

#### دورة

# "بناء الإستبانة خطوة بخطوة"

محاضر الدورة: الدكتور أسامة كمال الدين هنية، دكتوراه في تسويق التعليم من جامعة ماليزيا للتكنولوجيا UTM. ومستشار في مجال التربية والأسس الأكاديمية، ومدير عام مؤسسة المنارة للاستشارات الأكاديمية.

الدورة مقدمة من مؤسسة المنارة للاستشارات الأكاديمية

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- Source of the items
  - The field (Interviews).
  - Previous studies
  - Experts.
  - Standards.



- You need to revise the literature and theories to have a well based knowledge to fit the reliability.
- Develop the items under the Theory's domain.



- Set the dimensions of variables measured in the study
  - How many dimensions should be chosen?
  - What are those dimensions?
  - How many items per dimensions?



- Set the measuring scale.
  - 1 to 5
  - 1 to 7
  - 1 to 10
- Describe the meaning of the scale

| Value | Meaning           |
|-------|-------------------|
| 5     | Strongly agree    |
| 4     | Agree             |
| 3     | Neutral           |
| 2     | Disagree          |
| 1     | Strongly disagree |



| Value | Meaning                       |                              |  |  |
|-------|-------------------------------|------------------------------|--|--|
| value | Expected                      | Perceived                    |  |  |
| 7     | Very high expectation         | Very strong perception       |  |  |
| 6     | High expectation              | Strong perception            |  |  |
| 5     | Above the average expectation | Above the average perception |  |  |
| 4     | Average expectation           | Average perception           |  |  |
| 3     | Below the average expectation | Below the average perception |  |  |
| 2     | Low expectation               | Weak perception              |  |  |
| 1     | Very low expectation          | Very weak perception         |  |  |

**Draft questionnaire is ready for test** 



### **The Pilot Study**

- Surface Validity (Student Content Review)
- Expert Validity
- Reliability (Cronbach's alpha test)



### **Surface Validity**

- Surface Validity (Student Content Review)
  - Linguistic.
  - Structural clarity.
  - Double meaning.
  - *Example*: HEI Acronyms that are not clear for some students.



# **Surface Validity**

Table 3.8 Modified and deleted items

| ISEBaL Construct | Item number | Modification  |  |
|------------------|-------------|---|--|
|                  | 4           | Deleted, because of it similar to 6.  |  |
|                  | 7           | Deleted, because the international students said that they cannot answer this question. |  |
| Reliability      | 9           | Improved  |  |
|                  | 10          | Improved  |  |
|                  | 14          | Improved  |  |
| Assurance        | 1           | Improved  |  |
| Assurance        | 3           | Improved  |  |
|                  | 4           | Improved  |  |
| Tangibles        | 7           | Improved  |  |
|                  | 11          | Deleted, because of it similar to 4   |  |
| Unnings          | 7           | Improved  |  |
| Happiness        | 11          | Improved  |  |
| I overlite:      | 3           | Improved  |  |
| Loyalty          | 8           | Improved  |  |
| Advocate         | 8           | Improved  |  |



#### **Surface Validity**

Table 3.9 Modified double-meaning sentences

| ISEBaL<br>Construct | Item<br>number | Statement before modification  | Statement after modification  |
|---------------------|----------------|--|---|
| Tangibles           | 4              | Malaysian HEI provides motivating learning environment.  | Malaysian universities provide learning environment that facilitates the learning process.                        |
| Advocate            | 3              | If I knew that students facing<br>problems studying in other<br>country, I will invite them to<br>study in Malaysian universities. | I will invite students who face<br>problems studying in other<br>countries to study in<br>Malaysian universities. |



### **Expert Validity**

- Expert Validity
- Cohen's kappa, when assessing the agreement between not more than two raters (experts).
- Fleiss kappa more than two raters.
- Content validation
- Psychometric validation
- Language validation



# **Expert Validity**

Table 3.12 ISEBaL items amendments

| Table 3.12 ISEBaL items amendments |                |  |                             |  |
|------------------------------------|----------------|--|-----------------------------|--|
| ISEBaL<br>Construct                | Item<br>number | Experts' Agreement and<br>Comment                | Modifications               |  |
|                                    | 1              | Expert (2) suggested discarded this item.        | The item was not discarded. |  |
|                                    | 3              | Expert (2) suggested discarded this item.        | The item was not discarded. |  |
|                                    | 6              | Expert (1) suggested modifying the sentence.     | No modifications made.      |  |
|                                    | 7              | Expert (1&2) suggested a minor modification.     | Modified.                   |  |
| Reliability                        | 8              | Expert (1&2&3) suggested a minor modification.   | Modified.                   |  |
| Kenability                         | 9              | Expert (3) suggested a minor modification.       | Modified.                   |  |
|                                    | 10             | Expert (2) suggested a minor modification.       | Modified.                   |  |
|                                    | 11             | Expert (1) suggested a minor modification.       | No modifications made.      |  |
|                                    | 12             | Expert (1&2) suggested modifying the sentence.   | Modified.                   |  |
|                                    | 13             | Expert (1&2&3) suggested modifying the sentence. | Modified.                   |  |
| Assurance                          | 5              | Expert (2) suggested discarded this item         | The item was not discarded  |  |



| k           | Interpretation           |
|-------------|--------------------------|
| < 0         | Poor agreement           |
| 0.01 – 0.20 | Slight agreement         |
| 0.21 – 0.40 | Fair agreement           |
| 0.41 – 0.60 | Moderate agreement       |
| 0.61 – 0.80 | Substantial agreement    |
| 0.81 – 1.00 | Almost perfect agreement |

Table 3.11 Kappa value (k) for each of the ISEBaL constructs

| Variable      | ISEBaL<br>Construct                   | Number of<br>Items    | Kappa<br>Value (k) | Kappa interpretation     |
|---------------|---------------------------------------|-----------------------|--------------------|--------------------------|
|               | Reliability 13 0.68 Substantial agree | Substantial agreement |                    |                          |
|               | Assurance                             | 9                     | 0.92               | Almost perfect agreement |
| Expectation & | Tangibles                             | 12                    | 0.89               | Almost perfect agreement |
| Perception    | Empathy                               | 8                     | 0.91               | Almost perfect agreement |
|               | Responsiveness                        | 10                    | 0.93               | Almost perfect agreement |
|               | All                                   | 52                    | 0.86               | Almost perfect agreement |
|               | Happiness                             | 13                    | 0.84               | Almost perfect agreement |
| T14           | Loyalty                               | 9                     | 0.85               | Almost perfect agreement |
| Loyalty       | Advocate                              | 8                     | 0.83               | Almost perfect agreement |
|               | All                                   | 30                    | 0.84               | Almost perfect agreement |
| Tot           | tal                                   | 82                    | 0.85               | Almost perfect agreement |



### Reliability

- Reliability (Cronbach's alpha test)
  - 0.70 is the threshold value (Phillips, 2011)



# Reliability

Table 3.13 Pilot testing results for expectation (before reduction)

| Construct   | Items # | Item-total correlation | Cronbach alpha if<br>Item excluded | Alpha |
|-------------|---------|------------------------|------------------------------------|-------|
| Reliability | 1       | .687                   | .905                               | .913  |
|             | 2       | .761                   | .901                               |       |
|             | 3       | .507                   | .912                               |       |
|             | 4       | .606                   | .908                               |       |
|             | 5       | .695                   | .907                               |       |
|             | 6       | .628                   | .907                               |       |
|             | 7       | .793                   | .902                               |       |
|             | 8       | .678                   | .905                               |       |
|             | 9       | .612                   | .908                               |       |
|             | 10      | .762                   | .902                               |       |
|             | 11      | .625                   | .907                               |       |
|             | 12      | .686                   | .905                               |       |
|             | 13      | .391                   | .917                               |       |
| Assurance   | 1       | .596                   | .941                               | .939  |
|             | 2       | .674                   | .937                               |       |
|             | 3       | .800                   | .930                               |       |
|             | 4       | .792                   | .931                               |       |
|             | 5       | .853                   | .926                               |       |
|             | 6       | .827                   | .928                               |       |



# Reliability

Table 3.14 Pilot testing results for expectation (after reduction)

| Construct   | Items # | Item-total correlation | Cronbach alpha if<br>Item excluded | Alpha |
|-------------|---------|------------------------|------------------------------------|-------|
| Reliability | 1       | .726                   | .892                               | .905  |
|             | 2       | .773                   | .888                               |       |
|             | 3       | .536                   | .903                               |       |
|             | 4       | .635                   | .897                               |       |
|             | 5       | .708                   | .896                               |       |
|             | 6       | .635                   | .897                               |       |
|             | 7       | .817                   | .888                               |       |
|             | 8       | .644                   | .898                               |       |
|             | 10      | .705                   | .893                               |       |
|             | 11      | .548                   | .903                               |       |
| Assurance   | 1       | .608                   | .927                               | .926  |
|             | 2       | .678                   | .922                               |       |
|             | 3       | .801                   | .913                               |       |
|             | 4       | .793                   | .914                               |       |
|             | 6       | .810                   | .912                               |       |
|             | 7       | .702                   | .920                               |       |
|             | 8       | .876                   | .906                               |       |



#### **Distribution**

Questionnaire is ready for distribution