

Implementation of Rubrics in Assessment of Teaching from Students' and Teachers' Perspectives

Pankaja Pandey, Kalpana Sharma



Abstract: *The aim of this study is to inspect the implementation of Rubrics Model for the assessment of Skill performance in P.E at university level, discuss possible implication and understand benefits and shortcomings of Rubrics model of assessment in Physical Education (PE) programs in an Indian setup. Grading in PE programs has various challenges and the traditional method lacks not only in effectiveness but also in transparency. Thus, the objective is to provide an effective pedagogical approach to enable physical education teachers to help assess their students in an effective and fair way. The intention is to provide hands-on understanding of the benefits of rubrics model and encourage teachers to implement this into their curriculum. This would not only help in the career growth of the teachers but also improve learning of the student. Hence the examples provided in this paper aim at helping other teachers of physical education to better understand the rubrics model and use this as a tool for assessment of students.*

Keywords: *Physical Education, Assessment, Model for Assessment, Rubrics Model*

I. INTRODUCTION

The education system in the recent years is undergoing a reform in which the onus of student learning not only lies with the student but also with the teachers. This implies that evaluation of student learning gives a feedback of not only the student's knowledge but also of the teacher's teaching methodology. In order to hold teachers accountable for a student's learning, the largest teacher's union in US declared that, "proof of students learning must be considered in the assessments of teachers" (Otterman, 2011, p. A15). Since, "evaluation is indispensable part of instructing" (Hensley, 1997) and "the student learning assessment is key to determining student achievement" (Fisette et al., 2009) physical education instructors should be well aware of a practical and feasible assessment methodology to assess their student learning. Rubric is one of the important assessment tools which give noteworthy feedback of student learning. In simple terms, rubric is a set of instructions or rules. In other words, rubrics are a set of rules for assessment in which students are graded against expected level of performance for the various qualities required for the particular sports.

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Student learning is directly related to teaching methodology; thus, it is imperative for the physical education instructors to thoroughly understand how rubrics can help assess student learning and in turn improve teaching methodology.

In the rubrics model of student assessment, students are given feedback of their performance at every step. This helps both the students and the teachers to self-assess their understanding and teaching methodology respectively.

This model gain more importance in physical education assessment as compared to other subjects as the feedback in performance of students is immediately known to the them, thereby encouraging them to work harder and perform better in learning the sports. "Improving skills and facilitating outcomes ought to be a valid justification for teachers to endeavor to assess the quality of their students' efforts. In spite of the fact that teachers in other academic disciplines cannot accomplish this result, physical teachers are frequently regarded as the target of this evaluation." (Mouratidis, Vansteenkiste, Lens, & Sideridis, 2008).

Studies related to Effectiveness of Rubrics:

Several studies have been done on rubrics to prove its efficacy in assessment of physical education programs. The most important factor in its popularity and acceptance around the world is the fact that:

- It sets and informs the objectives and expectations
- And it gives detailed feedback to the students of their strengths and shortcomings.

The significance of rubrics as an essential valuation tool has been well established (Jonsson & Svingby, 2007; Peirce, 2006; Wolf & Stevens, 2007).

Benefits of rubrics as listed by Mohnsen (2006) are:

- It helps teachers to evaluate consistently and fairly.
- It helps evaluate student learning as a whole.
- It helps track the progress of students.
- It informs the students about their goals and expectations.

"Rubrics have been utilized by college professors, supervisors, and co-operating instructors to break down and survey and practices and showing improvement of PETE applicants," Rikard & Lancaster, 1999.

Rubrics model is a popular assessment model at school level in the USA and is now being employed in institutions of higher education as well, (Simon and Forgette-Giroux, 2001). One of the main causes of this change is the discontent in both the students and teachers in grading of long essay-like answers, case analysis, oral presentations and projects.

A study of grading system was conducted by Holmes and Smith in 2003 in a business program.

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A survey was collected from a total of 230 students of marketing and accounting where they were asked to point out the “specifically irritating” features of grading of their essays and quantitative problems respectively, by the faculty.

The inference from the survey said, “Independent of the appraisal strategy, essays or quantitative issues, understudy reactions of reviewing extensively fell under the two classes of (a) lack of fairness, and (b) lacking feedback.”

Similar inferences were drawn from other studies done by Oakleaf in 2006 and Powell in 2001 in other academic programs.

Another survey of grading system was conducted by Michlitch and Sidle in 2002 to study the perspective of teachers. It was collected from a total of 50 teachers from two US based business schools. The survey showed when students were assessed in groups, assessments being done on case studies or quantitative problems; they scored high both in terms of frequency and effectiveness. But there was a significant mismatch in the frequency and effectiveness of assessment for the strategies for “analytic scoring of students recording assignments to break every expertise region” and “perception of student’s introductions estimating execution, utilizing measure”. The investigation inferred that “the educators accepted that the utilization of these techniques would prompt 'incredibly upgraded' SL and accentuated upon the necessity for 'successful' devices to control evaluation of understudy exhibitions when utilizing these strategies.”

Development of Rubrics:

Rubrics are assessment tools. It helps teachers to assess and grade their students. They are 'elucidating scoring plans', 'a lot of scoring rules' and get their significance as an immediate aftereffect of the accentuation on use of built reactions and execution-based errands in business programs - Hafner and Hafner, 2003; Quinlan, 2006; Glickman-Bond and Rose, 2006. A method for 'imparting desires; giving focused advancing analysis; and evaluating' – Andrade and Du, 2005, Moskal, 2000; Isaacs, 2001; Holmes and Smith, 2003. Rubrics can be used for assessment of various subjects (Moskal, 2000; Tierney and Simon, 2004).

As per Popham (1997), Rubrics have three important features:

a. Evaluation criteria

They are the criteria on which the teacher is to assess the nature of a student’s work. “They are the situations a presentation must meet to be fruitful,” Wiggins (1998), Oakleaf (2006, p 187). In expressions of certain creators: “Criteria are a lot of pointers/guides/rundown of measures/characteristics required for a student to meet a result. Posting conceptualizes and characterize measures, particularly in difficult to-characterize zones, for example, basic reasoning, critical thinking, group aptitude and so forth. It empowers model referenced segregation of exhibitions and checking of understudies learning against every basis.”

b. Quality Definitions

As the name suggests it is explanation of expectation from students. That is, qualities which a student must demonstrate in assessments in order to achieve certain grade. “The significance of these degrees of dominance, execution descriptors and objective markers originate from their capacity to “address concerns, for example, how to tell a decent reaction from a poor one; how to be steady in making

a decision about student execution crosswise over assignments, time and students; how to characterize achievement; and how to catch understudy execution in a manner to report this to guardians” - Arter, 1996 as estimated by Oakleaf 2006, p 188.

c. Scoring Strategy

Holistic rubrics are concerned about a subject as a whole, while analytic rubrics provide in depth information about subject curriculum and its objectives. If a holistic scoring strategy is employed in rubrics, then it does not provide appropriate and detailed feedback. “Given its methodology of by and large assessment, all-encompassing rubrics don't give detailed and indicative criticism of the qualities and shortcoming of the item/execution” - Mertler, 2001; Moskal, 2000. If each criterion in the rubrics are evaluated separately and then aggregated, as in analytics rubric, it provides better information of student learning. “The writing on rubrics express that the point by point criticism gave by these, are helpful for directing the development of SL at a total just as at an distinct student level” - Klenowski, 1996; Simon and Forgette-Giroux, 2001.

As previously mentioned rubrics is a set of instructions. These can be holistic in nature or analytical depending upon the purpose. These rubrics can be drafted with respect to an individual or a task or it can be generalized for similar tasks, that is, generic. “Despite the fact that assignment explicit rubrics have been expressed in writing to have higher unwavering quality and legitimacy, their need and achievability (because of the venture of time and vitality) has been addressed” - Moskal, 2000; Popham, 1997. “Conventional rubrics, then again catch the basic elements of the 'aptitude to be estimated' and not the ability as smeared to a particular job” - Popham, 1997; Oakleaf, 2006. “Their adaptability licenses utilization for evaluation of tasks, projects and student learning crosswise over time and projects” - Tierney and Simon, 2004; Oakleaf, 2006; Petcov and Petcova, 2006.

II. PROPOSED METHODOLOGY

The rubrics were developed by a multi-stage method proposed by Lopez (1999), Philip (2002), Martell and Calderon (2006). To identify the ideas of the study and the purpose of the assessment, the researcher had a different discussion with the team of various faculties teaching at Amity School of Physical Education and Sports Sciences.

STEP 1: Several group meetings were held with faculty members to determine the working criteria and standards for the assessment methodology used to assess achievement of teaching goals. The reason behind this process is to gather the opinions of the members of the department in which they are interested and to increase their general knowledge of the issues involved.

STEP 2: Then analytic rubrics developed were sent to 5 subject experts with at least 5 years of experience in Athletics as specialization. The experts analyzed, added/modified onto the rubrics. The final rubrics thus was developed for the assessment of athletic events of student teacher candidates enrolled in an undergraduate course at Amity school of physical education and sports sciences.



However, a set of analytic rubrics was designed for three different events. There were four descriptors was ranked highest – 5 - to the lowest – 1. The total marks were 15.
STEP 3:A quantitative and qualitative approach has been applied to this study.

Some questionnaires were created for Amity University students to obtain data about member’s personal information, use their idea of rubrics under the influence of rubrics, suggested for future utilization of rubrics, and if they had something to share with each other. The issue referenced in the questionnaire.

In the primary significant stage, members were approached to share their own data, for example, sex and level of instruction. There were two alternatives to browse "yes" and "no". In the subsequent part, they were gotten some information about their idea of rubric use. There were two sub-focuses: (a) they think about the utilization of rubrics, and (b) instructors assess those utilizing rubrics. They picked five choices, in particular; emphatically concur, concur, impartial, dissent, and unequivocally concur. Third, the most significant is the impact of rubrics on their exhibition. There were two exact inquiries past this volume: (a) regardless of whether rubrics help them achieve good results, (b) whether teachers can determine what rubrics they want teachers to have. They were given the same 5 options as before. The fourth was designed to interrogate the proposal to use rubrics in all courses at each institute. Further statement regarding the fact that rubrics are mandatory in all organizations.

For various University teachers, a semi-structured questionnaire was surrounded to get their idea about the effect of rubrics, consideration of rubrics in organizations, role of rubrics, and anything else if they want to express.

The main significant part consist of three sub-focuses, (a) regardless of whether they have utilized any rubrics for institutionalizing their appraisal of students work, (b) whether they figured rubrics would aid develop their evaluation of students’ execution and why, (c) whether they considered the teachers’ desire, if understudies were educated before the test and why the subsequent significant point inside which there were two sub-focuses; (a) whether they figured rubrics ought to be incorporated into all the establishment to survey every one of the units, (b) whether they thought rubrics – extraordinarily the systematic ones, would upgrade generally speaking execution of students in every one of the foundations. Under the third umbrella term “job of rubrics” the educates were posed two inquiries; (a) regardless of whether they believed that the utilization of rubrics would empower students self-rule, if the appropriate response was “yes” they needed to clarify, quickly, “how”, (b) whether they imagined that rubrics would assume the job of an administrator when there is no educator, and again if the appropriate response was “yes or no” they needed to delineate quickly why they suspected as much

STEP 4: The information were gathered from Amity university students and various university teachers, 46 and 20 in number respectively. Among the students, there were 9 girls and 37 boys, and among the teachers, there were 5 female and 15 male university teachers.

STEP 3: Of performance outcome, one example insights was completed to see the Std. Mistake Mean, one example test was led to test the impact of rubrics on their performance and result of the questionnaire was discussed to examine the implementation of Rubrics Model for the assessment of Skill performance and understand benefits and shortcomings of

Rubrics model of assessment in Physical Education (PE) programs in an Indian setup

III. DATA ANALYSIS

Mean and Standard deviation were calculated for impact of rubrics on total performance of athletic events of student teacher candidates enrolled in an undergraduate course and the data was analyzed by using ‘t’ test as suggested by McGuigan for further understanding and interpretation of scores obtained.

EVENTS	PRE-TEST		POST TEST		MD	SE _M	‘t’	Significance
	Mean	SD	Mean	SD				
High Jump	2.2825	.88602	2.8913	1.03770	-.60870	.14737	-4.130	0.00
Triple Jump	2.1739	.73950	3.4348	.91049	-1.2608	.12601	-10.006	0.00
Long Jump	2.6522	.7068	3.0217	.93069	-.36957	.11778	-3.138	.003
Total Performance	7.1087	1.91170	9.3696	2.36980	-2.26087	.24757	-9.132	0.00

In case of High Jump, the mean performance of students in Pre-test was 2.2825 (SD = 0.88602) and Post-test was 2.8913 (SD = 1.03770). The mean gain of students was -.60870 (SEM = .14737). In case of Triple Jump, the mean performance of students in Pre-test was 2.1739 (SD = .73950) and Post-test was 3.4348 (SD = .91049). The mean gain of students was -1.350 (SEM = .12601). In case of Long Jump, the mean performance of students in Pre-test was 2.6522 (SD = .7068) and Post-test was 3.0217 (SD = .93069). The mean gain of students was -.36957 (SEM = .11778). In case of the Total performance, the mean performance of students in Pre-test was 7.1087 (SD = 1.91170) and Post-test was 9.3696 (SD = 2.36980). The mean gain of students was -2.26087 (SEM = .24757).

IV. RESULT ANALYSIS

	N	Mean	Std. Deviation	Mean Difference	Std. Error Mean	t value	Significance
Before use of Rubrics	46	7.10	1.91	-2.26	0.24	-9.132	0.00
After use of Rubrics	46	9.36	2.36				

To test the objective of this study, whether the use of rubrics had a significant impact in the performance of the students, a hypothesis was set that use of rubrics had no significant impact in improving student’s performance.



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Since in test of independence the hypothesis was set i.e. the use of rubrics had a significant impact in the performance of the students. We set our 95% confidence and tested the hypothesis on both tailed.

Therefore, rejection region for null hypothesis was $<0.25(100-95\%=5\% \text{ divided by } 2)$ on either side of normal distribution. Since, the test value was 0.00% which was much less than 2.5%, the null hypothesis was rejected, meaning the use of rubrics HAD a significant impact in the performance of the students. Thus, this study has clearly developed the idea that the use of rubrics has indeed and impact on the performance of the students provided they have the prior knowledge to grasp the concept of rubrics.

Results from the Student's Questionnaire:

Chart 1

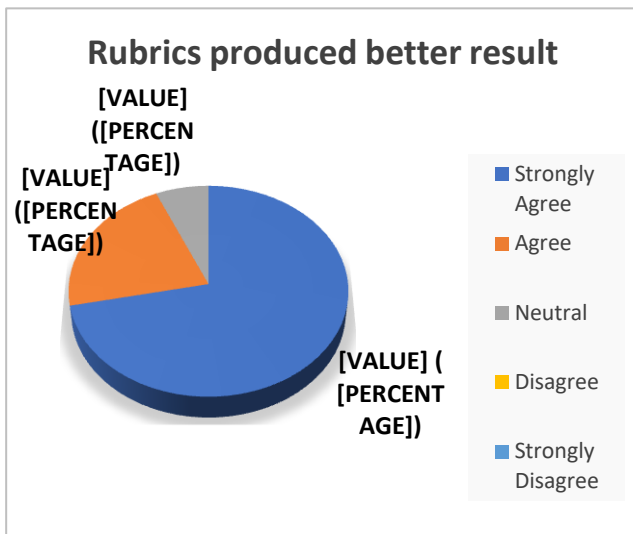
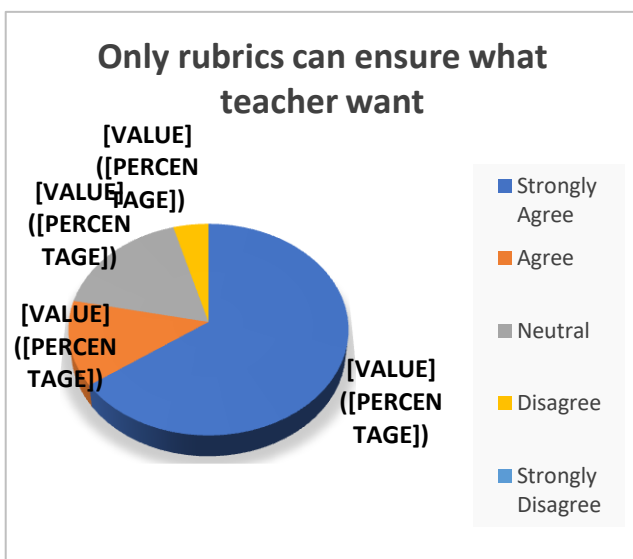


Chart 2



students said that they agree to the statement and 3 of them remained neutral as shown in chart1. When they were asked whether only rubrics can ensure what a teacher wants from the students, 30 out of 46 said they strongly agree to this statement and 6 of them only agree that only rubrics can ensure what a teacher wants to perform from students and 8 out of 46 remain neutral to the statement whereas 2 out of 46 responded disagree that only rubrics can ensure what a teacher wants as shown in chart 2.

Chart 3

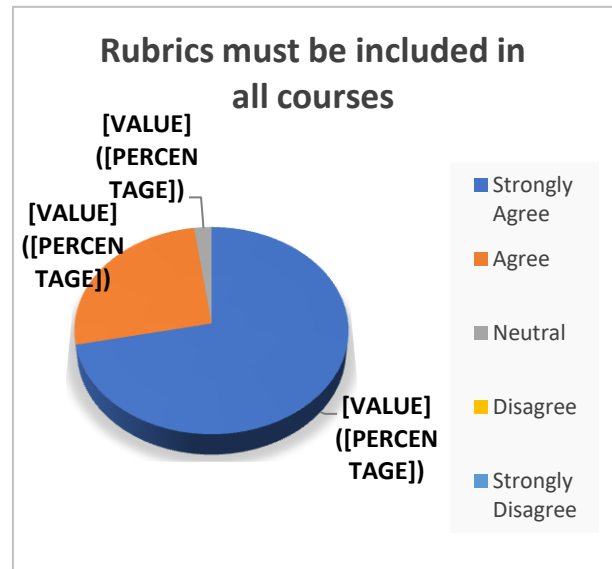
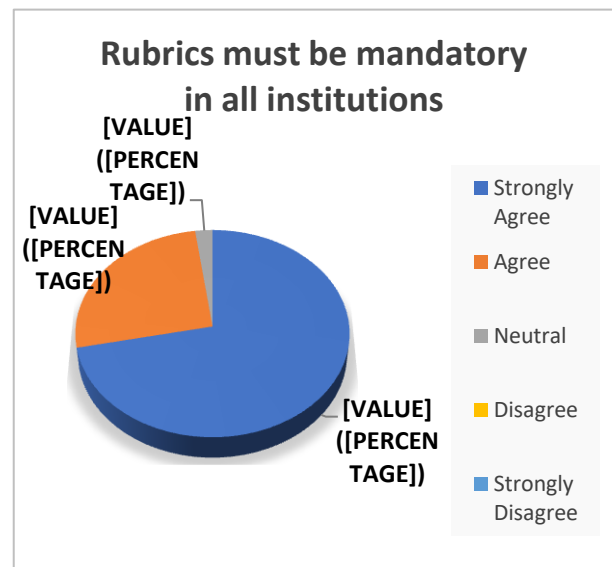


Chart 4



For the statements which were asked to inquire about their perspective for use of rubrics in all courses. 33 out of 46 respondents strongly agreed that rubrics must be included in all the courses while 12 of them agreed to the statement 1 out of 46 remain neutral on inclusion of rubrics in all the institution as shown in Chart 4. The next statement was weather rubrics must be made mandatory in all the institution, the figure showed the same result as previous one,

The analysis of university student "questionnaires showed important results and their future approach towards the utilize of rubrics. Out of 46, 33 respondents said that they strongly agree that the rubrics helped them to perform better. 10

in other words 33 out of 46 respondents strongly agreed that rubrics must be made mandatory in all the institution while 12 of them agreed to the statement 1 out of 46 remain neutral on inclusion of rubrics in all the institution must be mandatory as shown in Chart 5. This add to the effect of using rubrics. Students added that they use rubrics to plan, evaluate their work and give guidance, or to consider the opinions of others, from the perspective of assignments. Students said utilizing rubrics helped them focus their attention, create high quality work, get better grades, and worry less about assessment. Their opinions also indicate that most students read their entire rubrics, and some may view the rubric as a tool to meet the demands of a teacher without reflection on discipline norms and standards.

Thus, it can be argued that university students have had an incredible affected their presentation. Over time, they were so inspired that a large number of students expressed their eagerness with the expectation that the rubric would be incorporated in all courses in all organizations.

Results from the University Teacher's Questionnaire:

After Analyzing Questionnaire for university teachers, it was observed that out of 20 university teachers 12 university teachers used rubrics for standardizing their assessment for student's performance and 8 did not use rubrics for assessment of student's performance.

Out of 8 university teachers who don't use rubrics for assessment 7 university teachers agreed that the usage of rubrics would help them improve their assessment standards and would also encourage learner's autonomy but making rubrics are laborious and time-consuming job. They also agreed that making rubrics needs specialized knowledge of that particular subject. One of them said that rubrics hamper the imagination of the understudies, which thus implead their inactive abilityand thus rubrics must not be used.

Out of 12 university teachers who used rubrics for standardizing their assessment of student's performance.10 of them agreed that the rubrics help them improve the assessment of student's performance as rubrics permit students know what their teacher looks for in to perform well. They also agreed that rubrics should be comprised in all the specialization. In all the organization to survey their entire student's presentation in every one of the modules. They additionally imagine that rubrics help to improve the total execution of all the foundation and rubrics assume a job of manager without genuine director.

2 out of 12 university teachers who used rubrics for assessment think that rubrics are not so useful for assessment as it hampers the creativity of students and reduce the scope of their thinking and evolving. They also think that rubrics make assessment very easy and simple.

All the 20-university teacher strongly approve that making rubrics is a laborious and time consuming and that making rubrics needs specialized knowledge of that particular subject or modules.

V. CONCLUSION

The study has clearly developed that rubrics can have a major impact on performance of the student if they have former knowledge of the idea of rubrics and can express specific ideas. This result leads to students reaching a particular area that helps them to express their opinions with

rubrics. In this way, we can conclude that the rubrics make the evaluation procedure increasingly substantial and solid; their genuine worth is the advancement of the instructing and learning process. The best rubrics license assessors and educators to take their expert information and use this expert information with the goal that the rating procedure doesn't include individual passionate contrasts or human data preparing limits. Rubrics show learning objectives. On the off chance that understudies realize what the objective is, they are progressively ready to accomplish it. Rubrics are bound to assume a progressively viable job in view of an intricate undertakingmore work, more thinking, and more valued tasks.

The rubrics demonstrate informative structure and delivery. At the point when professors are cautiously structuring their desires as rubrics, they are increasingly ready to introduce the principle focal point of beginning learning and the inside when selecting a teaching approach and designing learning environments that make learning more effective. Facilitate students to accomplish their results. Rubrics offer students with a means of self-assessment and peer feedback. When assessing criteria when completing a task, students can review their own performance. Professional quality is the capability to self-evaluate work accurately and considerately. In addition, class pupils can use rubrics to give precise feedback on their performance.

For teachers, rubrics make the evaluation procedure more precise and fairer. Teachers like to be consistent in their decisions, referencing a typical rubric when assessing every product or student's performance. A rubric helps determine a decision since it causes the reviewer to notice every one of the key measures set forth earlier, so that the professor is less likely to change the criteria from one student to another. In addition, where there is more than one, consistency in these rates is high when they are all related to the similar performance measures. In addition, there is another advantage and rubrics do not enable students to complain about grades at the end of the semester.

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