COVID-19 Imposed Digital Learning Environment:
The Relationship Between Perceived Educator Attitude & Student Acceptance

Melissa D. Almeida, B.A.
### Department of Psychology California State University, Stanislaus

Introduction

Online and computer mediated pedagogy has been well researched over the last decade. The consensus has been that there is 'no significant difference' between traditional and online learning (Swan, 2003). Yet, online education remains one of the top concerns of faculty, specifically in higher education.

A main source of reluctance is due to the alternate skillsets required for effective online instruction. Mentoring, training, and ongoing professional development specific to required techniques and technology has been found to successfully address these concerns (Andrews Graham, 2019). However, since many educators regard online education as an inferior teaching medium, the prevalence of preparation cannot be assumed (Gurley, 2018; Swan, 2003).

Some research on emergency remote instruction reported more negative student reactions in comparison to remote instruction pre-pandemic. Research cited lack of choice, prior experience, and preparedness for both students and educators as contributing factors (Besser, et al., 2020). Especially for instructors without training in e-learning design, who faced the challenge of translating in-person course designs and teaching methods to an online platform without much notice or support (Guruaja, 2021).

This research inspects how educator attitudes may influence student receptiveness of digital learning environments. Such inquiry into student perceptions of the value that educators place upon digital course designs was recommended in research that suggests that platform experiences, good or bad, affect student learning outcomes (Paul et al., 2020).
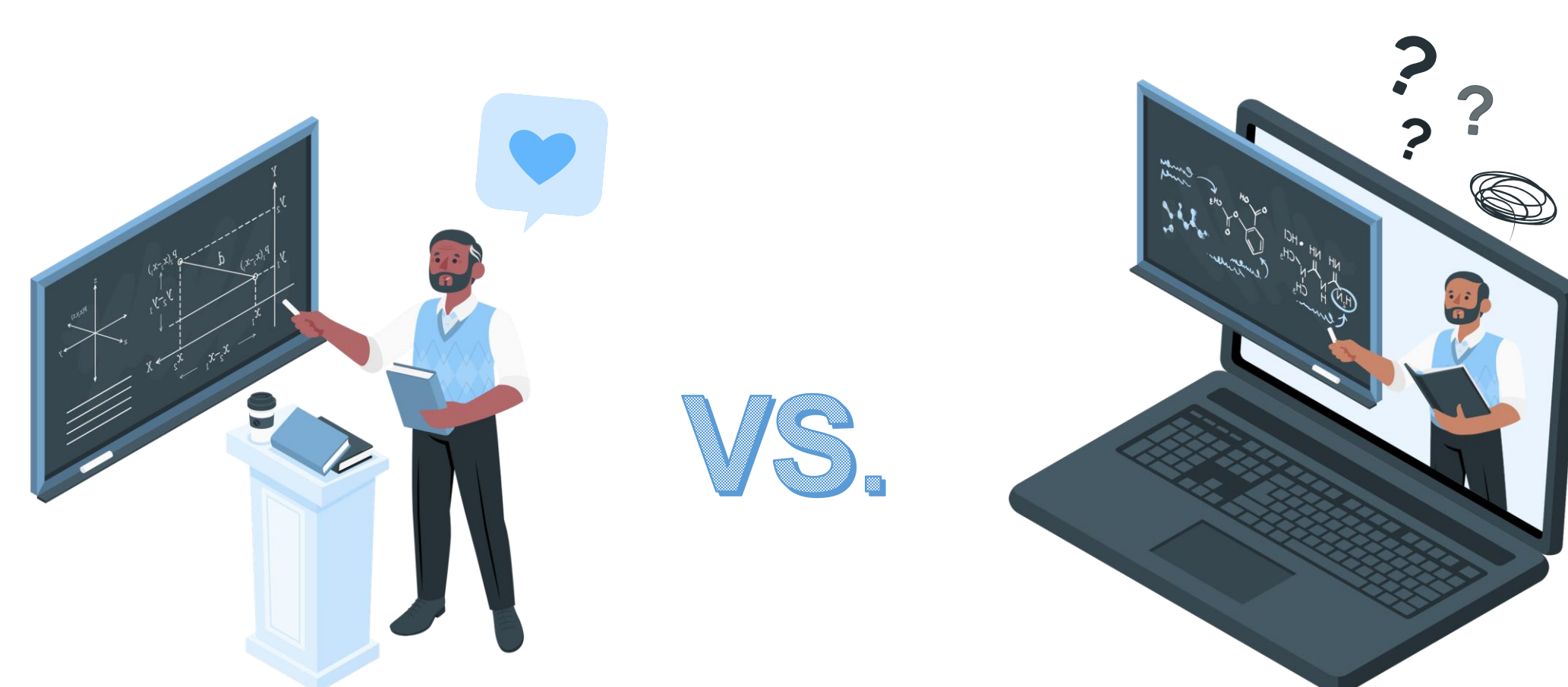
Do students' perceptions of educator attitudes toward digital learning environments influence their acceptance of these platforms?

Hypotheses:
- Positive perceptions will correlate to higher student acceptance scores.
- The correlation between attitude and acceptance will be stronger for students with little previous online education experience.
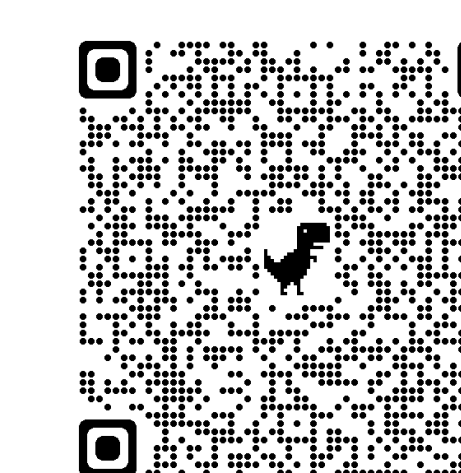
Methods

Participants

- 113 recruited from CSUS & Amazon Mechanical Turk
- 205 total course evaluations
- 68% from CSUS
- 11% from other colleges
- 74.3% Women
- 12.4% Men
- 24 Novices no prior experience
- 21 Beginners few online courses
- 27 Intermediate several courses
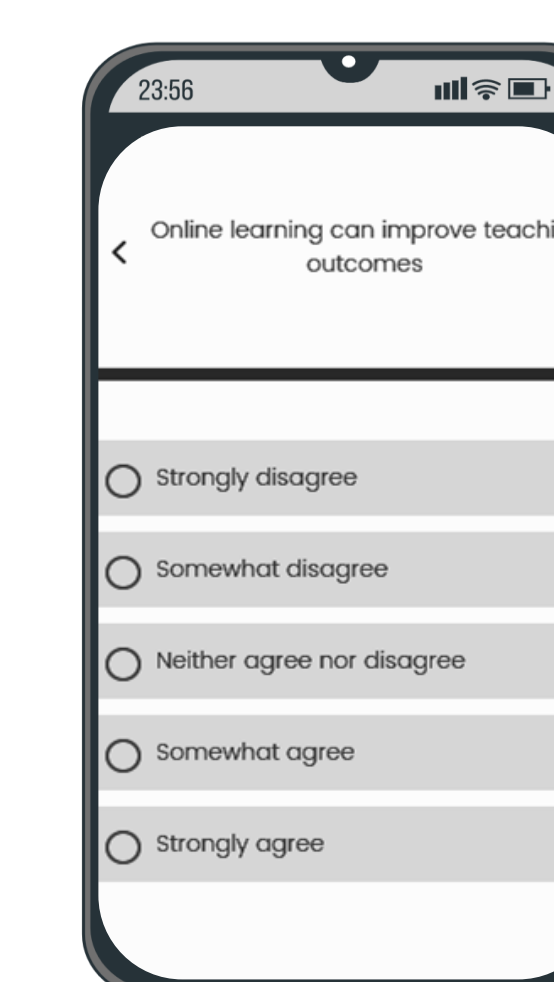- 26 Advanced many online courses taken prior to mandatory remote learning.
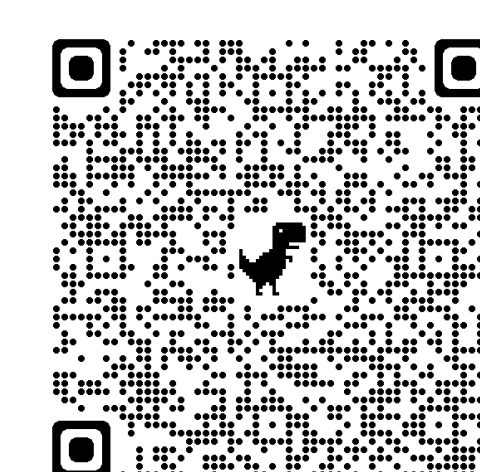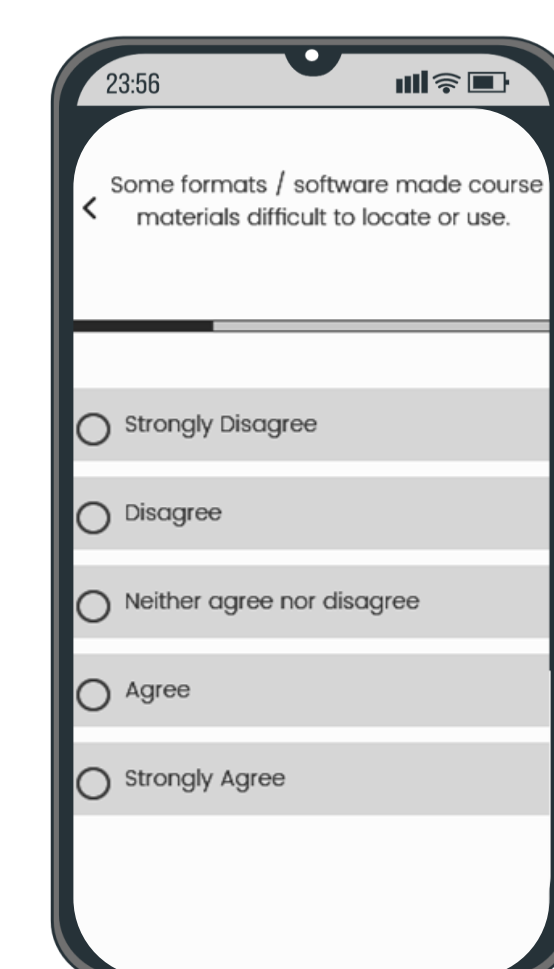
Scan to download appendices with full survey scales and participant instructions.

Measures & Procedures

- Delivered via Qualtrics Survey Platform
- Student Acceptance Scale (sample on left) 12 items adapted from assessment of attitudes toward learning management systems (Alshorman & Bawaneh, 2018).
- Perceived Educator Attitude Scale (sample on right) 6 items adapted from the Test of e-Learning Related Attitudes (TeLRA) (Kisanga & Ireson, 2016). Participants were asked to provide their opinion of how their course instructor would answer.
- Students with a single mandatory remote class completed the scales once, others completed one round while considering their best designed course and again considering the worst designed course.

Scan to download article submission for the Stanislaus State University Honors Program Journal of Exploratory Research

Results

Relationship of Student Acceptance & Perceived Educator Attitude for Worst Course

Scatter Plot of Acceptance Score by Ed. Attitude Score
CourseCategory: Worst Course Design

$r(90) = .49, p<.001$

.49** a moderate positive correlation

24% of variance due to relationship between variables

**.01 level 2-tailed

Relationship of Student Acceptance & Perceived Educator Attitude for Best Course

Scatter Plot of Acceptance Score by Ed. Attitude Score
CourseCategory: Best Course Design

$r(90) = .57, p<.001$

.57** a strong positive correlation

32% of variance due to relationship between variables

**.01 level 2-tailed

A Pearson's product moment test was used to produce a correlation coefficient for both course evaluation categories worst (top left), best (top right), and for all total evaluations including those from students with only a single course (bottom left). The correlation coefficient number can be thought of as the increment the student's acceptance rises for each additional point of the perceived educator attitude score. The r squared value, shown as a percentage, estimates how much of the variance is error and how much is due to the relationship between the variables.

The table (bottom right) shows correlation coefficients as grouped by previous online course experience. The correlations remain close in strength and do not significantly change as students gain more online course experience.

Student Acceptance & Perceived Educator Attitude Across All Evaluations

Scatter Plot of Acceptance Score by Ed. Attitude Score

$r(203) = .58, p<.001$

.58** a strong positive correlation

34% of variance due to relationship between variables

**.01 level 2-tailed
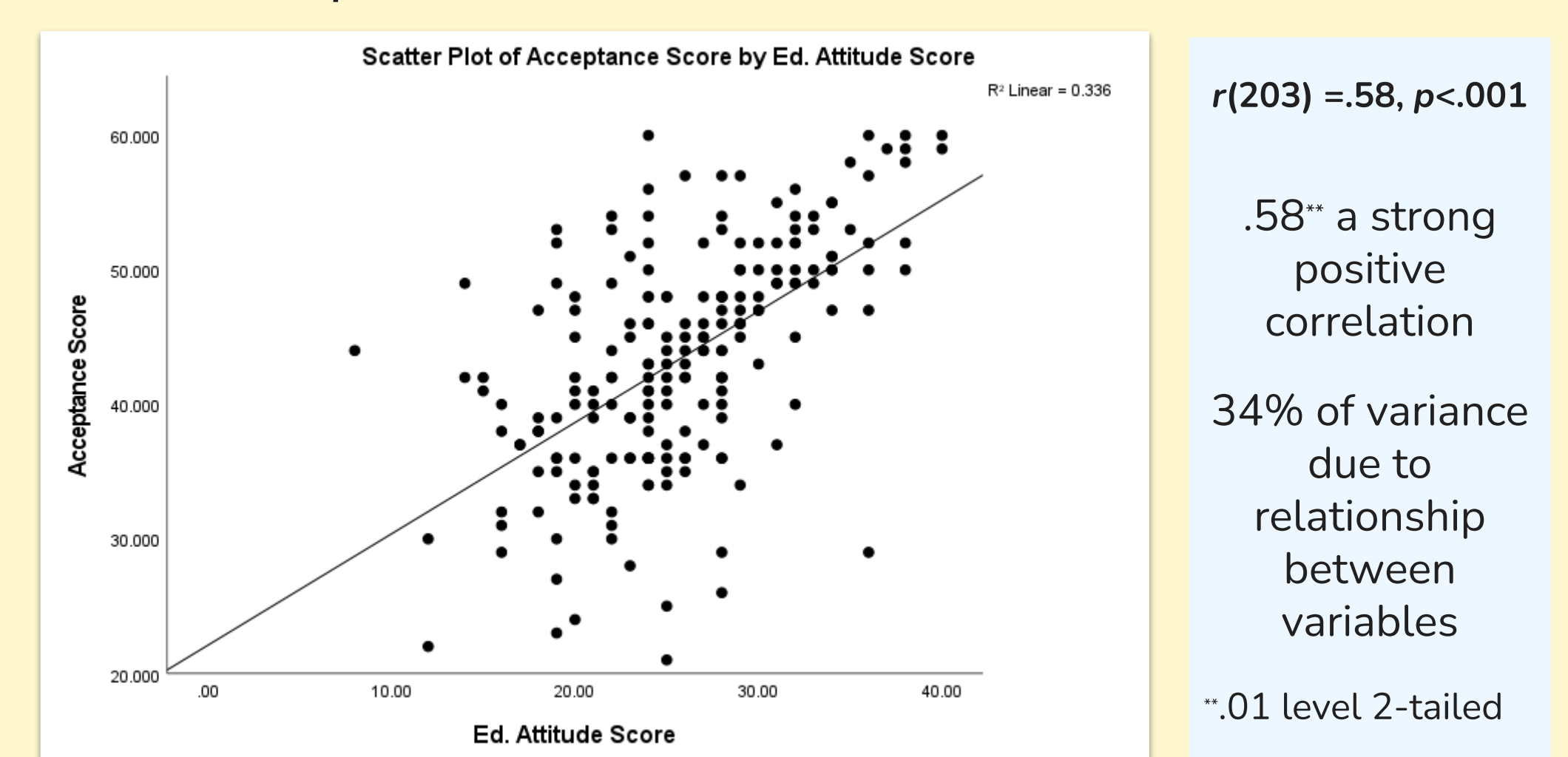
Course Category Correlations By Previous Online Experience

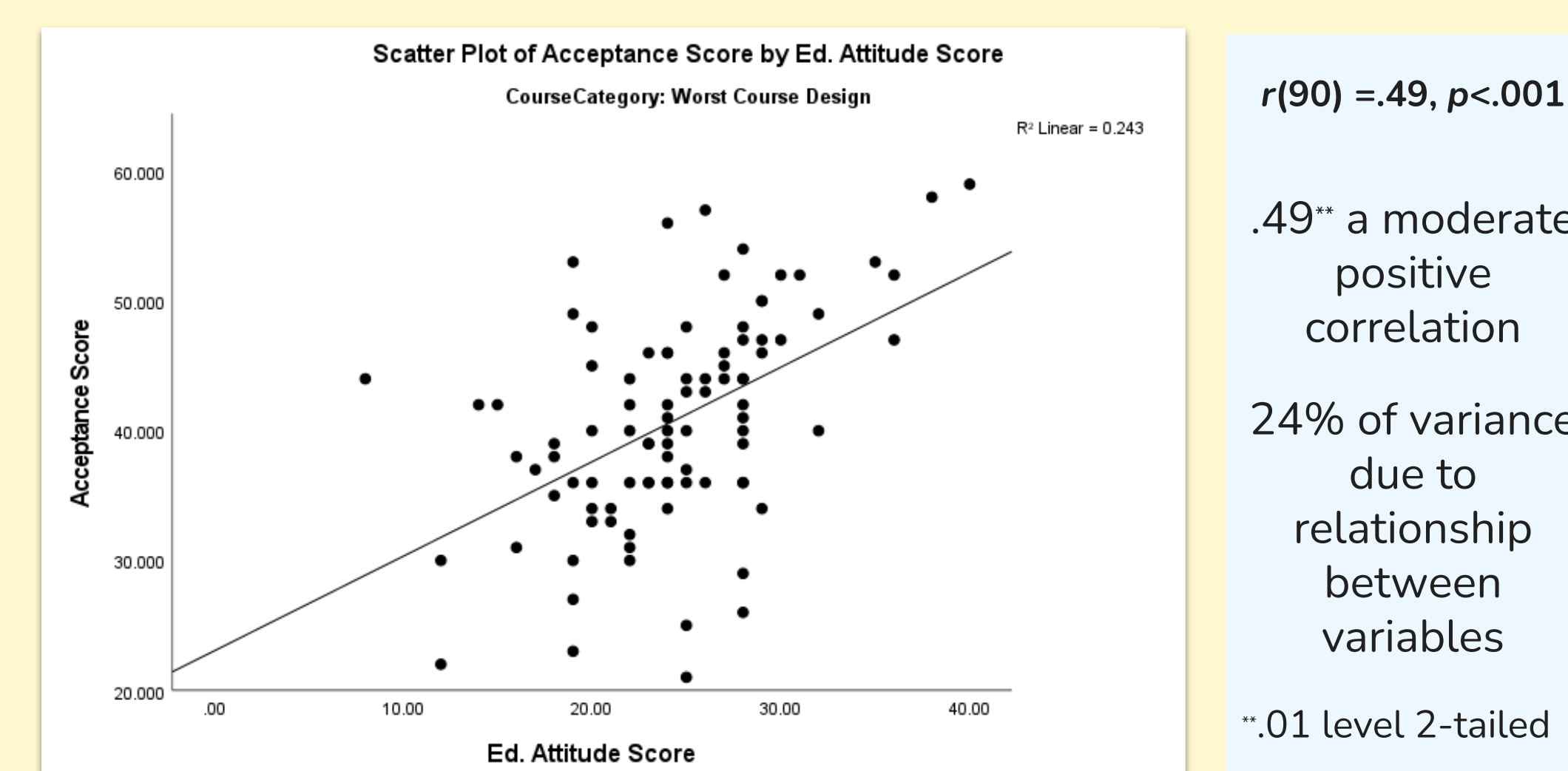|	Novice	Beginner	Intermediate	Advanced
Student Acceptance & Educator Attitude	.57**	.58**	.48**	.52**
# of Evaluations (n)	45	41	51	50

**p<.01, two-tailed

Conclusions

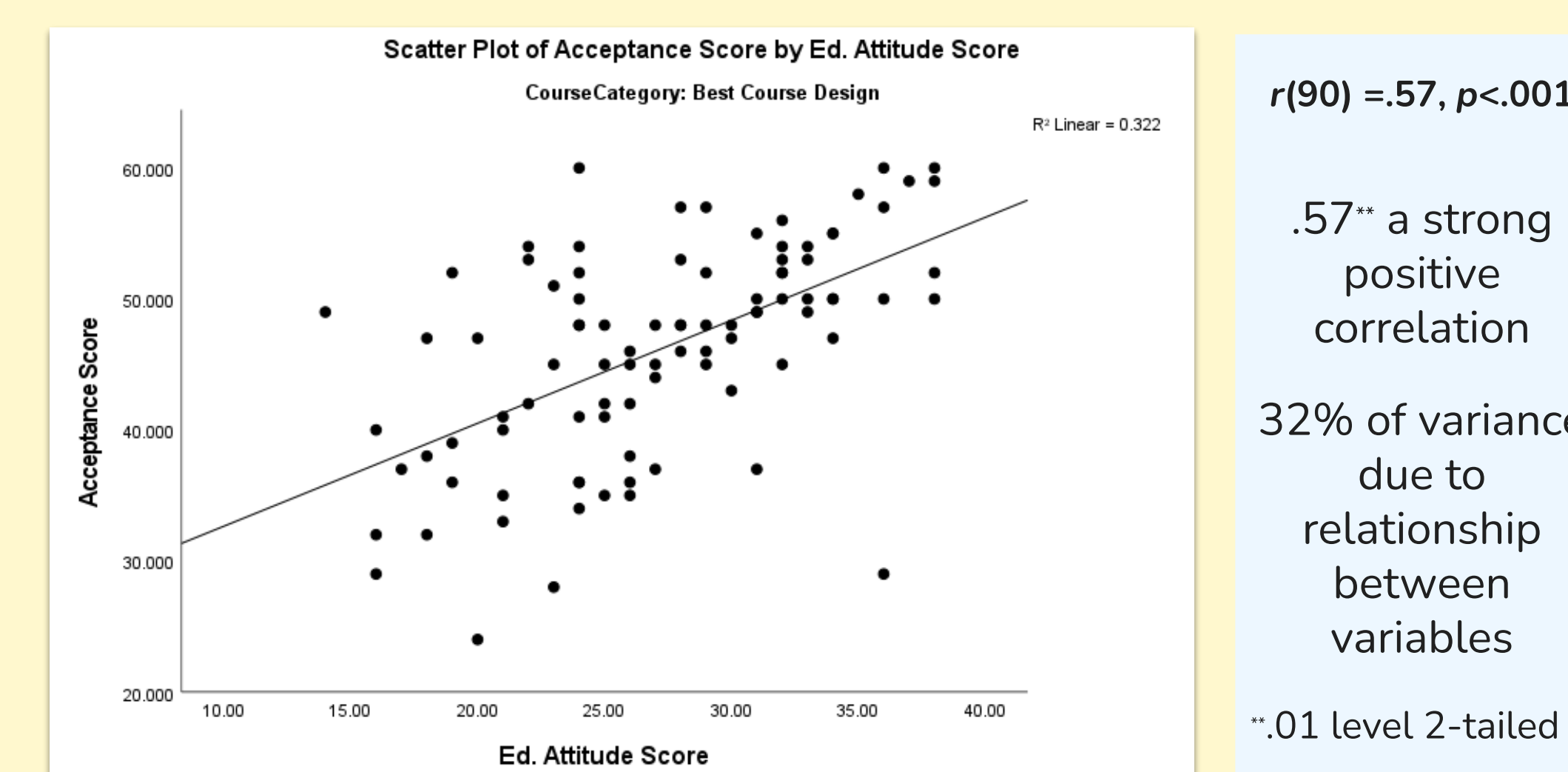Student acceptance had a moderate-to-strong positive relationship with perceived educator attitude.

- Supports hypothesis that students with a positive perception of educator attitude will be more accepting of digital learning environments, regardless of the student's opinion of course design.
- Previous experience did not mediate the influence of educator attitude as predicted.
- Both educators and faculty may benefit from considering how the perception of their opinions and beliefs affect student acceptance of digital learning environments.
- Further research targeting a student's pre-existing openness to online education and the extent to which it informs their estimation of an educator's attitude is suggested. It is possible that this variable is responsible for correlation measured in the current study.
- This research is limited by a sample bias towards women & course experiences at California State University, Stanislaus.

References

Alshorman, B. A., & Bawaneh, A. K. (2018). Attitudes of faculty members and students towards the use of the Learning Management System in teaching and learning. *TOJET: The Turkish Online Journal of Educational Technology, 17*(3), 1–15.

Andrews Graham, D. (2019). Benefits of online teaching for face-to-face teaching at historically black colleges and universities. *Online Learning, 23*(1), 144–163. https://doi.org/10.24059/olj.v23i1.1435

Besser, A., Flett, G. L., & Zeigler-Hill, V. (2020). Adaptability to a sudden transition to online learning during the COVID-19 pandemic: Understanding the challenges for students. *Scholarship of Teaching and Learning in Psychology*. Advance online publication. https://doi.org/10.1037/stl0000198

Gurley, L. E. (2018). Educators' preparation to teach, perceived teaching presence, and perceived teaching presence behaviors in blended and online learning environments. *Online Learning, 22*(2), 197–220. https://doi.org/10.24059/olj.v22i2.1255

Guruaja, C. S. (2021, July 19). *Teacher's Attitude towards Online Teaching* [Conference session]. New Education Policy: A Quality Enhancer for Inculcation of Human Values in Higher Education Institutions. http://www.researchgate.net/publication/353336812_Teachers_Attitude_towards_Online_Teaching#read

Kisanga, D. H., & Ireson, G. (2016). Test of e-Learning Related Attitudes (TeLRA) scale: Development, reliability and validity study. *International Journal of Education and Development using Information and Communication Technology, 12*(1), 20–36. http://ijedict.dec.uwi.edu/viewarticle.php?id=2087

Paul, M. W., Torgerson, C., Tracz, S., Coy, K., & Wahleithner, J. (2020). Engaging the control-value theory: A new era of student response systems and formative assessment to improve student achievement. *Research in Learning Technology, 28*, Article 2454. https://doi.org/10.25304/rlt.v28.2454

Swan, K. (2003). Learning effectiveness online: What the research tells us. In J. Bourne & J. C. Moore (Eds.), *Elements of quality online education: Practice and direction* (pp. 13–45). Olin College - Sloan-C.

Acknowledgements