



Validation of Alternative Assessment for Rhythmic Activities in Physical Education

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Abstract

Rhythmic activity has an effect on balance improvement, physical endurance, strength, cardiovascular endurance, flexibility and increased vital capacity. To support quality learning, an assessment instrument is needed so as to measure what is to be measured. The aim of the study was to examine the validity of the content of alternative assessments for rhythmic activity that have been developed in Physical Education (PE) learning for Junior High School Students. The research method used a method of evaluating the subject of document research. The research subjects were the documents of alternative assessment instrument with three main indicators, namely the level of difficulty of movement, rhythm accuracy, and enthusiasm, with each indicator having three items. Data collection technique used the Delphi technique of 6 experts. Data analysis applied a formula of Content Validity Ratio (CVR) technique developed by Lawshe. The results showed the content validity of alternative assessment instruments, with the indicator of level of difficulty for item one having a CVR value of 0.66, and for item two and three having a CVR value of 1.00. In the indicator of rhythm accuracy, the CVR value on all items was 1.00, and the CVR value of the item on the indicator of enthusiasm was 0.66. Conclusion. All items had CVR value above 0.5, thus alternative assessment items indicated high content validity.

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INTRODUCTION

Rhythmic activity is one of the important material in the physical education curriculum at School. Through rhythmic activity, children can develop their motor skills and creativity (Modoran, 2014). Based on research conducted by Kwon et al (2016), rhythmic activity can improve balance and reduce depression. In addition rhythmic activity shows a significant effect on endurance, strength, cardiovascular endurance, flexibility and vital capacity (Barney & Prusak, 2015). Rhythmic motion activity is also a form of physical activity that combines motor skills and contributes to the development of physical fitness and provides more choices for students to choose an active lifestyle (Little & Hall, 2017). Cone and Cone (2005) stated that rhythmic activity as part of physical education, which allows students to develop motor skills, create and gain appreciation for various forms of movement and use critical thinking skills.

Referring to the assessment of knowledge, the assessment of PE is not enough just to carry out traditional assessments; alternative assessment is needed. Assessment in PE is to know the teaching and learning process, improve learning for students, move focus from assessment based on teaching to assessment based on student learning (López, Pastor, David Kirk, Catalán, MacPhail & Macdonald, 2013). Alternative assessment is a different assessment from traditional assessment. In general alternative assessment is understood as the process of diagnosing, analyzing, sequencing, motivating, providing useful information to improve the decision making process regarding the education process and verifying the effectiveness of the education system through student learning Blázquez: 1993, Stufflebeam: 1971, Ball & Forzani: 2019 (Rodrigues & Zulaika, 2016). Alternative assessments also assess the learning process and evaluate the programs implemented by the teacher (Diaz: 2005) (Rodrigues & Zulaika, 2016). To carry out alternative assessments, the teacher must have in-depth knowledge of evaluation and always develop assessments that are consistent with the curriculum and student learning criteria (Willis, 2011).

Considering that many studies show that teacher knowledge about evaluation is generally low (Derri, Kouli & Emmanouilidou, 2013) and there is a discrepancy between the implementation of curriculum and assessment practices in schools, (Chan, Hay & Tinning, 2011) alternative assessments should be designed for specific material. Rhythmic activity is a subject that not only

includes certain forms of movement, but students can also show their thinking abilities and creativity that are displayed in the form of movement. Therefore it is necessary to compile an alternative assessment instrument to assess students' abilities based on indicators contained in rhythmic activity. Furthermore, the prepared instruments must be examined to determine the feasibility of assessment instruments based on the validity of their contents. Content validity is one of the estimates of validity used for test instruments that are made by the teacher (Newman, 2013)

Alternative research to assess rhythmic movement activity in PE is still very minimal, so it is necessary to compile rhythmic activity assessment instruments to assess the process and results in rhythmic activity. The purpose of writing this article is to examine the content validity of alternative assessments for rhythmic activity in PE learning.

METHODS

Research used a research evaluating document research subjects. The research subjects were documents of alternative assessment instrument with three indicators, namely, difficulty of movement, rhythm accuracy and enthusiasm. Each indicator had three items. These items were the levels of each indicator. More details can be seen in **Table 1**. The data collection technique used the Delphi technique with 6 experts. Data analysis applied the formula of Content Validity Ratio (CVR) technique. The data analysis used the formula of Content Validity Ratio (CVR) developed by Lawshe, C. H. (1975). The formula is :

$$CVR = (ne - N / 2) / (N / 2)$$

Description :

- CVR : Content Validity Ratio
- ne : The number of panelists who answered "Important "
- N : Total number of panelists

Research Procedure

The first step was drafting an alternative assessment of learning outcomes for rhythmic activity, by (1) conducting an analysis of performance assessment or alternatives that have been carried out by physical education teachers (PE), (2) analysis of documents from research journals, test books on alternative assessments or performance assessment and results of needs analysis, (3) based on the analysis, draft of alternative assessment instruments or assessment of rhythmic activities in PE learning was prepared.

The second step was to evaluate the alternative assessment instrument draft by assessment through 6 experts, each of whom did meet each other. This technique is called the delphi technique.

The third step was to conduct quantitative and qualitative data analysis. Quantitative data were analyzed using the Aiken formula. Qualitative data in the form of suggestions were reduced so the data can be used to improve the language and content of instruments of alternative assessment instruments for rhythmic activity in PE learning.

The fourth step was the preparation and improvement of the draft alternative assessment instrument for rhythmic activity in PE learning.

RESULTS AND DISCUSSION

The results of the content validity test with the CVR formula are as in **Table 1**.

Table 1. Result of CVR Analysis

	Indicator	Item	Expert						CVR
			1	2	3	4	5	6	
Level of difficulty in movement		High level of difficulty in movement	A	A	A	B	A	A	0,66
		Medium level of difficulty in movement	A	A	A	A	A	A	1,00
		Low level of difficulty in movement	A	A	A	A	A	A	1,00
Accuracy of rhythmic activity		Rhythmic activity is always accurate	A	A	A	A	A	A	1,00
		Rhythmic activity is sometimes accurate	A	A	A	A	A	A	1,00
		Rhythmic activity is not accurate	A	A	A	A	A	A	1,00
Enthusiasm		Always being enthusiastic in doing rhythmic activities	B	A	A	A	A	A	0,66
		Sometimes being enthusiastic in doing rhythmic activities	A	B	A	A	A	A	0,66
		Barely being enthusiastic in doing rhythmic activities	A	B	A	A	A	A	0,66

Remarks:

A= Important, B = Quite Important, C = Not important

Table 2. Construction of Alternative Assessment Instruments for Rhythmic Activities

Students are assigned to do their own movement activities in a rhythm of music for 3 minutes.

Latticework Instruments

Level of difficulty in movement	High level of difficulty in movement
	Medium level of difficulty in movement
	Low level of difficulty in movement
Accuracy of rhythmic activity	Rhythmic activity is always accurate
	Rhythmic activity is sometimes accurate
	Rhythmic activity is not accurate
Enthusiasm	Always being enthusiastic in doing rhythmic activities
	Sometimes being enthusiastic in doing rhythmic activities
	Barely being enthusiastic in doing rhythmic activities

Based on **Table 1** above, the CVR value of all items in the indicator level of difficulty in movement shows that (CVR = 0.66, CVR = 1.00, CVR = 1.00) all CVR values were above 0.50, so it can be concluded that indicator level items of difficulty had high content validity (Tomoliyus, 2016). The items on the indicator of accuracy of rhythmic movement indicate that (CVR = 1.00, CVR = 1.00, CVR = 1.00) all CVR values were above 0.50, so it can be concluded that the indicator items on the accuracy of rhythmic movement had high content validity (Tomoliyus, 2016). The items in the 'enthusiasm' indicator in carrying out rhythmic movements show that (CVR = 0.66, CVR = 0.66, CVR = 0.66) all CVR values were above 0.50, so it can be concluded that the enthusiasm indicator items had high content validity (Tomoliyus, 2016). The results of construction of alternative assessment instruments after revision by experts are as in **Table 2**.

Sheet Observation

Instructions for filling in the Sheet observation

Mark 3, if it is high, always

Mark 2, if it is moderate, sometimes

Mark 1, if it is low, barely

Name	Level of difficulty	Accuracy of rhythmic activities	Enthusiasm	Total
Tuti	3	2	3	8
Erwan	2	2	2	6

Score: $= (\sum x) / 9 \times 100$

Explanation:

$\sum x$ = assessment score total

Tuti's score = $(8 / 9) \times 100 = 89$.

Erwan's score = $(6 / 9) \times 100 = 67$.

The results of this research indicated that the assessment instrument for rhythmic activity in the indicator of the high level of difficulty in movement was with a CVR value of 0.66, while the moderate level of difficulty in movement and the low level of difficulty in movement were in CVR value of 1.00. In the indicator of the accuracy of rhythmic activity, all items had a CVR value = 1.00. The enthusiasm indicator for each item had a CVR value = 0.66. These results indicated that the instrument for assessing rhythmic activities agreed upon by experts had high validity.

The results of this research are in accordance with the opinion of Ghauri and Gronhaug (2005) who stated that the right instruments used to measure must have high content validity. In addition, Kevin and Doolittle (2013) also stated that the requirements for assessment instruments are to have high content validation. Content validity provides evidence of the extent to which elements of the instrument are relevant and represent constructs targeted for specific assessment purposes (Almanasreh, Moles, Chen, 2018). Newman (2013) states that content validity shows the ability of selected items that reflect indicators of construct variables in measurement.

If the instrument does not have content validation, it is impossible to show the reliability of the instrument (Nunnally, 1994). After finding content validation, the assessment instrument for rhythmic activity needs to look for reliability between raters (Kozue et al., 2018). To get reliability between raters, alternative assessment instruments for rhythmic activities need to be tested in the field (Hamed T, 2016).

CONCLUSION

Based on the results and discussion, it can be concluded that the assessment instrument items must provide evidence that the instrument is relevant and represents the targeted construct. The way to prove it is by conducting content validity on the instrument. In this study, the results of the content validity of alternative assessment instruments for rhythmic movement showed the indicator of level of difficulty on item one having a CVR value of 0.66, and item two and three having a CVR value of 1.00. In the indicator of rhythm accuracy, the CVR value on all items was 1.00, and the CVR value on the item of indicator of enthusiasm was 0.66. Therefore all items had CVR value above 0.50, or in other words, all indicators of the level of difficulty in movement, movement and rhythm accuracy, and enthusiasm had high content validity.

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