

# Content Validity of the Enjoyment Instrument in Physical Education Learning: A Field Study

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**Abstract**—This study aims to estimate the value of the validity of the content of the instrument of exercise enjoyment in physical education. The study was conducted on seven lecturers as academics called the Subject Matter Expert (SME). This preliminary research was carried out in the city of Bandung Indonesia by conducting Focus Group Discourse (FGD) to assess the suitability of the items developed in measuring the pleasure of exercising during the lesson. The instrument was developed to adapt from Kendzierski and DeCarlo called Physical Activity Enjoyment Scale (PACES) which consists of 18 items. The analysis technique uses content validity ratio (CVR) analysis from Lawshe. The results of data analysis using estimated content validity (Lawshe's CVR), obtained the value of the ratio between 0.71 to 1.00. This value exceeds the minimum limit value of 0.50 as an acceptable ratio value limit. Thus, the results of this initial stage of validation show that the instrument of pleasure in sports on teaching learning is proven to be valid in content in measuring the level of enjoyment of students.

**Keywords**—content validity; enjoyment; Content Validity Ratio (CVR)

## I. INTRODUCTION

In teaching and learning processes, learning outcome measurement is an important aspect, either in elementary or secondary school aiming at assessing students' ability after learning [1,2]. Thus, in measurement, there are instruments used to measure such aspects as cognition, affection, and psychomotor. Good instruments have two main criteria including validity and reliability [3]. In Indonesia, the latest curriculum namely Curriculum 2013 demands all the learning processes to involve cognitive, affective, and psychomotoric domains. Thus, physical education needs to be an integral part of physical activity [4]. To this relation, enjoyment plays an important part of physical education [5]. It is believed that students will be motivated to have more physical activity if they have enjoyment in doing so.

One of the instruments used to measure students' enjoyment in physical education is namely Physical Activity Enjoyment Scale (PACES) developed by Kendzierski and DeCarlo, however, the validity and reliability of the instrument have not been proven so that further investigation on it needs to

be performed. One of the important aspects to identify in the measurement is the so-called content validity which is closely related to expert judgment of the instrument, particularly regarding the measurement of the affective aspects. It has been shown that content validity is rarely used in the contexts of sport and physical education.

Based on the aforementioned reasons, this study aimed to conduct a validity test of the enjoyment instrument prior to its use, particularly regarding the content validity of the instrument.

## II. METHOD

### A. Participants

There were seven people from academics and practitioners serving as respondents in this study. To measure the item suitability developed, the experts were called subject matter expert (SME) where they were selected purposively [6]. The respondents were lecturers with expertise in sport pedagogy, sport psychology, and physical education teachers as practitioners.

### B. Procedure

The study was took place at the Faculty of Sport and Health Education, Universitas Pendidikan Indonesia, Indonesia, through a Focus Group Discussion (FGD) [7]. This aimed to discuss the check the item suitability developed [8].

### C. Instrument

The instrument in this study was PACES developed by Kendzierski and DeCarlo consisting of 13 questions on students' enjoyment in doing football in physical education [9].

### D. Data Analysis Technique

The statistical data analysis technique used in this study was Content Validity Ratio Lawshe [7,8,10,11] aiming at estimating the content validity based on the judgment of seven SMEs. The formula is as follows.

$$CVR = \frac{M_p - \frac{M}{2}}{\frac{M}{2}} = \frac{2M_p}{M} - 1$$

where:

$M_p$  = the number of experts stating that it is important;

$M$  = the number of experts validating

With the ratio index  $-1 \leq CVR \leq +1$  and the following criteria:

$M_p < \frac{1}{2} M$  Then  $CVR < 0$

$M_p = \frac{1}{2} M$  Then  $CVR = 0$

$M_p > \frac{1}{2} M$  Then  $CVR > 0$

### III. RESULTS AND DISCUSSION

#### A. Results

TABLE I. RESULTS OF EXPERT JUDGMENT

Variable/ Indicator	Item	Expert Judgment							JK	M	CVR
		1	2	3	4	5	6	7			
Enjoyment	Item 1	1	1	1	1	1	0	1	6	0.86	0.71
	Item 2	0	1	1	1	1	1	1	6	0.86	0.71
	Item 3	1	1	1	1	1	1	1	7	1.00	1.00
	Item 4	1	0	1	1	1	1	1	6	0.86	0.71
	Item 5	1	1	1	1	1	0	1	6	0.86	0.71
	Item 6	1	1	1	0	1	1	1	6	0.86	0.71
	Item 7	1	1	1	1	1	1	1	7	1.00	1.00
	Item 8	1	0	1	1	1	1	1	6	0.86	0.71
	Item 9	1	1	1	1	1	0	1	6	0.86	0.71
	Item 10	0	1	1	1	1	1	1	6	0.86	0.71
	Item 11	1	1	1	1	1	1	1	7	1.00	1.00
	Item 12	1	0	1	1	1	1	1	6	0.86	0.71
	Item 13	1	1	1	1	1	0	1	6	0.86	0.71

Where: JK = Total number M = Mean; CVR = Content Validity Ratio

TABLE II. VALIDITY SCORE

No	Item	Validity score	Remark
1	Item 1	0.71	Valid
2	Item 2	0.71	Valid
3	Item 3	1.00	Valid
4	Item 4	0.71	Valid
5	Item 5	0.71	Valid
6	Item 6	0.71	Valid
7	Item 7	1.00	Valid
8	Item 8	0.71	Valid
9	Item 9	0.71	Valid
10	Item 10	0.71	Valid
11	Item 11	1.00	Valid
12	Item 12	0.71	Valid
13	Item 13	0.71	Valid

It can be inferred from the results presented in Table 1 and Table 2 that the indicators of enjoyment in the instrument were still valid. The reasons why it was valid would be explained in the next chapter namely Discussion chapter.

#### B. Discussion

The objective of the study was to estimate the value of content validity of the enjoyment instrument in physical education process. It has been discussed before that content validity is one of validity tests in instrument development process. In content validity test, a test item was categorized valid if it is properly developed based on the indicators, content, and learning objectives by the experts of the field [7]. Some of the techniques to measure the content validity are (1) percentage of the indicators and objects; (2) matching index of the indicators and objectives; (3) content validity ratio from Lawshe; and (4) V index from Aiken [7,8,10,11]. Meanwhile, the analysis technique used in this study is Lawshe's content validity ratio.

The results show that the content validity using Lawshe's technique was ranging from 0.71 to 1.00. the minimum number of the ratio was still higher than 0.50 indicating that even though there was an expert stating that it was not valid, it was actually valid over all. This result is in line with a theory proving that content validity ratio is influenced by the number of experts involved and stating how valid it is [8]. Furthermore, the ratio index ranging  $-1 \leq CVR \leq +1$  with the  $M_p$  criteria  $< \frac{1}{2} M$   $CVR < 0$ ;  $M_p = \frac{1}{2} M$   $CVR = 0$ ;  $M_p > \frac{1}{2} M$   $CVR > 0$  [8,10-12] indicating that revision is needed based on the feedback given by the experts acting out as the respondents in this study giving their judgment on the content validity of the instrument [1]. This is in agreement with a study saying that content validity should find out how far the items cover the entire area of the objects measured [11].

The results in this study also support previous studies' results conducting a qualitative test followed by empirical validity test [13]. Previous studies show consistency with the results of this study as well [1,14-18]. However, some studies measured the content validity using a percentage technique [19,20]. The analysis aims to measure the agreement of the experts using percentage ranging from 0% to 100%.

### IV. CONCLUSION

The results of initial validity test showed that the enjoyment instrument of physical education used in a junior high school in Indonesia was proven valid. Therefore, the instrument is able to give feedback on students' enjoyment in physical education. This also means that the more enjoyment students have, the more effective the teaching and learning process in physical education gets.

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