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### Tool and Application of Content Validity Index for Assessing Test Questions for Clarity and **Relevance in Education**

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#### INTRODUCTION

Theoretical definition:

constructs

Explaining the construct

measured by the questionnaire.

the operational definition of the

the conceptual definition, and

Instruction — The questionnaire aims to evaluate the content validity of the items developed. Please provide an analysis based on the following descriptions:

- Assess the relevancy level of each item with a 1-4 scale, where 1 indicates that the item is not at all relevant, and 4 indicates that the item is very relevant. The space for comments on revision (if necessary) is provided in the sheet.
  - Relevancy (content validity):
  - The item is not relevant.
  - 2. The item needs major revision.
  - 3. The item needs minor revision.
  - 4 The item is relevant

- The analysis of clarity level follows the same 1-4 scale procedure.
- Decide the categorization of each item based on the factor. Definition and description of each factor have been provided. If items do not belong to the factors described, a separate note explaining which factors are measured by the items can be provided.
- Lastly, assess the comprehensiveness of all items and determine whether items should be revised or removed (Roebianto, et al., 2023).

Standard Alignment/objectives List Standards or Objectives for

#### Clarity

- 1. The message of the item is not clear.
- 2. The item needs major revision.
- The item needs minor revision. 4. The message of the item is clear
- each item on the Assessment

Item/Test Question	Relevancy/Content Validity	Clarity	Standards/Objective	
1	1 / 2 / 3/ 4	1 / 2 / 3/ 4		
2	1 / 2 / 3/ 4	1 / 2 / 3/ 4		
3	1 / 2 / 3/ 4	1 / 2 / 3/ 4		
4	1 / 2 / 3/ 4	1 / 2 / 3/ 4		
5	1 / 2 / 3/ 4	1 / 2 / 3/ 4		
6	1 / 2 / 3/ 4	1 / 2 / 3/ 4		
7	1 / 2 / 3/ 4	1 / 2 / 3/ 4		
8	1 / 2 / 3/ 4	1 / 2 / 3/ 4		
9	1 / 2 / 3/ 4	1 / 2 / 3/ 4		
10	1 / 2 / 3/ 4	1 / 2 / 3/ 4		
11	1 / 2 / 3/ 4	1 / 2 / 3/ 4		
12	1 / 2 / 3/ 4	1 / 2 / 3/ 4		
13	1 / 2 / 3/ 4	1 / 2 / 3/ 4		
14	1 / 2 / 3/ 4	1 / 2 / 3/ 4		
15	1 / 2 / 3/ 4	1 / 2 / 3/ 4		
16	1 / 2 / 3/ 4	1 / 2 / 3/ 4		
Item/Test Question	Relevancy/Content Validity	Clarity	Standards/Objectiv	

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17	1 / 2 / 3/ 4	1 / 2 / 3/ 4
18	1 / 2 / 3/ 4	1 / 2 / 3/ 4
19	1 / 2 / 3/ 4	1 / 2 / 3/ 4
20	1 / 2 / 3/ 4	1 / 2 / 3/ 4
21	1 / 2 / 3/ 4	1/2/3/4
22	1 / 2 / 3/ 4	1/2/3/4
23	1 / 2 / 3/ 4	1/2/3/4
24	1 / 2 / 3/ 4	1 / 2 / 3/ 4
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29	1 / 2 / 3/ 4	1/2/3/4
30	1 / 2 / 3/ 4	1/2/3/4
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45	1 / 2 / 3/ 4	1 / 2 / 3/ 4
46	1 / 2 / 3/ 4	1 / 2 / 3/ 4
47	1 / 2 / 3/ 4	1 / 2 / 3/ 4
48	1 / 2 / 3/ 4	1 / 2 / 3/ 4
49	1 / 2 / 3/ 4	1 / 2 / 3/ 4
50	1 / 2 / 3/ 4	1 / 2 / 3/ 4

#### **Content Validity Index (CVI)**

Following Completion of the evaluation of the exam by each member of a subject matter teams or department chair independently, the data will be organized using the content validity index which show if each item should be revised, removed, or is valid. The content validity index is used as a way to organize data and quantifiably summarize item relevancy score from a panel of experts (McCoach et al. 2003). The content validity assessment is calculated by counting the number individuals who give a test question a 3 or 4 score for relevance or clarity on each assessment item and then divide it by the number individuals who evaluated the assessment (Zamanzadeh et al., 2015). If 10 members of a team are evaluating a test, and of seven individuals give a score of 3 or 4 to an item, the Content Validity Index would be: 7/10 = .700 (I-CVI = .700). After calculating the CVI for each assessment item, if the I-CVI is below .7 (I-CVI < .70) the test or assessment question should be removed, test or assessment question between .70 and .90 (.70  $\leq$  I-CVI  $\leq$  .90) should be revised, and items with a Content Validity Index above .90 (I-CVI > .90) should remain.

When measuring the content validity of an assessment it is difficult to have a unanimous commences among all members, and data being gathered can be affected if there are too few or too many items, the suggest number of evaluators should be between five to ten (Roebianto, et al., 2023).

#### References

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