

HYPOTHESIS 1

Reliability

[DataSet1] /Users/joellecho/Documents/Documents - Joelle's MacBook Air (2)/2022-2023/22fall/bus2138/proj_final/BUS2_G8_Survey_November 27, 2022_15.10.sav

Scale: ALL VARIABLES

Case Processing Summary

| | | N | % |
|-------|-----------------------|----|-------|
| Cases | Valid | 62 | 92.5 |
| | Excluded ^a | 5 | 7.5 |
| | Total | 67 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

| Cronbach's Alpha | N of Items |
|------------------|------------|
| .873 | 3 |

Item-Total Statistics

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
|---|----------------------------|--------------------------------|----------------------------------|----------------------------------|
| [Starting Question] Opinion/Preference regarding Metaverse in general - 2) I would like to see more applications of metaverse in my daily life. | 6.19 | 5.011 | .766 | .816 |
| [Starting Question] Opinion/Preference regarding Metaverse in general - 3) I think that Metaverse will maximize the communication in virtual reality. | 5.66 | 4.752 | .709 | .865 |
| [Starting Question] Opinion/Preference regarding Metaverse in general - 4) I would like to use metaverse in the near future | 6.02 | 4.410 | .801 | .779 |

According to the Cronbach Alpha if Item deleted, new variable "h1_dv1" was created using all three attributes.

$$h1_dv1 = (Q1-2-2 + Q1-2-3 + Q1-2-4)/3$$

Regression

Variables Entered/Removed^a

| Model | Variables Entered | Variables Removed | Method |
|-------|---|-------------------|--------|
| 1 | [Starting Question] Opinion/Preference regarding Metaverse in general - 1) I think metaverse is effective in general ^b | . | Enter |

a. Dependent Variable: h1_dv1

b. All requested variables entered.

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .635 ^a | .403 | .393 | .82110 |

a. Predictors: (Constant), [Starting Question] Opinion/Preference regarding Metaverse in general - 1) I think metaverse is effective in general

ANOVA^a

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|----|-------------|--------|--------------------|
| 1 | Regression | 27.297 | 1 | 27.297 | 40.488 | <.001 ^b |
| | Residual | 40.452 | 60 | .674 | | |
| | Total | 67.749 | 61 | | | |

a. Dependent Variable: h1_dv1

b. Predictors: (Constant), [Starting Question] Opinion/Preference regarding Metaverse in general - 1) I think metaverse is effective in general

Coefficients^a

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t |
|-------|--|-----------------------------|------------|---------------------------|-------|
| | | B | Std. Error | Beta | |
| 1 | (Constant) | .760 | .364 | | 2.087 |
| | [Starting Question] Opinion/Preference regarding Metaverse in general - 1) I think metaverse is effective in general | .769 | .121 | .635 | 6.363 |

Coefficients^a

| Model | | Sig. |
|-------|--|-------|
| 1 | (Constant) | .041 |
| | [Starting Question] Opinion/Preference regarding Metaverse in general - 1) I think metaverse is effective in general | <.001 |

a. Dependent Variable: h1_dv1

(After Scenario)

Reliability

Scale: ALL VARIABLES

Case Processing Summary

| | | N | % |
|-------|-----------------------|----|-------|
| Cases | Valid | 62 | 92.5 |
| | Excluded ^a | 5 | 7.5 |
| | Total | 67 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

| Cronbach's Alpha | N of Items |
|------------------|------------|
| .925 | 3 |

Item-Total Statistics

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
|---|----------------------------|--------------------------------|----------------------------------|----------------------------------|
| [Ending Question] Opinion/Preference Regarding Metaverse in general - 2) I would like to see more applications of metaverse in my daily life. | 6.68 | 5.075 | .880 | .866 |
| [Ending Question] Opinion/Preference Regarding Metaverse in general - 3) I think that Metaverse will maximize the communication in virtual reality. | 6.42 | 6.051 | .772 | .950 |
| [Ending Question] Opinion/Preference Regarding Metaverse in general - 4) I would like to use metaverse in the near future | 6.52 | 5.237 | .899 | .850 |

According to the Cronbach's Alpha if Item deleted number, the new variables were made using all three attributes again.

$$h1_dv2 = (Q4_2 + Q4_3 + Q4_4) / 3$$

Regression

Variables Entered/Removed^a

| Model | Variables Entered | Variables Removed | Method |
|-------|---|-------------------|--------|
| 1 | [Ending Question] Opinion/Preference Regarding Metaverse in general - 1) I think metaverse is effective in general ^b | . | Enter |

a. Dependent Variable: h1_dv2

b. All requested variables entered.

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .772 ^a | .596 | .589 | .73502 |

a. Predictors: (Constant), [Ending Question] Opinion/Preference Regarding Metaverse in general - 1) I think metaverse is effective in general

ANOVA^a

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|----|-------------|--------|--------------------|
| 1 | Regression | 47.771 | 1 | 47.771 | 88.424 | <.001 ^b |
| | Residual | 32.415 | 60 | .540 | | |
| | Total | 80.186 | 61 | | | |

a. Dependent Variable: h1_dv2

b. Predictors: (Constant), [Ending Question] Opinion/Preference Regarding Metaverse in general - 1) I think metaverse is effective in general

Coefficients^a

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t |
|-------|--|-----------------------------|------------|---------------------------|-------|
| | | B | Std. Error | Beta | |
| 1 | (Constant) | .255 | .334 | | .764 |
| | [Ending Question] Opinion/Preference Regarding Metaverse in general - 1) I think metaverse is effective in general | .886 | .094 | .772 | 9.403 |

Coefficients^a

| Model | | Sig. |
|-------|--|-------|
| 1 | (Constant) | .448 |
| | [Ending Question] Opinion/Preference Regarding Metaverse in general - 1) I think metaverse is effective in general | <.001 |

a. Dependent Variable: h1_dv2

HYPOTHESIS 2

T-Test

Paired Samples Statistics

| | | Mean | N | Std. Deviation | Std. Error Mean |
|--------|---|------|----|----------------|-----------------|
| Pair 1 | Brands with or without Metaverse - 1) I am familiar with the brands that uses metaverse for their promotion | 2.71 | 62 | 1.246 | .158 |
| | [After watching Nikeland Video] - 1) After watching this video, I feel like I would like to learn more about the brand's metaverse platform | 3.31 | 62 | 1.034 | .131 |
| Pair 2 | Brands with or without Metaverse - 3) I would be more interested if company/brand uses metaverse for their promotion. | 2.61 | 62 | 1.092 | .139 |
| | [After watching Nikeland Video] - 3) I think using metaverse would be effective for company's promotion | 3.53 | 62 | 1.097 | .139 |

Paired Samples Correlations

| | | N | Correlation | Significance | |
|--------|---|----|-------------|--------------|-------------|
| | | | | One-Sided p | Two-Sided p |
| Pair 1 | Brands with or without Metaverse - 1) I am familiar with the brands that uses metaverse for their promotion & [After watching Nikeland Video] - 1) After watching this video, I feel like I would like to learn more about the brand's metaverse platform | 62 | -.184 | .076 | .152 |
| Pair 2 | Brands with or without Metaverse - 3) I would be more interested if company/brand uses metaverse for their promotion. & [After watching Nikeland Video] - 3) I think using metaverse would be effective for company's promotion | 62 | .572 | <.001 | <.001 |

Paired Samples Test

| | | Paired Differences | | | |
|--------|---|--------------------|----------------|-----------------|-----------------------------|
| | | Mean | Std. Deviation | Std. Error Mean | 95% Confidence ... Lower |
| Pair 1 | Brands with or without Metaverse - 1) I am familiar with the brands that uses metaverse for their promotion - [After watching Nikeland Video] - 1) After watching this video, I feel like I would like to learn more about the brand's metaverse platform | -.597 | 1.760 | .223 | -1.044 |
| Pair 2 | Brands with or without Metaverse - 3) I would be more interested if company/brand uses metaverse for their promotion. - [After watching Nikeland Video] - 3) I think using metaverse would be effective for company's promotion | -.919 | 1.013 | .129 | -1.177 |

Paired Samples Test

| | | Paired ... 95% Confidence Interval of the... | t | df | Significance One-Sided p |
|--------|---|--|--------|----|-----------------------------|
| | Upper | | | | |
| Pair 1 | Brands with or without Metaverse - 1) I am familiar with the brands that uses metaverse for their promotion - [After watching Nikeland Video] - 1) After watching this video, I feel like I would like to learn more about the brand's metaverse platform | -.150 | -2.670 | 61 | .005 |
| Pair 2 | Brands with or without Metaverse - 3) I would be more interested if company/brand uses metaverse for their promotion. - [After watching Nikeland Video] - 3) I think using metaverse would be effective for company's promotion | -.662 | -7.146 | 61 | <.001 |

Paired Samples Test

| | | Significance Two-Sided p |
|--------|---|-----------------------------|
| Pair 1 | Brands with or without Metaverse - 1) I am familiar with the brands that uses metaverse for their promotion - [After watching Nikeland Video] - 1) After watching this video, I feel like I would like to learn more about the brand's metaverse platform | .010 |
| Pair 2 | Brands with or without Metaverse - 3) I would be more interested if company/brand uses metaverse for their promotion. - [After watching Nikeland Video] - 3) I think using metaverse would be effective for company's promotion | <.001 |

Paired Samples Effect Sizes

| | | | Standardizer ^a | Point Estimate | 95% ... Lower |
|--------|---|--------------------|---------------------------|----------------|------------------|
| Pair 1 | Brands with or without Metaverse - 1) I am familiar with the brands that uses metaverse for their promotion - [After watching Nikeland Video] - 1) After watching this video, I feel like I would like to learn more about the brand's metaverse platform | Cohen's d | 1.760 | -.339 | -.594 |
| | | Hedges' correction | 1.782 | -.335 | -.587 |
| Pair 2 | Brands with or without Metaverse - 3) I would be more interested if company/brand uses metaverse for their promotion. - [After watching Nikeland Video] - 3) I think using metaverse would be effective for company's promotion | Cohen's d | 1.013 | -.908 | -1.201 |
| | | Hedges' correction | 1.026 | -.896 | -1.186 |

Paired Samples Effect Sizes

| | | | 95% ... Upper |
|--------|---|--------------------|------------------|
| Pair 1 | Brands with or without Metaverse - 1) I am familiar with the brands that uses metaverse for their promotion - [After watching Nikeland Video] - 1) After watching this video, I feel like I would like to learn more about the brand's metaverse platform | Cohen's d | -.082 |
| | | Hedges' correction | -.081 |
| Pair 2 | Brands with or without Metaverse - 3) I would be more interested if company/brand uses metaverse for their promotion. - [After watching Nikeland Video] - 3) I think using metaverse would be effective for company's promotion | Cohen's d | -.609 |
| | | Hedges' correction | -.601 |

a. The denominator used in estimating the effect sizes.

Cohen's d uses the sample standard deviation of the mean difference.

Hedges' correction uses the sample standard deviation of the mean difference, plus a correction factor.

HYPOTHESIS 3

Reliability

Scale: ALL VARIABLES

Case Processing Summary

| | | N | % |
|-------|-----------------------|----|-------|
| Cases | Valid | 62 | 92.5 |
| | Excluded ^a | 5 | 7.5 |
| | Total | 67 | 100.0 |

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

| Cronbach's Alpha | N of Items |
|------------------|------------|
| .789 | 3 |

Item-Total Statistics

| | Scale Mean if Item Deleted | Scale Variance if Item Deleted | Corrected Item-Total Correlation | Cronbach's Alpha if Item Deleted |
|---|----------------------------|--------------------------------|----------------------------------|----------------------------------|
| [After watching the "Education in Metaverse" youtube video] - 1) I am familiar with the metaverse in education industry | 6.92 | 3.715 | .498 | .849 |
| [After watching the "Education in Metaverse" youtube video] - 2) Education using metaverse seems more interesting than the one doesn't | 6.55 | 3.235 | .701 | .636 |
| [After watching the "Education in Metaverse" youtube video] - 3) I think the application of metaverse in education industry would maximize the effectiveness of education. | 6.66 | 3.146 | .701 | .633 |

According to the reliability test results, the new variable was created using Q3- 3- 2 and Q3- 3- 3

$$h3_iv = (Q3_3_2 + Q3_3_3) / 2$$

Regression

Variables Entered/Removed^a

| Model | Variables Entered | Variables Removed | Method |
|-------|--------------------|-------------------|--------|
| 1 | h3_iv ^b | . | Enter |

a. Dependent Variable: [After watching the "Education in Metaverse" youtube video] - 4) I would choose education using metaverse platform over the one without it.

b. All requested variables entered.

Model Summary

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1 | .748 ^a | .560 | .552 | .785 |

a. Predictors: (Constant), h3_iv

ANOVA^a

| Model | | Sum of Squares | df | Mean Square | F | Sig. |
|-------|------------|----------------|----|-------------|--------|--------------------|
| 1 | Regression | 46.966 | 1 | 46.966 | 76.222 | <.001 ^b |
| | Residual | 36.970 | 60 | .616 | | |
| | Total | 83.935 | 61 | | | |

a. Dependent Variable: [After watching the "Education in Metaverse" youtube video] - 4) I would choose education using metaverse platform over the one without..

b. Predictors: (Constant), h3_iv

Coefficients^a

| Model | | Unstandardized Coefficients | | Standardized Coefficients | t | Sig. |
|-------|------------|-----------------------------|------------|---------------------------|-------|-------|
| | | B | Std. Error | Beta | | |
| 1 | (Constant) | -.118 | .374 | | -.315 | .754 |
| | h3_iv | .911 | .104 | .748 | 8.731 | <.001 |

a. Dependent Variable: [After watching the "Education in Metaverse" youtube video] - 4) I would choose education using metaverse platform over the one without it.

HYPOTHESIS 4

T-Test

[DataSet1] /Users/joellecho/Documents/Documents - Joelle's MacBook Air (2)/2022-2023/22fall/bus2138/proj_final/BUS2_G8_Survey_November 27, 2022_15.10.sav

Paired Samples Statistics

| | | Mean | N | Std. Deviation | Std. Error Mean |
|--------|--|------|----|----------------|-----------------|
| Pair 1 | Opinion/Preference about metaverse in Education Industry - 1) I am familiar with the metaverse in education industry | 2.15 | 62 | 1.213 | .154 |
| | [After watching the "Education in Metaverse" youtube video] - 1) I am familiar with the metaverse in education industry | 3.15 | 62 | 1.053 | .134 |

Paired Samples Correlations

| | | N | Correlation | Significance | |
|--------|---|----|-------------|--------------|-------------|
| | | | | One-Sided p | Two-Sided p |
| Pair 1 | Opinion/Preference about metaverse in Education Industry - 1) I am familiar with the metaverse in education industry & [After watching the "Education in Metaverse" youtube video] - 1) I am familiar with the metaverse in education industry | 62 | .355 | .002 | .005 |

Paired Samples Test

| | | Paired Differences | | | 95% Confidence ... |
|--------|---|--------------------|----------------|-----------------|--------------------|
| | | Mean | Std. Deviation | Std. Error Mean | Lower |
| Pair 1 | Opinion/Preference about metaverse in Education Industry - 1) I am familiar with the metaverse in education industry - [After watching the "Education in Metaverse" youtube video] - 1) I am familiar with the metaverse in education industry | -1.000 | 1.293 | .164 | -1.328 |

Paired Samples Test

| | | Paired ... | | | Significance |
|--------|---|-----------------------------------|--------|----|--------------|
| | | 95% Confidence Interval of the... | | | One-Sided p |
| | | Upper | t | df | |
| Pair 1 | Opinion/Preference about metaverse in Education Industry - 1) I am familiar with the metaverse in education industry - [After watching the "Education in Metaverse" youtube video] - 1) I am familiar with the metaverse in education industry | -.672 | -6.089 | 61 | <.001 |

Paired Samples Test

| | | Significance |
|--------|---|--------------|
| | | Two-Sided p |
| Pair 1 | Opinion/Preference about metaverse in Education Industry - 1) I am familiar with the metaverse in education industry - [After watching the "Education in Metaverse" youtube video] - 1) I am familiar with the metaverse in education industry | <.001 |

Paired Samples Effect Sizes

| | | | Standardizer ^a | Point Estimate | 95% ... Lower |
|--------|---|--------------------|---------------------------|----------------|------------------|
| Pair 1 | Opinion/Preference about metaverse in Education Industry - 1) I am familiar with the metaverse in education industry - [After watching the "Education in Metaverse" youtube video] - 1) I am familiar with the metaverse in education industry | Cohen's d | 1.293 | -.773 | -1.055 |
| | | Hedges' correction | 1.309 | -.764 | -1.042 |

Paired Samples Effect Sizes

| | | | 95% ... Upper |
|--------|---|--------------------|------------------|
| Pair 1 | Opinion/Preference about metaverse in Education Industry - 1) I am familiar with the metaverse in education industry - [After watching the "Education in Metaverse" youtube video] - 1) I am familiar with the metaverse in education industry | Cohen's d | -.487 |
| | | Hedges' correction | -.481 |

a. The denominator used in estimating the effect sizes.

Cohen's d uses the sample standard deviation of the mean difference.

Hedges' correction uses the sample standard deviation of the mean difference, plus a correction factor.