

## A Shahdol district: Comparative study of stress in Class X students under grading and numerical marking system

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### Abstract

Teaching is a triangular process wherein instructional objectives, learning experience and evaluation procedures lie inseparably intertwined. In this process, evaluation occupies a pertinent position as it provides constant feedback on the quality of course content, teaching-learning process and advancement of learner's performance.

**Keywords:** Shahdol district, comparative study, class x, grading system, numerical marking

### 1. Introduction

Shahdol District is situated in the north-eastern part of the Madhya Pradesh province of India. Because of the division of the district on 15-08-2003, the area of the district remains 5671 km<sup>2</sup>. It is surrounded by Anuppur in the southeast, Satna & Sidhi in the north and Umaria in the west. The district extends 110 km from east to west and 170 km from north to south. This district is situated between 22°38' N latitude to 24°20' N latitude and 80°28' E Longitude to 82°12' E longitude.

According to the 2011 census Shahdol District has a population of 1,064,989, roughly equal to the nation of Cyprus or the US state of Rhode Island. This gives it a ranking of 427th in India (out of a total of 640). The district has a population density of 172 inhabitants per square kilometre (450/sq mi). Its rate over the decade 2001-2011 was 17.27%. Shahdol has a sex ratio of 968 females for every 1000 males, and a literacy of 68.36%.

The history of education is the history of teaching and learning. Each generation, since the beginning of human evolution and writing, has sought to pass on cultural and social values, traditions, morality, religion and skills to the next generation. The history of the curricula of such education reflects human history itself, the history of knowledge, beliefs, skills and cultures of humanity.

Teaching is a triangular process wherein instructional objectives, learning experience and evaluation procedures lie inseparably intertwined. In this process, evaluation occupies a pertinent position as it provides constant feedback on the quality of course content, teaching- learning process and advancement of learner's performance.

Evaluation and measurements are terms often used with little regard to their meaning. Measurement refers to observation that can be expressed quantitatively and answers the question "how much". Evaluation goes beyond the statement of how much to concern itself with the question, "what value". It seeks to answer to the pupil's and teacher's question, "what progress am i making?" Evaluation hence presupposes a definition of goals to be reached- objectives that have been set-forth. According to Education Commission (1964-66), "It has been accepted that evaluation is a continuous process. It

exercises greatest influence on the teacher's method of instruction and on pupil's study habits and this helps not only to measure educational achievements but also to improve it. The new approach to evaluation will attempt to improve the written examination so that it becomes a valid and reliable measure of educational achievement and to devise techniques for measuring those important aspects of the student's growth that cannot be measured through written examinations".

### 2. Marking system and its inadequacies

Nowadays, according to opinions expressed by various experts, the existing education system in India has become somewhat outdated. In addition, excessive workloads have made it very rigorous for the students. Children today are perennially handicapped by the lack of time, as they are made to work extremely hard in schools. On top of that, there are exams at regular intervals, which make life all the more miserable for the children. Life of the present-day has become stress personified, which can have various adverse effects on their overall personality traits in later years. Also, the need for changing the existing system, which puts a premium on rote learning, was being felt for quite some time. As a result of this, a school examination system designed to reduce stress and bring India on a par in quality with international educational standards has been recently introduced in India.

In the traditional marking system, teachers usually assign marks ranging from 0 to 100, and therefore it is called 101 point scale. This inference is not correct, because the marks scored by each student's are subject to several uncertainties. The 101 point scale appears to be an absolute scale indicating the exact level of a student's achievement. But it is infact, a relative scale.

Stated some of the observations regarding marks as:

- Marks are inaccurate and incomparable.
- Marks are responsible for a variety of detrimental effects such as anxiety, dishonesty, hostility and poor mental health. But it is pointed out there is nothing wrong with encouraging students to work for high marks if the marks are reliable measures for achievement.
- Marks have created controversy over high and low achievement among students. But Ebel remarked that the

measurement and reporting of pupils achievement are necessary and no substantially better or more scientific means that marks seems likely to appear.

- Apathy in marking system is that marking standards vary from evaluation to evaluation and institution to institution. Major variations have been found in marking standard of the same examiner if the same answer script is got evaluated after some interval.
- Although the marking is unreliable but can increasingly be made reliable by improved assessment techniques.
- Sometimes the evaluator does not discriminate properly because he lacks discrimination power.
- The range of marks in social sciences is skewed and marks cluster on a point which is biased and spurious.
- In the marking of scripts of any discipline of social sciences, the examiners keep in view the content, facts, figures, language and logical sequences in writing the essay type answers.
- The shortcomings of marks are attributable to frequent lack of clearly defined and scrupulously observed meanings for the marks and the frequent lack of sufficient good evidence to use as a basis for assigning marks.

The major shortcomings of marks, as they are assigned by many instructors and recorded in many institutions, are twofold:

- i) The lack of clearly defined, generally accepted, scrupulously observed definitions of what the various marks should mean.
- ii) The lack of sufficient relevant, objective evidence to use as a basis for assigning marks.

As per reports, every day more than 17 students aged between 15-25 years commit suicide in India due to non-performance in the examination or an entrance test. One of the points to note here is the thinking of the society, which puts lot of pressure on students to "to perform". This pressure from schools, parents, peer groups and society takes away the youthfulness of a child. Further, a health report also supports that this often causes health hazard such as fatigue, body aches, eye weakness, stress and in more severe cases, depression (neurotic/psychotic).

Examination can be improved upon by continuous evaluation. Examinations are an indispensable part of the educational process as some form of assessment is quite necessary to determine the effectiveness of the dissemination of knowledge by teachers and its assimilation by students. "The first purpose of any examination is just to rank students in order of merit. The advantage of the objective over the traditional examination is that it ranks students more accurately". The strength and success of an educational system mostly depends on the examination system.

### 3. Academic grading in India

Grades are standardized measurements of varying levels of comprehension within a subject area. Grades can be assigned in letters (for example, A, B, C, D, or F), as a range (for example 4.0 - 1.0), as descriptors (excellent, great, satisfactory, needs improvement), in percentages, or, as is common in some post-secondary institutions in some countries, as a Grade Point Average (GPA). The most predominant form of grading in Indian higher education is the percentage system. In all India, marks are generally given in percentages to encourage perfection and good presentation,

despite the extra pressure on the students. Percentage differences up to two decimals was taken into consideration for ranking. For many schools up to XII grade high percentage above 90% is supposed to indicate the excellent quality of a student while in many undergraduate and graduate courses scoring above 65% also is very difficult, though it varies depending upon the board or University. However, the existing system of evaluation suffers from a number of anomalies. It focuses more on cognitive learning and ignores the non-cognitive aspects that are vital components of human personality (NCERT, 2000). The term evaluation is associated with examination, stress and anxiety and the board examinations negatively influence all testing and assessment through the school years, beginning with preschool (NCERT, 2005). In order to improve the educational evaluation, the National Curriculum Framework 2000, recommended introducing grading system in schools. According to Scriven (in Davis *et al.*, 1983) it can also be used for various purposes as stated below-

1. To describe unambiguously the worth, merit or value of the work accomplished.
2. To improve the capacity of students to identify good work, that is, to improve their self-evaluation or discrimination of skills with respect to work submitted.
3. To stimulate and encourage good work by the students.
4. To communicate the teachers judgement of student's progress.
5. To inform the teacher about what students have and have not learned.
6. To select people for rewards or continued education.

The use of a coarser scale of measurement i.e., a few units, each comprising a larger band on a scale reduces error of measurement. The impetus for introducing the grading system was to minimize the negative assumptions and effects of 0 to 100 marking system. The widely held presumption that a student who receives 60 per cent in a subject is truly superior to one who receives 58 per cent and the erroneous assumption that marks are based on absolute scale. After analysing the result obtained from a university for standard error varies from 3 marks to 14 marks out of 100 in different subjects. This means if a student obtains a mark of 52, it is likely for every 2 out of 3 chances that his marks can be anything between 47 and 57. If there are three students obtaining 47, 52 and 57, it is more meaningful to say that they all are in same band of achievement. This is in essence the background to Grading.

Marks are treated by most people as though they are fixed amounts like the centimeters or degrees or rupees. Grades are statements of value. Marks are statements of quantity, grades are statements of quality. Marks are based upon percentage of questions or of knowledge. Grades are related to percentage of people. Marks claim to be absolute measurements. Grades are much like merit lists. The position of a person in the group is considered more important than the actual mark awarded. Those who really understand what they are talking about, frequently emphasize that grades are evaluations on a „relative scale“, while marks claim to be „absolute measurements. It is the reliability of grades that is their essential feature.

The advantage of grading scale is that we do not attempt to use large number of categories. With only 5, 7, 9 or 11 grades, each representing a range of marks, we have a more

dependable differentiation among the students. It is fair to ask why we should choose a particular use of 5, 7, 9 or 11 grades. Why not more or fewer? The decision is somewhat arbitrary. To use these numbers of grade is definitely better than using 101 point scale. Using a 101 point scale we are attempting to make distinctions that are too fine. In view of the error involved, these distinctions are not meaningful. The advantage of the grading scale is that we do not attempt to use such a large number of categories with 5, 7, 9 or 11 grades each representing range of marks, we have a more dependable differentiation among marks. It is observed that classificatory error can be reduced by using a grading system which has a fewer intervals. It is apparently less precise but more reliable. This makes the process of evaluation more scientific. The problem of border line cases becomes less probable under the grading system. The range of grades awarded to students in different subjects would not vary widely as the marks in 101 point scale. Combining grades in different subjects rather than combining marks will considerably reduce the inaccuracies. Thus the grading system which has few classificatory intervals, can be considered to be superior to the marking system in identifying the performance of students. Hence the adoption of the grading system for evaluating student performance in tests and examinations in the universities and college is preferable. It is important to note that these percentage apply equally to history or to mathematics or to biology or to any subject.

The Indian education system has taken a step forward towards reviving the education system with the introduction of grading system in session 2009-10. It will help in reducing the pressure on students during exams. In the last five years the meaning of education has changed for students from imbibing knowledge to merely scoring marks, resulting in myriad forms of education policies.

#### 4. C.B.S.E. Grading System

C.B.S.E. has introduced new grading pattern for class X students. There will be nine grades. The highest will be A1 (exceptional) with a grade point of 10 and a marks range of 91-100%. Second grade will be A2 (excellent) with a grade point of 9 and marks in the range of 81-90%. Third grade will be B1 (very good) with grade point of 8 and a marks range of 71-80%. The fourth grade will be B2 (good) with a grade point of 7 and marks range of 61-70%. Fifth grade will be C1 (fair) with grade point of 6 and marks range of 51-60%. C2 (average) will be the sixth grade with grade point of 5 and marks range of 41-50%. D (below average) will be the seventh grade with 4 grade points and marks range of 33-40%. E1 (needs improvement) and E2 (unsatisfactory) are the last two grades.

Grading system based on continuous and comprehensive evaluation (CCE) will be done in two terms (April-September, October-March). In a year, the school will conduct four formative and two summative assessments.

The New Scheme of Grading has been introduced with the aim that:

- It will minimize misclassification of students on the basis of marks.
- It will eliminate unhealthy competition among high achievers.
- It will reduce societal pressure and will provide the learner with more flexibility.

- It will lead to a focus on a better learning environment Operational.

- It will facilitate joyful and stress free learning.

The nine-point scale grading system will require students to get qualifying grades in four of the five subjects to get promoted to the next level. It had been decided not to carry pass or fail on the mark sheets of students, who will have four options to improve on their grades within a period of two years from their exam. The grading system will adopt a five-point scale, which means awarding students grades from A to E. This will eliminate the schools from showing raw scores on the evaluation report of each student.

#### 5. Board of Secondary Education, Madhya Pradesh

The MPBSE is a Madhya Pradesh government body responsible for determining the policy-related, administrative, cognitive, and intellectual direction of the state's higher educational system. The board regulates and supervises the system of Intermediate education in Madhya Pradesh State. It executes and governs various activities that include devising of courses of study, prescribing syllabus, conducting examinations, granting affiliations to colleges. MPBSE also provides direction, support and leadership for all educational institutions under its jurisdiction. It also runs model schools such as the Model High, TT Nagar. The Madhya Pradesh Legislature, in the sixteenth year of the Republic of India, enacted an Act for the establishment of a Board in order to regulate Secondary Education in Madhya Pradesh and other ancillary matters. In 1965 this autonomous body was established under The Madhya Pradesh Secondary Education Act, 1965.

#### 6. Objectives of the study

The study was conducted with basic objectives as under-

1. To compare the examination stress in between boys and girls student of class X of CBSE Board (Grading System).
2. To compare the examination stress in between boys and girls student of class X of Madhya Pradesh Board (Traditional System).
3. To compare the examination stress in between students (both gender taken together) of class X of CBSE Board (Grading System) and of Madhya Pradesh Board (Traditional System).

#### 7. Design of the study

##### Sampling Plan

- a) Sample Units- Boys and girls student of class 10<sup>th</sup> of both CBSE and Madhya Pradesh Boards.
- b) Sampling Size- A sample of 200 respondents was taken for the study.
- c) Sample Method- Stratified Random Sampling method was followed in the study.
- d) Sample Extent- Schools from Shahdol district in Madhya Pradesh.

##### Tools

Examination stress: Bist Battery of Stress Scales made by Abha Rani Bisht. This battery measures four components of stress- frustration, conflict, pressure and anxiety through 13 sub-tests. For the study purpose the Scale for Academic Stress (SAS) was selected.

## Method

Keeping the nature (comparative and analytical sort) of the problem in mind the researcher followed the present study on the lines of Descriptive Survey Method. In selection of sample Purposive Method of Sampling was employed for selecting the schools for the respondent groups.

## Administration of tools and collection of data

For collecting the data respondents from six schools were selected (three schools from each board). The respondents include 200 students, of which 100 were from each board (and out of which 50 were boy and 50 girl students). For the collection of data from the respondents the tool Bisht Battery of Stress Scale (scale of achievement stress) was applied.

## Statistical Techniques

- Descriptive Statistics-Central tendency (mean), Measures of variability (S.D.)
- Inferential Statistics- t- test

## 8. Review of Literature

Related to this aspect of examination researches have been conducted by Brookhart, Susan M. (1991) <sup>[1]</sup>, Cheny, G.R., Ruzzi, B.B. and Muralidharan, K. (2005) <sup>[2]</sup>, Davis, M. And Davis, G. (1971) <sup>[3]</sup>, Das, Biren (2007) <sup>[4]</sup>, Dahlgren *et.al.*, (2009) <sup>[5]</sup>, Kothari, R.G. and Dinker, G. (2007) <sup>[6]</sup>, Lekholm, Alli Klepp (2010) <sup>[7]</sup> and NCERT (2005).

## 9. Findings of the study

**H1:** To compare the examination stress in between boy and girl students of X class studying under grading system of evaluation (CBSE Board). The result states that there is no significant effect of the gender on the examination stress of the students studying under grading system of evaluation.

**H2:** To compare the examination stress in between boy and girl students of X class studying under traditional numerical marking system of evaluation (Madhya Pradesh Board). The result states that there is no significant effect of the gender on the examination stress of the students studying under numerical system of evaluation.

**H3:** To compare the examination stress in between students of X class studying under grading system of evaluation (CBSE Board) and traditional numerical marking system of evaluation (Madhya Pradesh Board). The result states that there is significant effect of the evaluation system on the examination stress of the students studying under grading system and marking system of evaluation.

## 10. Conclusions of the study

The study reveals that the evaluation system lays an effect over the students on the level of examination stress. The numerical marking system (traditional system) has a direct effect on the examination stress of the students. It increases the pressure and stress among the students during the exam time, and thus, results into their poor academic achievement, which can further lead to severe consequences and dangerous steps can be taken by the students. Whereas on the contrary the grading system of evaluation puts minimum examination stress, and thus, the students can perform better and yields best results. Since the examination stress is minimal in case of grading system of evaluation, the academic achievement

might be higher in the students studying under this system (grading system).

## 11. References

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