

Physical Education Teachers' Knowledge and Practice of Educational Assessment Based on Gender: A Survey

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Abstract—this study was aimed towards investigating Physical Education teachers' assessment practices and competency during planning and implementing the assessment for the Physical Education subject. [1]Assessment Literacy Standards were used as a guide for the construction of items in the survey questionnaire used for collecting data intended for the study. The items were tested for validity and reliability (0.97) before being put to use for the collection of the required data. A total of 48 Physical Education teachers from 15 schools responded to the distributed questionnaires. The independent t test sample analysis showed no significance ($t(46) = 0.890, p = 0.378$). The data also revealed that there were no significant differences between the male teachers ($M = 4.28, SD = .40$) and female teachers ($M = 4.17, SD = 0.47$). Whereas, to measure the level of teacher practice using the assessment standard provided the values of $t(46) = 0.852$, and $p = 0.399$. The correlation between male and female teachers indicated that there was no significant mean where $M = 3.62, SD = 0.43$ for male teachers and $M = 3.50, SD = 0.56$ for female teachers. The relationship analysis of Kendall's tau-b product moment showed that there was a low and significantly positive correlation. Among the level of knowledge with the level of implementation practice in the assessment of male teachers obtained $r = 0.64, p = 0.00, p < 0.05$ while female teachers obtained $r = 0.47, p = 0.02, p < 0.05$. This study has revealed that the knowledge of the studied teachers has similarities with the implementations in the classroom.

Keywords—*knowledge, practice, physical education, standard assessment*

I. INTRODUCTION

Assessing learning is particularly essential aspect of the educational sector. By assessing the learning of students, the teacher gets to have knowledge of his students' level of mastery, and the students will simultaneously be able to evaluate the knowledge they have acquired through the teacher's teaching methods. Without any form of assessment in the teaching and learning process, the dispensed knowledge is perceived to be unimportant and unbeneficial to the listening students. The nonexistence of assessment in a course or subject will also reflect on the students believing it is not mandatory to study and see it as just waste time. Various forms of conducting assessments include classroom observations, class discussions, quizzes, homework and tests [2].

All prospective teachers are required to master both formative and summative evaluation methods which will be useful for their students' assessment. An assessment is a process that involves obtaining quantitative data. It is a process that aids teachers in observing behavioral progress in order to make judgments. Information on the achievements of lesson objectives, a teacher's mode of teaching and the effectiveness of a curriculum can be provided by the evaluation process. The teacher will decide on the progress, development, domination and achievement of students in the learning that has been followed through this information. Information on student progress and achievement is obtained through a variety of assessment methods and techniques at school.

Meeting the needs of the people and the state towards producing a balanced, skilled, noble and knowledgeable human being is the goal of the education system. A standard or benchmark that can be applied successfully in the state education system is established by the education system on this basis [3].

A valuation that can measure what we want to value is good judgment. According to the American Federation of Teachers [1], In making a good or standard assessment, there are seven levels that need to be present. To make a good assessment, a teacher needs to be proficient in the seven stages:

- 1) Selecting an appropriate assessment method for teaching results.
- 2) Developing evaluation methods based on the results of the teaching.
- 3) Ability to administer, print and interpret the results of both methods of external assessment produced by teachers.
- 4) Ability to be judgmental when making decisions on individual students, planning lessons, developing curriculum, and improving school.
- 5) Developing a valid student grading process that uses student assessments.
- 6) Conveying assessment results to students' parents, and other public audiences.
- 7) Recognizing reasonable and unreasonable valuation methods and uses of assessment information.

The teacher must also assess the teaching and learning process in Physical Education. Evaluation at school is not just the evaluation of the achievement of learning after the completion of a learning process but should also include evaluation throughout the learning process in order for the pupils to be able to improve learning achievement even in the Physical Education subjects [4,5]. In order for the students to be given the opportunity to collect data on the understanding and mastery of their learning through self-assessment and peer assessment, the assessment of the learning process includes the following: a) evaluation of learning, b) evaluation as learning and c) evaluation [6].

There is an ongoing assessment throughout the teaching and learning process which is known as the School-based assessment (SBA) [7]. All aspects of intellectual and student development that are not only focused on achievement in the examination alone are taken into account by the assessment. According to the procedures set by the Malaysian Examination Board, The SBA is fully implemented by teachers including planning, administering, scoring and reporting on a well-planned assessment [7]. [8] The role of teachers in SBA involves all processes including how the assessments are made and should be used.

Specific procedures and criteria should be used to assess the teaching and learning of Physical Education [9, 10]. In giving feedback on student achievement and the effectiveness of teacher teaching, it is important [11]. [4] The daily activities in teaching and learning should include evaluation. Therefore, the implementation of evaluation and teaching are simultaneously carried out to achieve a more successful process of teaching and learning in the Physical Education environment [12, 13].

It was discovered that physical and health education teachers (PJKs) were still inadequate in developing test items and unclear on the validity and credibility of assessments by [14] in their study. Because teachers still do not have appropriate assessment competencies to carry out effective assessments, thus is true [14]. Assessment in Physical Education subjects should include cognitive, psychomotor and effective domain assessments that focus on High Level Thinking Skills (KBAT) in that regard. Using the Assessment Literacy Standard [1] to track the implementation of assessments made by teachers in schools is the intention of researchers.

II. RESEARCH OBJECTIVE

- 1) To compare the Physical Education teachers' knowledge of educational assessment based on gender.
- 2) To compare the Physical Education teachers' practice of educational assessment based on gender.
- 3) To determine the relationship between the Physical Education teachers' knowledge and practice of educational assessment based on gender.

III. RESEARCH QUESTIONS

- 1) Is there a significant difference in the Physical Education teachers' knowledge of educational assessment based on gender?
- 2) Is there a significant difference in the Physical Education teachers' practice of educational assessment based on gender?
- 3) Is there a significant relationship between the knowledge and practice of the Physical Education teachers based on gender?

IV. LITERATURE REVIEW

An essential part of formal higher education is assessment [15]. The formative and summative assessments are the two types of assessment practice in higher education. While summative assessments are given periodically to determine at a particular point in time what students know and do not know and it occurs at the end of the lesson, formative assessment is part of the instructional process and it occurs during learning activities conducted [7,16]. Summative assessments deliver evidence of a longer period of learning while formative assessments deliver evidence of teaching, for example the summation of a particular subject or year. In order to produce quality and holistic students, it is important to choose the right technique in conducting assessments. Meeting the demands of education, work, and commerce in the 21st century necessitates additional layers for communication skills, technological savvy, global view, collaborative practices, digital skills and more innovative applications rather than memorizations, as stated by [17]. The feedback in formative assessment can foster student engagement, improve achievement and enhance motivation to learn, as stated by [18]. Assessment must be viewed as a multidimensional process by instructors. Formative assessment provides instructors with a more accurate representation of student gains in terms of knowledge and skills by using various strategies during the instructional process because of the circumstances. If one cannot be done, then doing the other is of no benefit and that is why the

processes of teaching and evaluation are two things which cannot be separated. Thus, to see the outcome of the teaching and learning process, the assessment is carried out. The instructors concerned who conduct assessments are the ones who determine the forms and means of the assessments. It is shown by studies that in assessing student performances, various forms of assessment are used by physical education teachers. According to the study conducted by [19], skills tests and written tests were used in student assessments by 50 percent of respondents. In their study, [20] found out that skill tests and written tests were used as student assessment strategies by 270 physical education teachers in Florida. According to [21] 75.2 per cent of the physical education teachers in his study used authentic assessments and 48.1 percent of them were male teachers while 51.9 percent were female teachers. Also, authentic assessments were not used by 24.8 percent because authentic assessments required more time, and they had higher teacher workloads according to him. 21.2 percent of the physical education teachers were not properly trained to implement authentic assessments. Nevertheless, these assessments are very subjective and this situation indicates the failure of Physical Education teachers to provide documentation and assessment of student achievement [22].

V. RESEARCH DESIGN

To get the data to answer the research questions, the researcher needs to go through several processes.

- The need for research subjects based on objectives and questions must be understood by him. The sample of the study and where to study it must be identified by him. The importance of this study is to the physical education subject.
- He must discuss the construction of questionnaires that focus on the objectives of the question and the question of the study together with the researchers.
- To gain credibility and reliability, the questionnaire item that has been awarded by the researcher was submitted to three content experts and three language specialists in the field of physical education to gain credibility. Based on the comments given by the specialists, the questionnaire items are reviewed and improved. The questionnaires were submitted once again to other physical education specialists as soon as they were fixed.
- The questionnaires are tested to 30 selected samples after they have high reliability. Using SPSS V21, the data obtained were analyzed to obtain reliability. The questionnaire is used with the actual sample to get the data to answer the research questions after the questionnaire item gets high reliability.
- The researchers will answer the questions of the study from the data analysis. Based on the results of the research, data researchers will also provide some suggestions and draw conclusions on this study.

VI. RESULTS AND DISCUSSION

Having Knowledge In The Strategy of Physical Education Questionnaire By Sex.

An independent t test sample analysis used to compare the mean score of knowledge in making assessment in

Physical Education subjects between male and female students is shown in table 1. The t test shows $t(46) = 0.89$, $p = 0.38$ is insignificant. There was no significant difference in knowledge in the assessment of the Physical Education subjects in schools between male students as shown by the results ($M = 4.28$, $SD = .40$), with female students ($M = 4.17$, $SD = .47$). Male and female students have a level of knowledge related to a balanced assessment in the Physical Education subject as seen in the table.

TABLE I. COMPARISON OF TEACHER'S KNOWLEDGE LEVEL IN STRATEGIES FOR BUILDING QUESTIONS IN PHYSICAL EDUCATION.

Sex	N	Mean	SD	F	Sig.	t	df	Sig. (2-tailed)
Male	21	4.28	.40	0.03	0.85	0.89	46	0.38
Female	27	4.17	.47			0.90	45.47	0.37

Teachers' Approval for Trainers Using Principles of Assessment In Physical Subjects by Sex

An independent t test sample analysis used to compare the mean score using the available knowledge to assess the physical education of male and female students is shown in table 2. The t test shows that $t(46) = 1.65$, $p = 0.105$ is insignificant. There was no significant difference in using existing knowledge to assess the Physical Education subjects between male and female students as shown by the test results. It is proven by the mean value of $M = 4.09$, $SD = 0.49$ for female students and $M = 4.30$, $SD = 0.40$ for male students. It can be stated that male and female students have a balanced assessment principle when assessing Physical Education subjects from the table.

TABLE II. APPLYING KNOWLEDGE WHILE MAKING ASSESSMENT DURING THE TEACHING PROCESS

Jantina	N	Mean	SD	F	Sig.	t	df	Sig. (2-tailed)
Male	21	4.30	.40	0.07	0.79	1.65	46	0.105
Female	27	4.09	.49			1.68	45.10	0.101

Knowledge Relationships With Practice In Making Assessment Between Master Teacher and Teacher

The correlation analysis of Kendall's tau-b product moment to see the relationship of knowledge with the use of knowledge in assessing the Physical Education subject is illustrated in table 3. There was a low and important positive relationship between the level of knowledge and the level of using that knowledge in assessing Physical Education subjects as found out by the analysis. The data showed that while female teachers obtained $r = 0.47$, $p = 0.02$, $p < 0.05$, male teachers obtained $r = 0.64$, $p = 0.00$, $p < 0.05$. Therefore, it is concluded that male and female teachers have the knowledge and apply the knowledge when making the assessment in the teaching process of Physical Education as illustrated by the data.

TABLE III. VIEWING KNOWLEDGE RELATIONSHIPS WITH PRACTICE IN MAKING ASSESSMENT OF TEACHERS PHYSICAL EDUCATION BY SEX.

Jantina			Pengetahuan	Amalan
Male	Knowledge	Cerrelation Coefficient	1.000	.641**
		Sig.(2 tailed)		.000
		N	21	21
	Practice	Cerrelation Coefficient	.641**	1.000
		Sig.(2 tailed)	.000	
		N	21	21
Female	Knowledge	Cerrelation Coefficient	1.000	.474**
		Sig.(2 tailed)		.002
		N	27	27
	Practice	Cerrelation Coefficient	.474**	1.000
		Sig.(2 tailed)	.002	
		N	27	27

VII. CONCLUSION

All the teachers had the knowledge to make the assessment and they also admitted using that knowledge while making the assessment in the teaching and learning process, according to the data analysis. Nevertheless, both in their knowledge and in the practice of their assessment, the mean of male teachers is higher than that of female teachers. A positive correlation was found between teacher knowledge and the use of this knowledge in making assessment during the teaching session in class for male and female teachers through data analysis using correlation coefficient.

VIII. IMPROVEMENT

Some of the suggestions that may be given to improve this study as well as assessment in physical Education as a result of this study are:

- 1) To know a more comprehensive analysis of all Malaysian countries, the research sample needs to be added.
- 2) The knowledge of assessment in teaching should be further enhanced with new and more effective assessment methods even though the findings of this study show that most of the Physical Education teachers have understood and applied it in teaching.

ACKNOWLEDGEMENT

The Niche Research Grant Scheme (NRGS) awarded to The University of Pendidikan Sultan Idris (Code No. 2014-0001-107-82-3) funded this study.

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