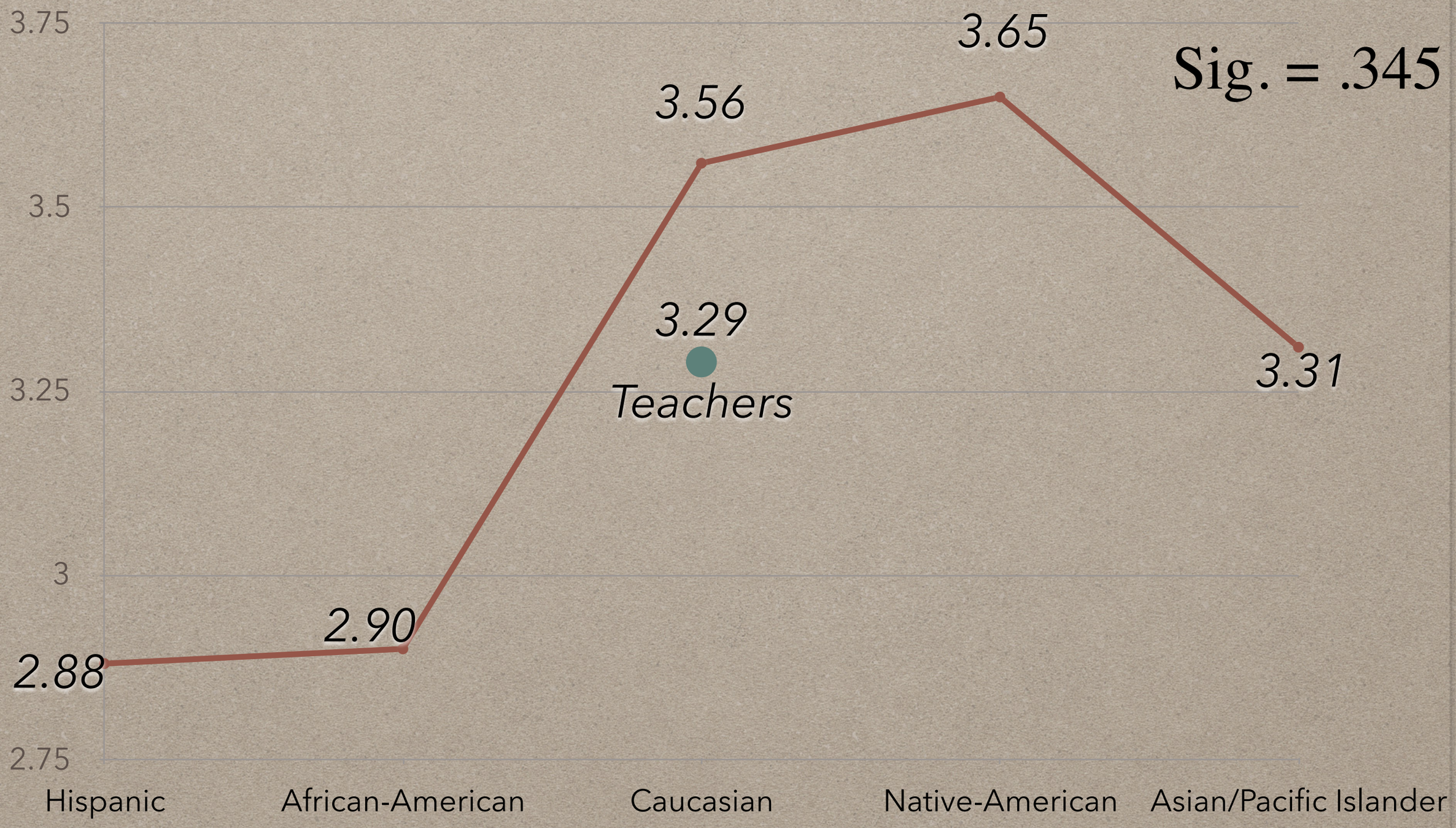
Section 4: Technology Literacy by Gender



R Squared = .133 (Adjusted R Squared = .047)

SURVEY RESULTS (QUANTITATIVE):

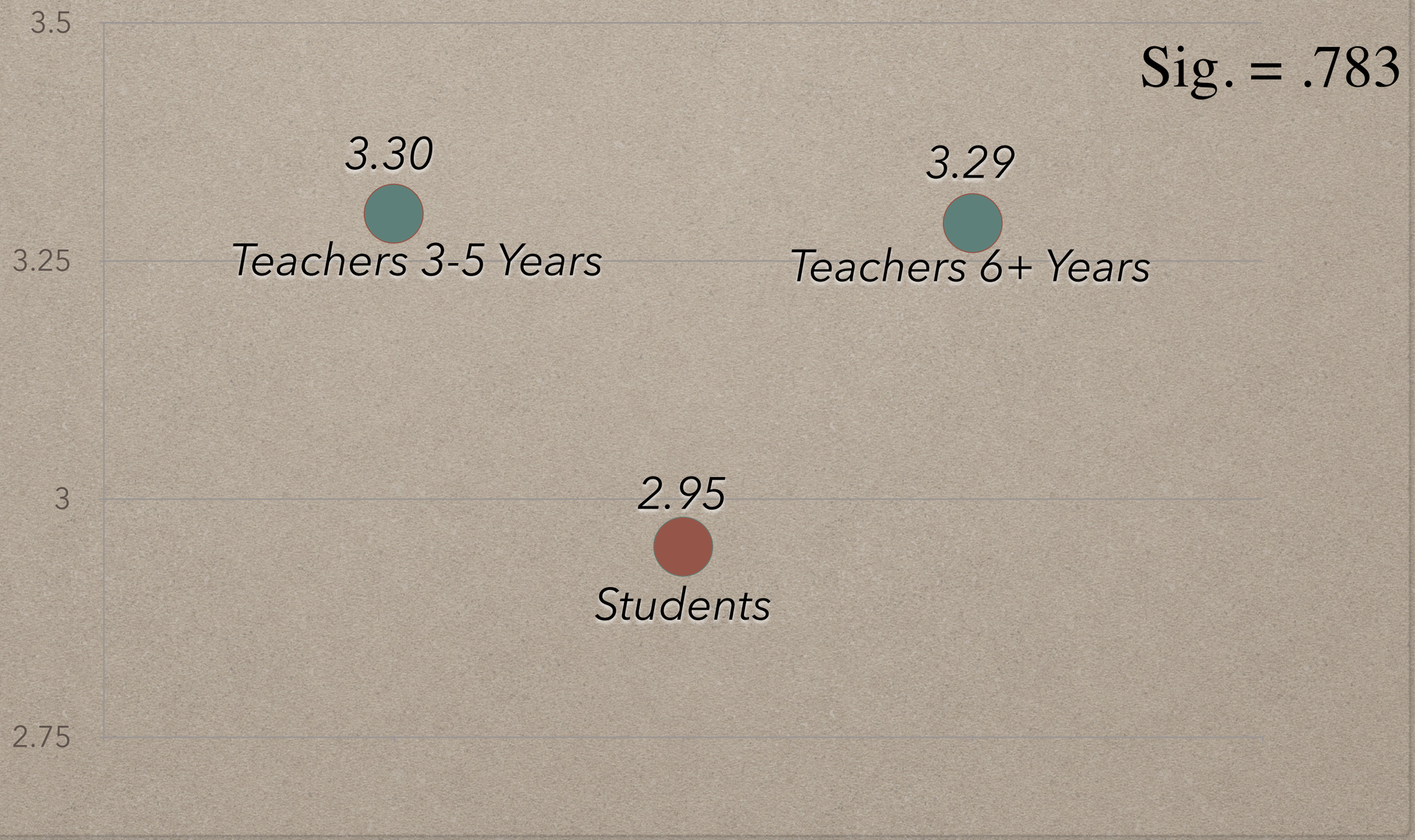
Section 4: Technology Literacy by Demographic



R Squared = .133 (Adjusted R Squared = .047)

SURVEY RESULTS (QUANTITATIVE):

Section 4: Technology Literacy by Teacher Experience



R Squared = .133 (Adjusted R Squared = .047)

FOCUS GROUP (QUALITATIVE):

Section 4: Technology Literacy

Teacher Focus Group Student Focus Groups

How would you define education technology?

FOCUS GROUP (QUALITATIVE):

Section 4: Technology Literacy

Themes: Hardware & Software

SMARTBoards

Projectors

Computers

Canvas

Kahoot

Quizlet

RESEARCH QUESTION 4 SUMMARY

Section 4: Technology Literacy

4. What are the differences between how teachers and students rate their technology literacy?	Null hypothesis retained
4a. What are the differences between how teachers and female students rate their technology literacy?	Null hypothesis retained
4b. What are the differences between how teachers and male students rate their technology literacy?	Null hypothesis retained

RESEARCH QUESTION 4 SUMMARY

Section 4: Technology Literacy

4c. What are the differences between how teachers and Hispanic students rate their technology literacy?	Null hypothesis rejected
4d. What are the differences between how teachers and African-American students rate their technology literacy?	Null hypothesis rejected
4e. What are the differences between how teachers and Caucasian students rate their technology literacy?	Null hypothesis retained
4f. What are the differences between how teachers and Native-American students rate their technology literacy?	Null hypothesis rejected
4g. What are the differences between how teachers and Asian-American/Pacific Islander students rate their technology literacy?	Null hypothesis retained

RESEARCH QUESTION 4 SUMMARY

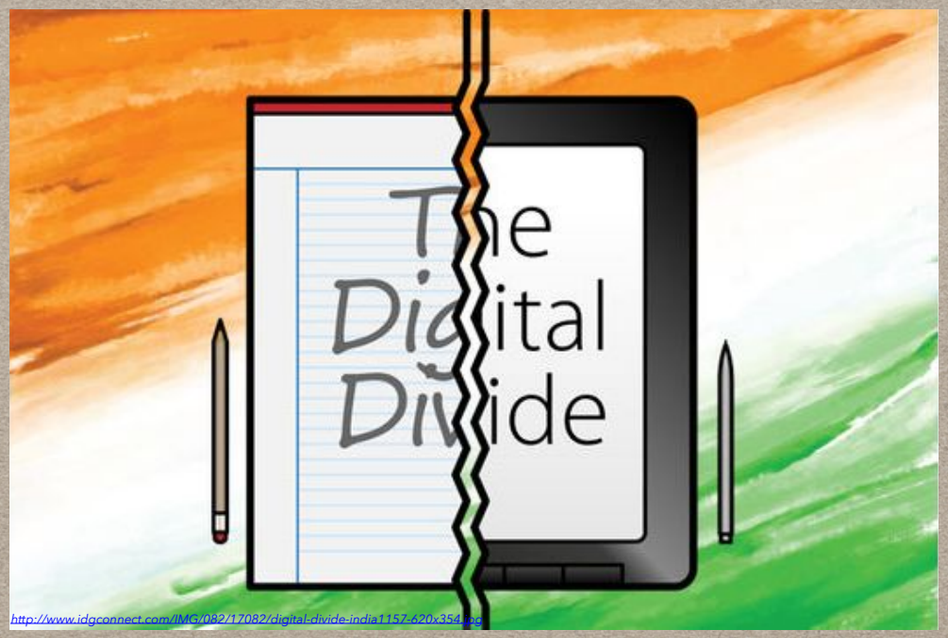
Section 4: Technology Literacy

4k. How do teachers who have taught 3-5 years rate their technology literacy compared to students?	Null hypothesis retained
4l. How do teachers who have taught 6+ years rate their technology literacy compared to students?	Null hypothesis retained

RESEARCH QUESTIONS

Section 5: Access to Technology

5. What are the differences between teachers and students regarding how much access to technology they have?



$H_0$5. There is no statistically significant difference between teachers and students regarding how much access to technology they have.

H5. There is a statistically significant difference between teachers and students regarding how much access to technology they have.

RESEARCH QUESTION 5

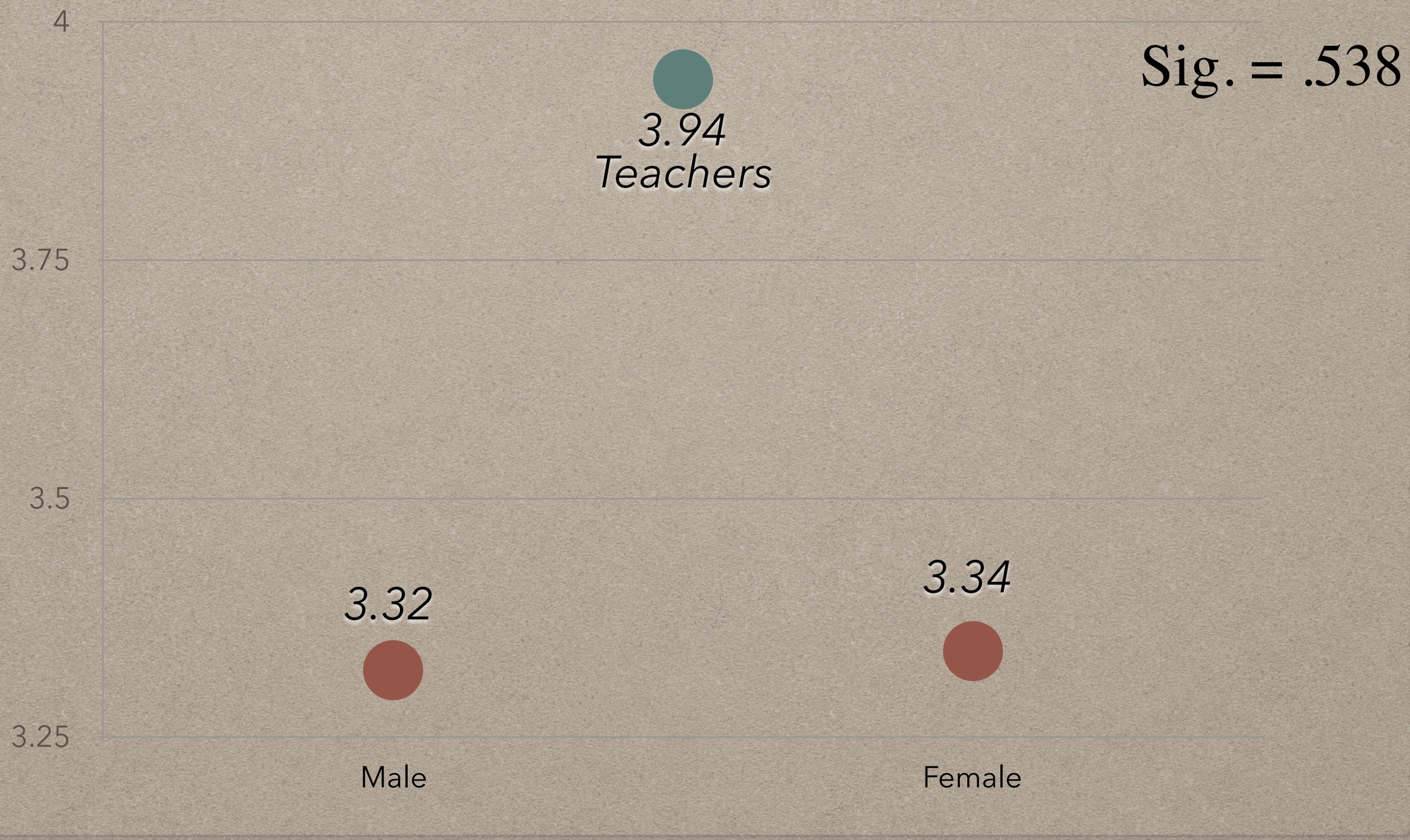
Section 5: Access to Technology

Section (5) Instructions: Please identify how often you have access to computer technology including the internet in the following contexts:

		Daily	2 or 3 times a week	Once a week	Once a month	Never
1	In your home	1	2	3	4	5
2	At school (computer lab or library)	1	2	3	4	5
3	Other (like Internet cafes, etc.)	1	2	3	4	5

SURVEY RESULTS (QUANTITATIVE):

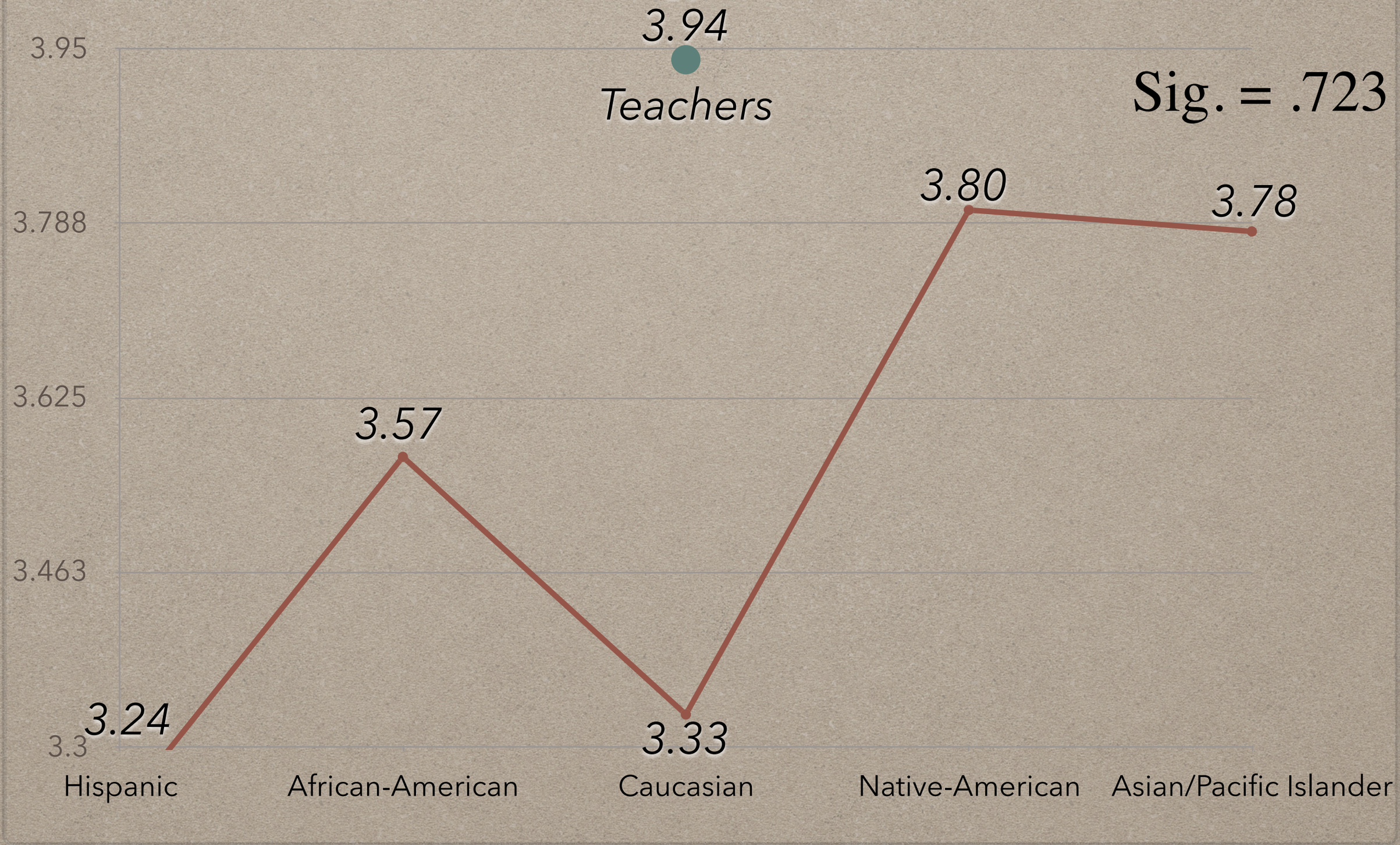
Section 5: Access to Technology



R Squared = .094 (Adjusted R Squared = .004)

SURVEY RESULTS (QUANTITATIVE):

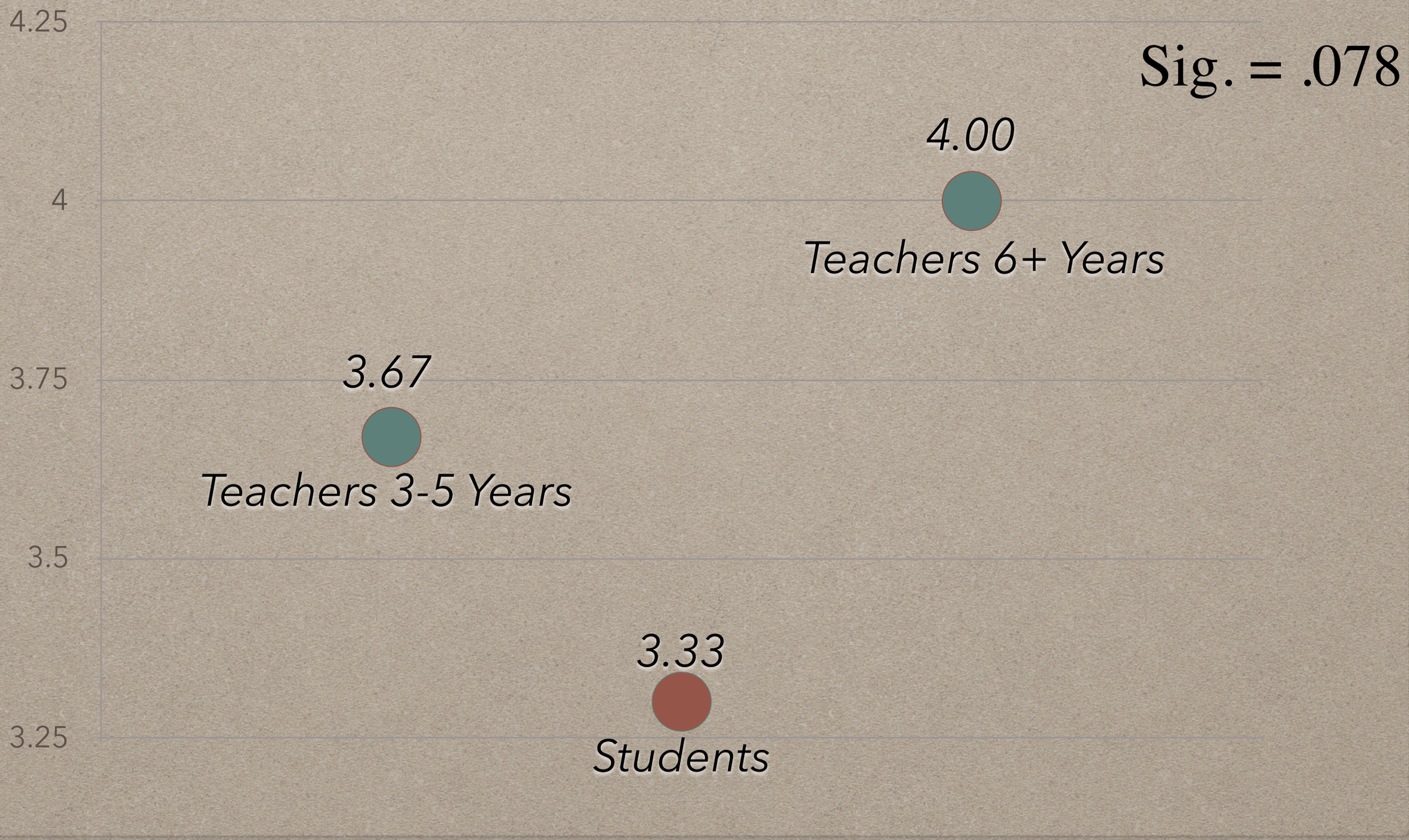
Section 5: Access to Technology



R Squared = .094 (Adjusted R Squared = .004)

SURVEY RESULTS (QUANTITATIVE):

Section 5: Access to Technology



R Squared = .094 (Adjusted R Squared = .004)

FOCUS GROUP (QUALITATIVE):

Section 5: Access to Technology

Teacher Focus Group

Are you provided with the technological tools needed to make classes engaging for students?

Student Focus Groups

Are your teachers provided with the technological tools needed to make classes engaging for you?

FOCUS GROUP (QUALITATIVE):

Section 5: Access to Technology

Theme: Lack of Access

J1: “I don't know how many kids there are here but a lot of times you have to wait every few weeks before you can go into the lab because other classes are using it for days at a time.”

T2 said, “Yeah. If we're serious about getting our kids ready for this 'twenty-first century workforce', it's technologically based, it's not the industrial age anymore,” and that, “I think it's improving, but I think the reality is, in a school like ours, we would have to have a 1:1 ratio with technology, and we don't. We barely have probably a 5:1 ratio, at best.”

RESEARCH QUESTION 5 SUMMARY

Section 5: Access to Technology

5. What are the differences between teachers and students regarding how much access to technology they have?	Null hypothesis rejected
5a. What are the differences between teachers and female students regarding how much access to technology they have?	Null hypothesis rejected
5b. What are the differences between teachers and male students regarding how much access to technology they have?	Null hypothesis rejected

RESEARCH QUESTION 5 SUMMARY

Section 5: Access to Technology

5c. What are the differences between teachers and Hispanic students regarding how much access to technology they have?	Null hypothesis retained
5d. What are the differences between teachers and African-American students regarding how much access to technology they have?	Null hypothesis retained
5e. What are the differences between teachers and Caucasian students regarding how much access to technology they have?	Null hypothesis retained
5f. What are the differences between teachers and Native-American students regarding how much access to technology they have?	Null hypothesis retained
5g. What are the differences between teachers and Asian-American/Pacific Islander students regarding how much access to technology they have?	Null hypothesis retained

RESEARCH QUESTION 5 SUMMARY

Section 5: Access to Technology

5k. How much access to technology do teachers who have taught 3-5 years have compared to students?	Null hypothesis rejected
5l. How much access to technology do teachers who have taught 6+ years have compared to students?	Null hypothesis rejected

CHAPTER 5:

Summary, Conclusions, Recommendations, & Implications

CHAPTER 5: *RQ1 TECHNOLOGY ATTITUDES*

Summary & Conclusions

No Statistically Significant Difference

Small Positive Correlation Demographically

Caucasian Students

Teachers 3-5 Years

African-American Students

Teachers 6+ Years

Male Students

Female Students

Hispanic Students

Asian-American/Pacific Islander Students

Native-American Students

CHAPTER 5: *RQ1 TECHNOLOGY ATTITUDES*

Summary & Conclusions

No Statistically Significant Difference When Aggregated

Small Positive Correlation Demographically

Positive Attitudes Exist For Technology

Caucasian Students = Most Positive (4.19)

Native-American Students = Least Positive (3.86)

CHAPTER 5: *RQ1 TECHNOLOGY ATTITUDES*

Summary & Conclusions

No Statistically Significant Difference When Aggregated

Small Positive Correlation Demographically

Positive Attitudes Exist For Technology

~~*Gender*~~, ~~*Ethnicity*~~, ~~*Years of Teaching Experience*~~

CHAPTER 5: *RQ2*

Summary & Conclusions

Computer/Education Technology Leads to Added Engagement for students, and organization for teachers.

Ritzhaupt, SES, and affinity for technology

~~*Gender*~~, ***Ethnicity***, ~~*Years of Teaching Experience*~~

CHAPTER 5: *RQ3 PERCEPTION OF IMPACTS OF ENHANCEMENTS WITH EDUCATION TECHNOLOGY*

Summary & Conclusions

Positive Correlation Demographically

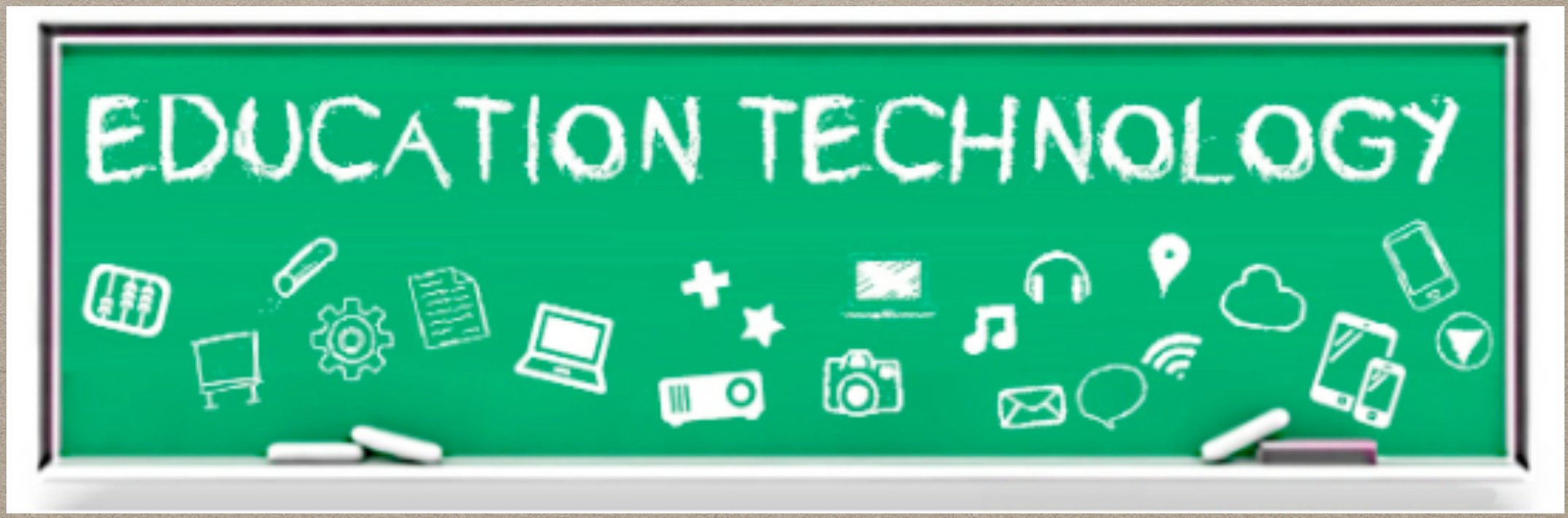
Yager, STEM, and 21st century skills such as adaptability

~~Gender~~, ***Ethnicity***, *~~Years of Teaching Experience~~*

CHAPTER 5: *RQ4 COMPUTER LITERACY*

Summary & Conclusions

Strong Positive Correlation Demographically



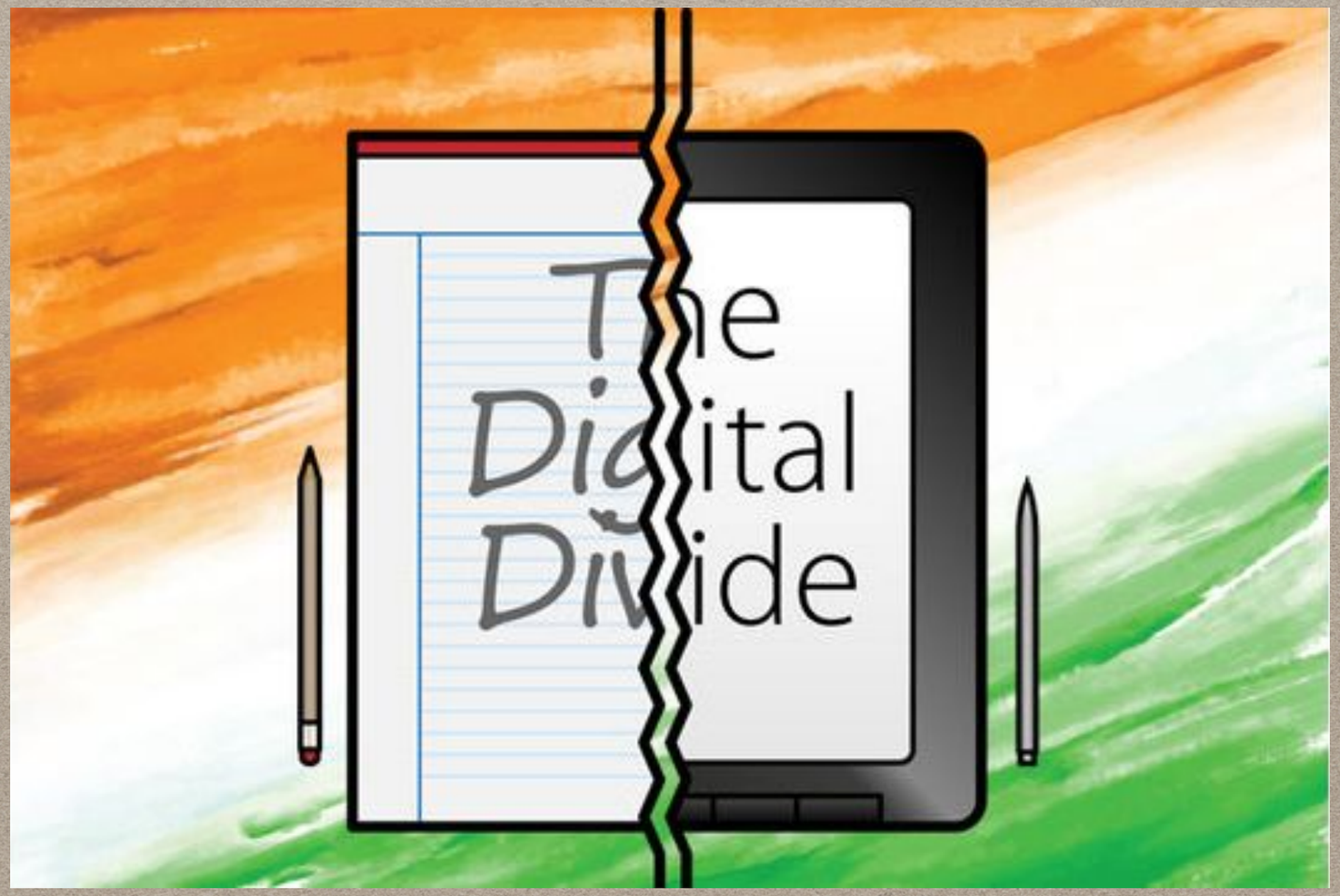
~~Gender~~, ***Ethnicity***, *~~Years of Teaching Experience~~*

CHAPTER 5: *RQ5 ACCESS TO TECHNOLOGY*

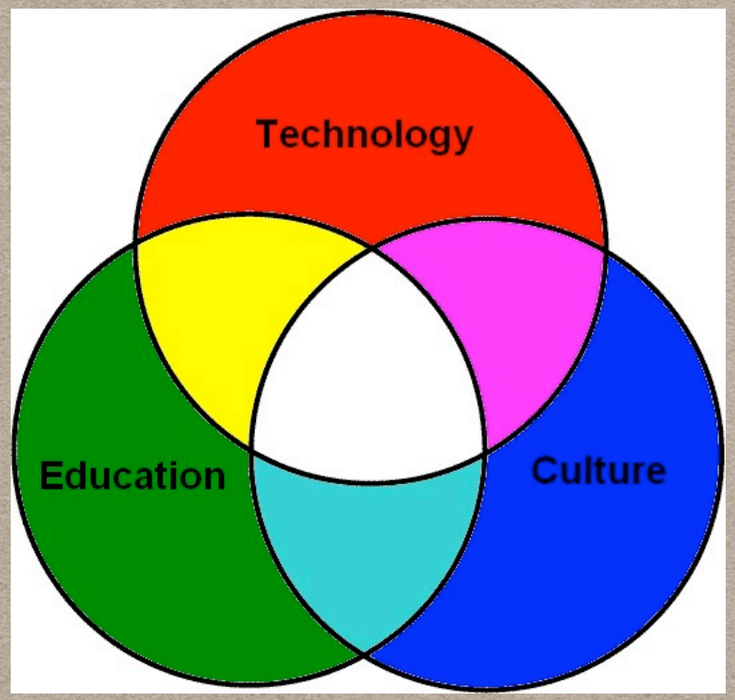
Summary & Conclusions

Strong Positive Correlation By Gender

Gender, ~~*Ethnicity*~~, ~~*Years of Teaching Experience*~~



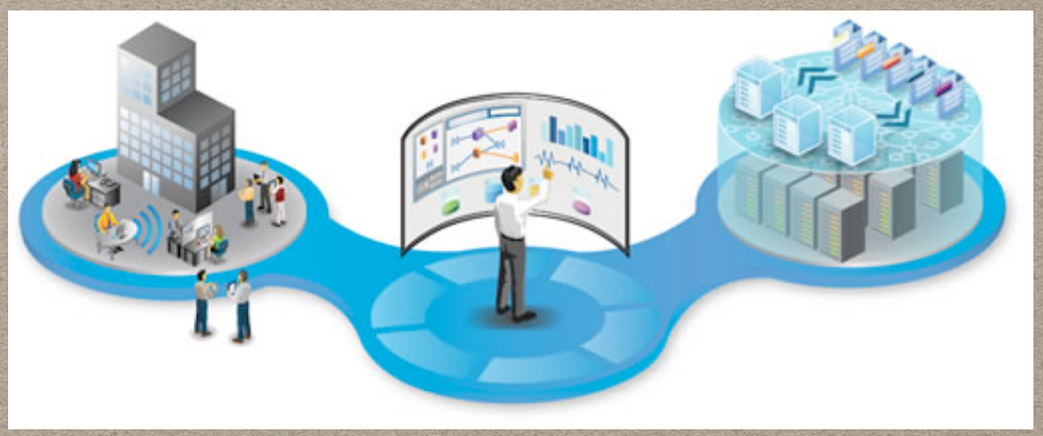
CHAPTER 5:
Recommendations For Practice



Culture Matters

Bridge the digital divide

Investment in Tech & Training



Infrastructure Required

CHAPTER 5: *Recommendations For Future Studies*

1. F/RL Study

2. More Teachers Needed For Response

3. Teachers who are younger (Millennials)

CHAPTER 5:

Implications

Tech Vision: Inclusive of Stakeholders

Digital Divide: Act with agency

Meaningfully engage students and communities

?

Questions/Comments

?

EXAMINING STUDENT AND TEACHER ATTITUDES OF EDUCATION TECHNOLOGY AND PERCEPTIONS OF EACH OTHER

A DISSERTATION BY: JASON THOMPSON