

# การวิเคราะห์ข้อสอบรายข้อ

กรณีศึกษา

ความยาก อำนาจจำแนกข้อสอบรายข้อ ตัวเลือกที่ถูกต้องและตัวลวง

**3.3.1 Item difficulty (difficulty index).** The indices of item difficulty level of each item are presented in Table 2. Test items were classified into three categories in terms of level of difficulty<sup>12</sup> as indicated in the Table 3.

**Table 2.** Item difficulty of comprehensive test items.

Item No	Difficulty index (p)	Item No	Difficulty index (p)	Item No	Difficulty index (p)
1	0.824	10	0.784	19	0.696
2	0.768	11	0.744	20	0.784
3	0.464	12	0.616	21	0.320
4	0.808	13	0.472	22	0.832
5	0.496	14	0.728	23	0.600
6	0.368	15	0.688	24	0.816
7	0.256	16	0.544	25	0.720
8	0.168	17	0.888	26	0.440
9	0.680	18	0.576		

**Table 3.** Classification of difficulty level.

Value of Difficulty Index (P)	Classification
0.00 – 0.30	Difficult
0.31 – 0.70	Moderate
0.71 – 1.00	Easy

**3.3.2 Item discrimination.** The indices of item discrimination of each item are presented in Table 4. The items were classified accordingly to their discrimination index<sup>12</sup> on Table 5. If the value of the discriminating power is negative, the item test should be rejected<sup>12</sup>.

**Table 4.** Item discrimination of comprehensive test items.

Item No	DP	Item No	DP	Item No	DP
1	0.260	10	0.176	19	0.588
2	0.529	11	0.411	20	0.353
3	0.441	12	0.206	21	0.206
4	0.294	13	0.558	22	0.353
5	0.353	14	0.500	23	0.588
6	0.176	15	0.323	24	0.617
7	0.530	16	0.529	25	0.382
8	0.530	17	0.206	26	0.500
9	0.265	18	0.706		

**Table 5.** The Classification of Discriminating Power (DP).

Discriminating Power (DP)	Interpretation
0.00 – 0.20	Poor
0.21 – 0.40	Satisfactory
0.41 – 0.70	Good
0.71 – 1.00	Excellent

### 3.3.3 Distractor analysis

In the section on item analysis, the choice of distractors is critically important. Studies have shown that it is rare to find items for which more than three or four distractors operate efficiently. The distractor is usable if the distractor was chosen by 5% of all the respondent<sup>12</sup>. Result analysis shown in the Table 6.

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## Developing Science Virtual Test to Measure Students' Critical Thinking on Living Things and Environmental Sustainability Theme

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The subjects of research were 8th grade students at International Junior High School in Bandung with 125 total of respondents

**Table 6.** Distractor analysis of comprehensive test items.

Item Number	Option			
	A	B	C	D
1	Answer	1	0	21
2	8	7	13	Answer
3	Answer	55	10	1
4	Answer	4	9	11
5	5	45	Answer	11
6	Answer	25	2	32
7	66	13	Answer	14
8	Answer	22	65	17
9	5	6	27	Answer
10	Answer	9	2	16
11	Answer	18	4	10
12	29	Answer	8	9
13	Answer	29	24	12
14	20	3	Answer	5
15	6	Answer	10	22
16	13	39	Answer	4
17	8	Answer	1	3
18	5	45	Answer	11
19	Answer	30	4	3
20	10	Answer	9	8
21	Answer	63	3	19
22	3	15	Answer	2
23	13	Answer	29	8
24	Answer	6	2	15
25	Answer	14	13	8
26	Answer	28	32	7

# Conclusion