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Behavioral Intention for AI Usage in Higher Education

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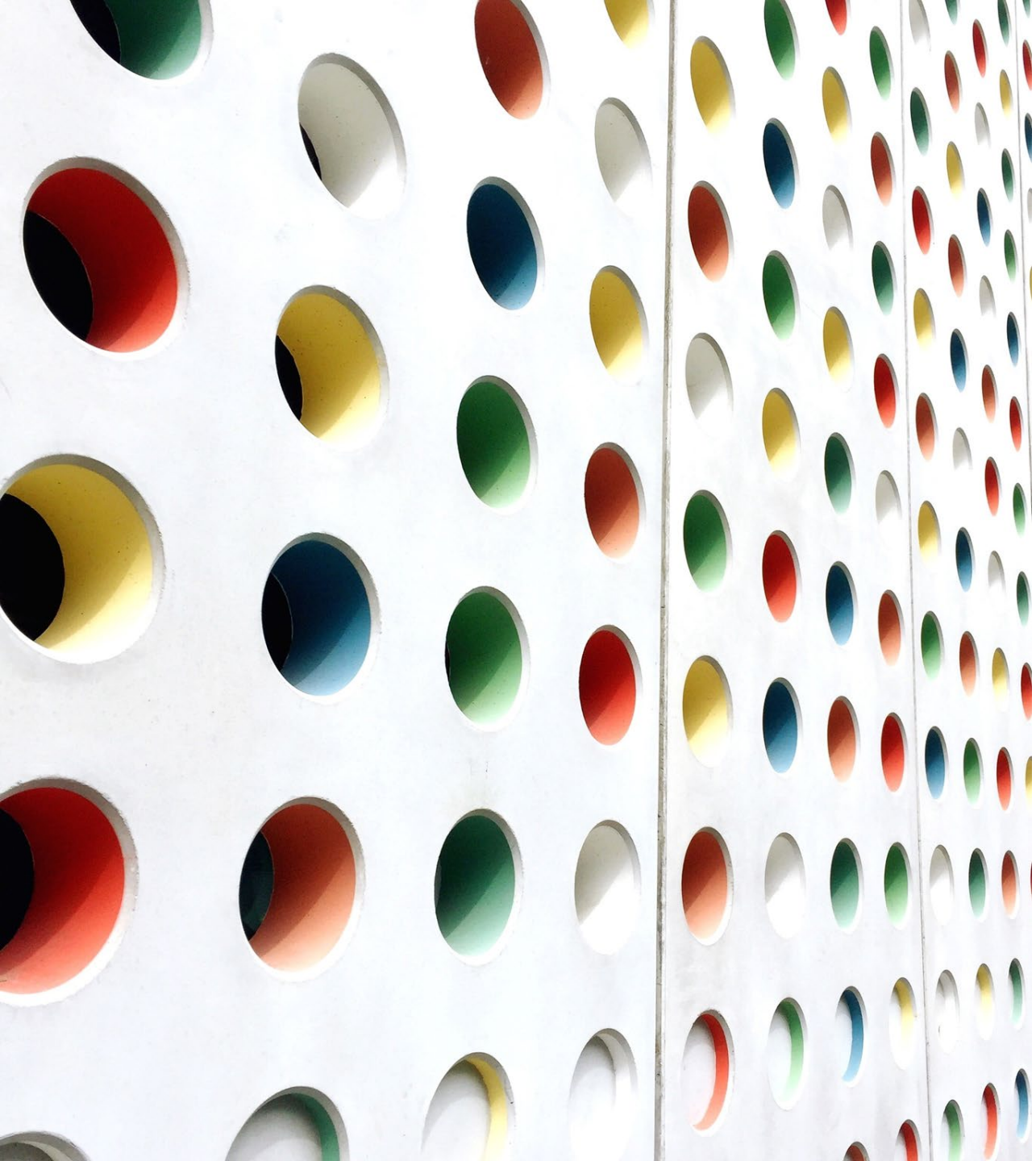
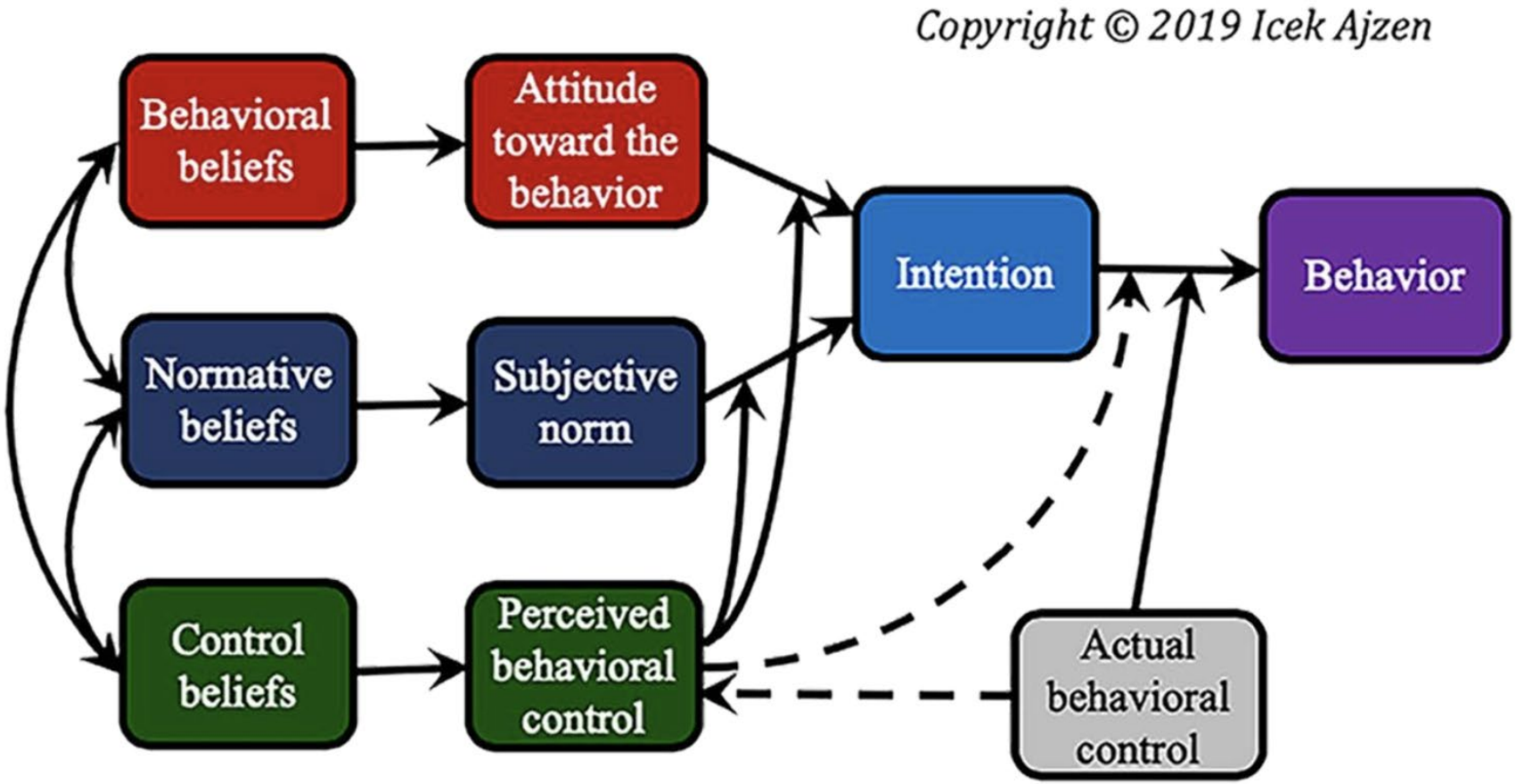


Planned Behavior and AI Usage

ISAAC ODAI & ELLIOT WILEY



Introduction

- AI is pressing issue in higher ed. – students can generate written content.
- While many students are quick to adopt it as an academic tool, others have been reluctant to use it.
- Understanding the factors influencing their decision-making process can be useful for teaching and further research.

Theory of Planned Behavior

TPB - people are “more likely to perform behaviors that are perceived to

(1) yield positive outcomes,

(2) be normatively desirable, and

(3) involve controllable behavioral processes and outcomes,” (Chai et al., 2021).

Our study is inspired by research conducted by Ching Sing Chai et al.

- (Acceptance of AI technology)
- (Intention to learn how to use AI tech for school)

Survey:

- Concepts measured on 5-point Likert scales.
- 1 “strongly disagree” to 5, “strongly agree,
- or from 1, “extremely unlikely” to 5, “extremely likely” for BI

Hypotheses:

(BI = Behavioral Intention)

H1:
ATTITUDE IS POSITIVELY CORRELATED WITH BI

H2:
SUBJECTIVE NORMS ARE POSITIVELY CORRELATED WITH BI

H3:
SELF-EFFICACY IS NEGATIVELY CORRELATED WITH BI

Method

5-Point Scales:

ATTITUDE

7 questions

SUBJECTIVE NORMS

6 questions

SELF-EFFICACY

6 questions

BEHAVIORAL INTENTION

4 questions

Consequences:
(Personal + "social good")

Results

Attitude: Positive Correlation, Significant! ☺

Correlations

		Combined attitude scale with social good questions	Combined BI Scale
Combined attitude scale with social good questions	Pearson Correlation	1	.577**
	Sig. (2-tailed)		<.001
	N	35	34
Combined BI Scale	Pearson Correlation	.577**	1
	Sig. (2-tailed)	<.001	
	N	34	43

**. Correlation is significant at the 0.01 level (2-tailed).

(Pearson's Correlation)

BEHAVIORAL INTENTION
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
0.00
1.00
2.00
3.00
4.00
5.00
ATTITUDE

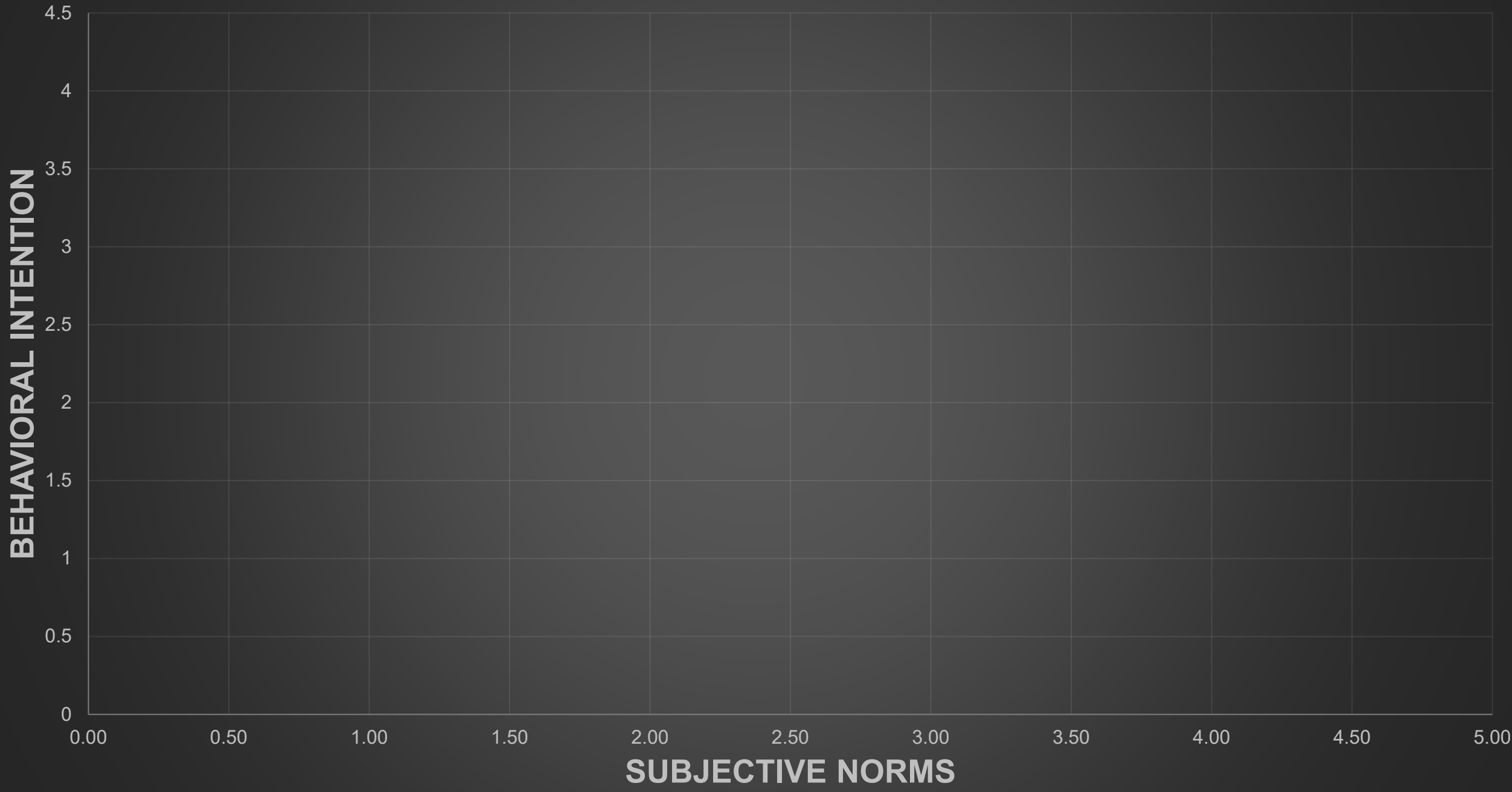
Subjective Norms: Positive Correlation, Significant! ☺

Correlations

		Combined social norms scale with 1st set of repeated reverse-coded questions	Combined BI Scale
Combined social norms scale with 1st set of repeated reverse-coded questions	Pearson Correlation	1	.325*
	Sig. (2-tailed)		.033
	N	45	43
Combined BI Scale	Pearson Correlation	.325*	1
	Sig. (2-tailed)	.033	
	N	43	43

*. Correlation is significant at the 0.05 level (2-tailed).

(Pearson's Correlation)


BEHAVIORAL INTENTION
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
0.00
0.50
1.00
1.50
2.00
2.50
3.00
3.50
4.00
4.50
5.00
SUBJECTIVE NORMS

Self-Efficacy: Negative Correlation, not significant ☹

Correlations

		Combined Self-Efficacy	Combined BI Scale
Combined Self-Efficacy	Pearson Correlation	1	-.155
	Sig. (2-tailed)		.322
	N	45	43
Combined BI Scale	Pearson Correlation	-.155	1
	Sig. (2-tailed)	.322	
	N	43	43

(Pearson's Correlation)

BEHAVIORAL INTENTION
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
0.00
1.00
2.00
3.00
4.00
5.00
SELF-EFFICACY

Discussion – Differences From Literature

Attitude – Consistent with both of Chai et al.'s studies (2020, 2021).

Subjective Norms

- Saxena and Doleck (2023) found no relationship between subjective norms and BI.
- Chai et al. (2020) relegated subjective norms to a background factor of BI.
- Difference could be due to sample size and analysis methods.

Self-Efficacy

- Chai et al. (2022) found significant positive relationship self-efficacy and BI - supported by previous research (Garland & Noyes, 2005; Lee, 2010).
- Probably due to them measuring intent to learn instead of intent to use a learning-assistive technology.

Limitations

Time constraints

Repeated questions

(Intended for 1st instance to be deleted. 2nd instance separated for ease of recoding.)

People who are important to me...

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
are using generative AI applications.	○	○	○	○	○
think I should use generative AI applications.	○	○	○	○	○
encourage the use of generative AI applications.	○	○	○	○	○
think it is necessary to learn about generative AI technology.	○	○	○	○	○
consider it to be cheating when using generative AI to complete assignments.	○	○	○	○	○
consider the use of generative AI to be an act of theft.	○	○	○	○	○

Q58

People who are important to me...

	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
consider it to be cheating when using generative AI to complete assignments.	○	○	○	○	○
consider the use of generative AI to be an act of theft.	○	○	○	○	○

Conclusion

2/3 hypotheses supported!

Generative AI is new and requires more research.

We hope to provide a helpful framework for future research on navigating the effect new AI technologies have in academic settings!

Thank you!