

Examining Students' Perceptions and Satisfactions in Blended Learning

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Blended learning
involves face-to-face learning with
online or technology-delivered
contents.

Research Gap and Objective

Research Gap:

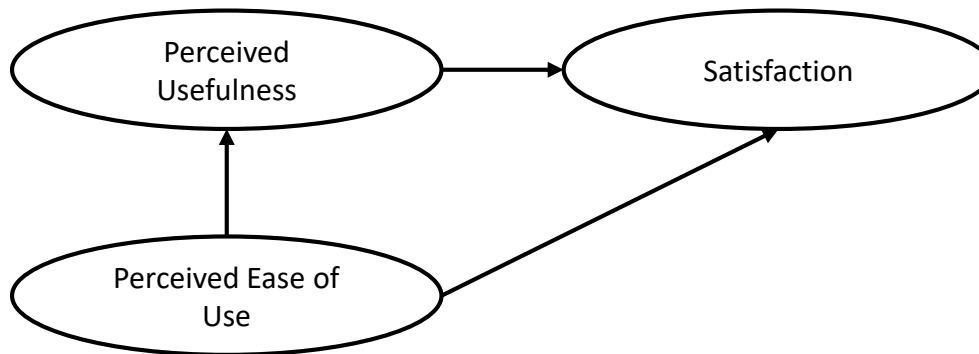
- The applications and empirical investigations of blended learning on sub-degree students are largely unexplored

Research Objective:

- To investigate blended learning among associate degree students in Hong Kong

Literature & Hypotheses

- Davis' Technology Acceptance Model (TAM) was adopted to examine two important perception factors in affecting one's satisfaction and continuance adoption of blended learning.



Literature & Hypotheses

- The two important perceptions highlighted in TAM are perceived ease of use and perceived usefulness (Davis, 1989).
- Empirical evidence showed that these two perceptions can jointly influence one's intended acceptance of a new technological system, for instance, in the context of **blended learning**, Padilla-Meléndez, Del Aguila-Obra, and Garrido-Moreno (2013).
- *Perceived ease of use* represents the extent that people perceive the technological system they adopted is free of physical and mental effort (Davis, 1989).
- *Perceived usefulness* indicates the extent that people perceive the technological system they adopted can assist enhancing their performance (Davis, 1989).

Literature & Hypotheses

- The **perceived ease of use** was found to have positive effect on the **perceived usefulness**
 - In massive open online courses (Chen, 2017)
 - among Greek blended learning users (Tselios, Daskalakis, & Papadopoulou, 2011).

H1: Perceived ease of use has a positive effect on perceived usefulness in using blended learning.

Literature & Hypotheses

- Both **perceived ease of use** and **perceived usefulness** positively and significantly predicted **higher satisfaction** levels towards:
 - blended learning among Iraqi learners (Al-Azawei, Parslow, & Lundqvist, 2017)
 - an e-learning system (Roca, Chiu, & Martínez, 2006)
 - massive open online courses (Joo, So, & Kim, 2018)

H2: Perceived ease of use has a positive effect on satisfaction in using blended learning.

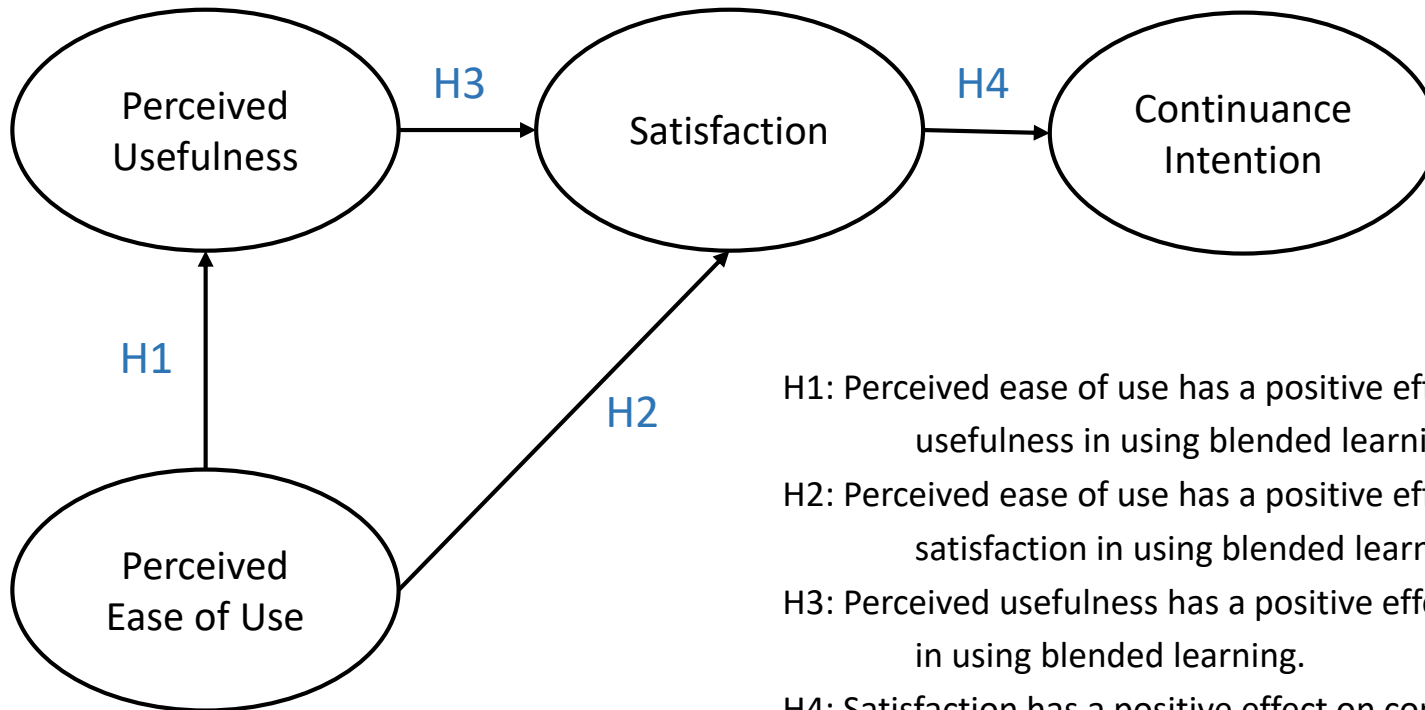
H3: Perceived usefulness has a positive effect on satisfaction in using blended learning.

Literature & Hypotheses

- Students' **satisfaction** with blended learning positively contributed to their **intended use** of
 - blended learning in Iraq (Al-Azawei, Parslow and colleague, 2017)
 - blended learning in Morocco (Yeou, 2016)
 - mobile Internet system (Zhou, 2011)
 - web-based learning platform (Chiu & Wang, 2008)
- The **mediating role of satisfaction** has been well-established between the effects of perceived ease of use and usefulness on the continuance intention in the contexts of e-learning system (Roca, Chiu, & Martínez, 2006) and massive open online courses (Joo, So, & Kim, 2018).

H4: Satisfaction has a positive effect on continuance intention to use blended learning.

Conceptual Model & Hypotheses



- H1: Perceived ease of use has a positive effect on perceived usefulness in using blended learning.
- H2: Perceived ease of use has a positive effect on satisfaction in using blended learning.
- H3: Perceived usefulness has a positive effect on satisfaction in using blended learning.
- H4: Satisfaction has a positive effect on continuance intention to use blended learning.

A path analytic model was established and tested with maximum likelihood estimation.

Methodology

Cross-sectional Survey

Sample Size: 145

Associate Degree
Students

Focus Group Study

Sample Size: 5

Respondents of the
Survey

Measures

| Construct | Sources | No. of Items | Scale of Measurement | Reliability (α) |
|-----------------------|----------------------|--------------|----------------------|--------------------------|
| Perceived Ease of Use | Davis (1989) | 4 | 5-point Likert Scale | .96 |
| Perceived Usefulness | Davis (1989) | 5 | 5-point Likert Scale | .96 |
| Satisfaction | Bhattacharjee (2001) | 3 | 5-point Likert Scale | .95 |
| Continuance Intention | Taylor & Todd (1995) | 3 | 5-point Likert Scale | .95 |

Procedures

Subject Selected for Investigation

- “Financial Management”, which is an elective subject in Business programmes

Topics Adopted Blended Learning

- Time Value of Money
- Discounted Cash Flow Valuation

Types of Learning Methods Used

- Face-to-face lectures
- Online learning
- Facebook live discussion

Participants

Number of Participants

- 145 Associate Degree students studying in a self-financed tertiary education institution

Age Distribution

- 93.8% aged 18 to 22
- 3.4% aged 23 or above

Year of Study

- 61.4% Year 1
- 36.5% Year 2

Programme

- 98.6% Business programmes
- 1.4% others

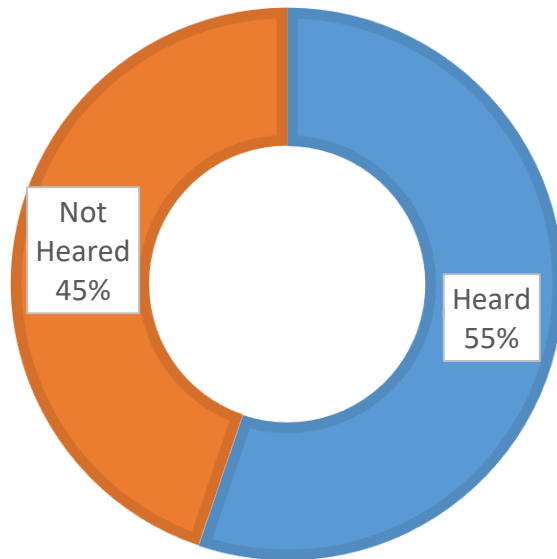
Blended Learning Experience

- 55.2% heard blended learning
- 53.1% used blended learning

Participants

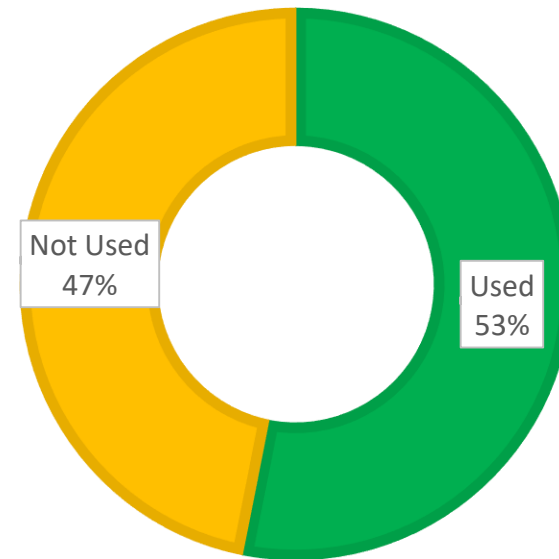
PERCENTAGES OF STUDENTS
HEARD BLENDED LEARNING

■ Heard ■ Not Heard



PERCENTAGES OF STUDENTS
USED BLENDED LEARNING

■ Used ■ Not Used

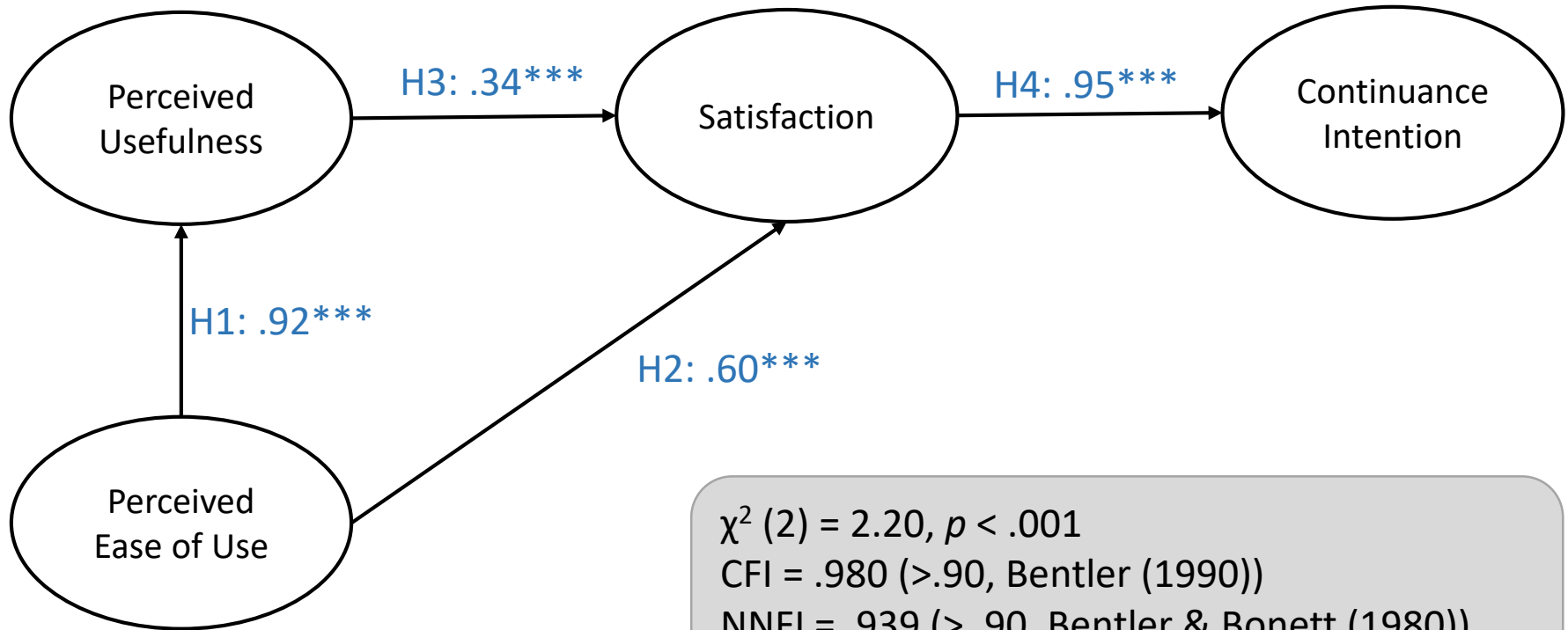


Results of Descriptive Statistics & Bivariate Correlations

| | Mean (SD) | 1 | 2 | 3 | 4 |
|--------------------------|---------------|----|--------|--------|--------|
| 1. Perceived Ease of Use | 3.814 (1.001) | -- | .92*** | .91*** | .91*** |
| 2. Perceived Usefulness | 3.876 (1.031) | -- | -- | .89*** | .89*** |
| 3. Satisfaction | 3.798 (0.999) | -- | -- | -- | .95*** |
| 4. Continuance Intention | 3.798 (1.003) | -- | -- | -- | -- |

*** $P < 0.001$

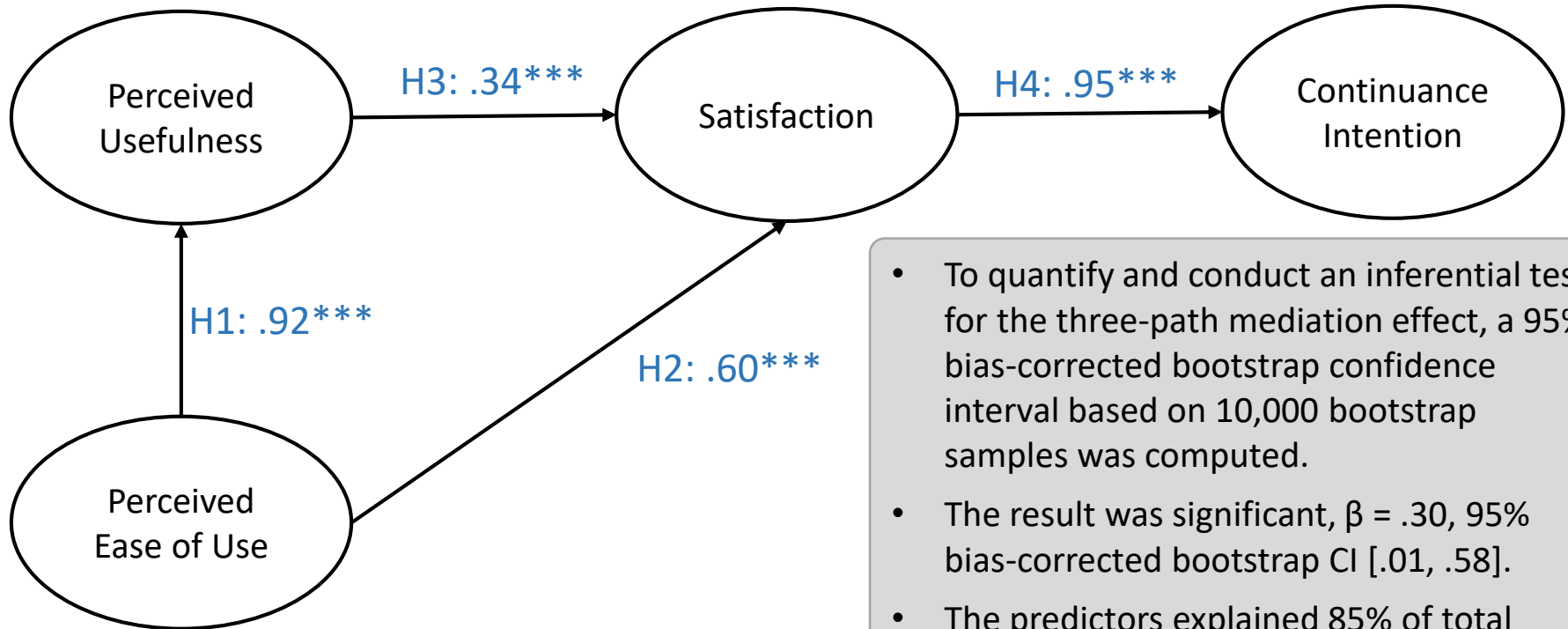
Results



$\chi^2 (2) = 2.20, p < .001$
CFI = .980 (>.90, Bentler (1990))
NNFI = .939 (> .90, Bentler & Bonett (1980))
SRMR = .016 (< .08, Hu & Bentler, (1998))

*** $P < 0.001$

Results



- To quantify and conduct an inferential test for the three-path mediation effect, a 95% bias-corrected bootstrap confidence interval based on 10,000 bootstrap samples was computed.
- The result was significant, $\beta = .30$, 95% bias-corrected bootstrap CI [.01, .58].
- The predictors explained 85% of total variance in perceived usefulness, 84% of total variance in satisfaction and 91% of total variance in continuance intention.

*** $P < 0.001$

Results of Hypotheses

H1: Perceived ease of use has a positive effect on perceived usefulness in using blended learning.

(Supported)

H2: Perceived ease of use has a positive effect on satisfaction in using blended learning. (Supported)

H3: Perceived usefulness has a positive effect on satisfaction in using blended learning. (Supported)

H4: Satisfaction has a positive effect on continuance intention to use blended learning. (Supported)

Results of Focus Group Discussion

- Possible effect of other factors on students' perception, satisfaction with the use of blended learning, students' motivation and engagement in learning, e.g.
 - Subject difficulty
 - Subject nature

Conclusion

- Students' satisfaction was found to mediate the relationships between perceived ease of use, perceived usefulness their intended use of blended learning.
- The results were generalized to the blended learning among associate degree students in Hong Kong.

Limitations & Future Research Recommendations

Limitations:

- Small sample size
- One subject involved in investigation
- Four constructs adopted in the model

Future Research:

- Larger sample size
- Test the same model in other subjects
- Other factors could be considered to understand more about blended learning, e.g. students' motivation to learn, learning style, engagement, previous learning experiences, online learning behaviours, behavioural metrics, etc.

Thank

You