

UNIT 9

REPORTING TEST SCORES

Written By:
Dr. Muhammad Saeed

Reviewed By:
Dr. Naveed Sultana

CONTENTS

<i>Sr. No</i>	<i>Topic</i>	<i>Page No</i>
	Introduction.....	
	Objective.....	
9.1	Functions of Test Scores and Progress Reports	
9.2	Types of Reporting and Marking.....	
9.3	Calculating CGPA and Assigning Letter Grades.....	
9.4	Conducting Parent Teacher Conferences.....	
9.5	Activities.....	
9.6	Self-Assessment Exercise	
9.7	References/Suggested Readings	

INTRODUCTION

The unit “Reporting Test Scores” is about measuring the performance of students by providing a profile of their progress and reporting the scores of tests in different ways in context to the different purposes. There is a long tradition that students’ skills are measured by some of testing procedures. Invariably, the product of testing is a score, a ‘yardstick’ by which an individual student is compared with others and/or by which progress is documented. Teachers and other educators use tests, and subsequently test scores in a variety of ways.

The first major topic of the unit deals with the functions of test scores and progress reports of students after taking any test. As there are different functions of grading and reporting systems with respect to its uses like instructional uses, providing feedback to students for administrative use and guidance and informing parents about their children’s performance.

The second key topic in the unit discussed is the “Types of Test Scores and Progress Reports”. Here two types of reporting test scores are discussed. First is Norm-referenced tests which include raw scores, grade norms, percentiles, stanines, and standard scores. Second is Criterion-referenced test which include system of pass-fail and the other types of the practices that are used to report the progress of students.

The third major theme is “Calculating CGPA and Assigning Letter Grades” It includes the method of calculating CGPA and different steps which are concerned with assigning letter grades in reporting test scores such as combining the data, selecting the proper frame of reference for grading and determining the distribution of grades etc.

The last major theme of the unit is “Conducting Parent-Teacher Conferences”. This section includes the information and important preparations for conducting the parent teacher conferences, mentioning the “Do’s” and “Don’ts” of the parent teacher conferences.

OBJECTIVES

After studying the Unit, the students will be able to:

1. understand the purpose of reporting test scores
2. explain the functions of test scores
3. describe the essential features of progress report
4. enlist the different types of grading and reporting systems
5. calculate CGPA
6. conduct parent teacher conferences

9.1 Functions of Test Scores and Progress Reports

The task of grading and reporting students' progress cannot be separated from the procedures adopted in assessing students' learning. If instructional objectives are well defined in terms of behavioural or performance terms and relevant tests and other assessment procedures are properly used, grading and reporting become a matter of summarizing the results and presenting them in understandable form. Reporting students' progress is difficult especially when data is represented in single letter-grade system or numerical value (Linn & Gronlund, 2000).

Assigning grades and making referrals are decisions that require information about individual students. In contrast, curricular and instructional decisions require information about groups of students, quite often about entire classrooms or schools (Linn & Gronlund, 2000).

There are three primary purposes of grading students. First, grades are the primary currency for exchange of many of the opportunities and rewards our society has to offer. Grades can be exchanged for such diverse entities as adult approval, public recognition, college and university admission etc. To deprive students of grades means to deprive them of rewards and opportunities. Second, teachers become habitual of assessing their students' learning in grades, and if teachers don't award grades, the students might not well know about their learning progress. Third, grading students motivate them. Grades can serve as incentives, and for many students incentives serve a motivating function.

The different functions of grading and reporting systems are given as under:

1. *Instructional uses*

The focus of grading and reporting should be the student improvement in learning. This is most likely occur when the report: a) clarifies the instructional objectives; b) indicates the student's strengths and weaknesses in learning; c) provides information concerning the student's personal and social development; and d) contributes to student's motivation.

The improvement of student learning is probably best achieved by the day-to-day assessments of learning and the feedback from tests and other assessment procedures. A portfolio of work developed during the academic year can be displayed to indicate student's strengths and weaknesses periodically.

Periodic progress reports can contribute to student motivation by providing short-term goals and knowledge of results. Both are essential features of essential learning. Well-designed progress reports can also help in evaluating instructional procedures by identifying areas need revision. When the reports of majority of students indicate poor progress, it may infer that there is a need to modify the instructional objectives.

2. *Feedback to students*

Grading and reporting test results to the students have been an on-going practice in all the educational institutions of the world. The mechanism or strategy may differ from country to country or institution to institution but each institution observes this practice in any way. Reporting test scores to students has a number of advantages for them. As the students move up through the grades, the usefulness of the test scores for personal academic planning and self-assessment increases. For most students, the scores provide feedback about how much they know and how effective their efforts to learn have been. They can know their strengths and areas need for special attention. Such feedback is essential if students are expected to be partners in managing their own instructional time and effort. These results help them to make good decisions for their future professional development.

Teachers use a variety of strategies to help students become independent learners who are able to take an increasing responsibility for their own school progress. Self-assessment is a significant aspect of self-guided learning, and the reporting of test results can be an integral part of the procedures teachers use to promote self-assessment. Test results help students to identify areas need for improvement, areas in which progress has been strong, and areas in which continued strong effort will help maintain high levels of achievement. Test results can be used with information from teacher's assessments to help students set their own instructional goals, decide how they will allocate their time, and determine priorities for improving skills such as reading, writing, speaking, and problem solving. When students are given their own test results, they can learn about self-assessment while doing actual self-assessment. (Iowa Testing Programs, 2011).

Grading and reporting results also provide students an opportunity for developing an awareness of how they are growing in various skill areas. Self-assessment begins with self-monitoring, a skill most children have begun developing well before coming to kindergarten.

3. *Administrative and guidance uses*

Grades and progress reports serve a number of administrative functions. For example, they are used for determining promotion and graduation, awarding honours, determining sports eligibility of students, and reporting to other institutions and employers. For most administrative purposes, a single letter-grade is typically required, but of course, technically single letter-grade does not truly interpret student's assessment.

Guidance and Counseling officers use grades and reports on student's achievement, along with other information, to help students make realistic educational and vocational plans. Reports that include ratings on personal and social characteristics are also useful in helping students with adjustment problems.

4. *Informing parents about their children's performance*

Parents are often overwhelmed by the grades and test reports they receive from school

personnel. In order to establish a true partnership between parents and teachers, it is essential that information about student progress be communicated clearly, respectfully and accurately. Test results should be provided to parents using; a) simple, clear language free from educational and test jargon, and b) explanation of the purpose of the tests used (Canter, 1998).

Most of the time parents are either ignored or least involved to let them aware of the progress of their children. To strengthen connection between home and school parents need to receive comprehensive information about their children achievement. If parents do not understand the tests given to their children, the scores, and how the results are used to make decisions about their children, they are prohibited from helping their children learn and making decisions.

According to Kearney (1983), the lack of information provided to consumers about test data has sweeping and negative consequences. He states;

Individual student needs are not met, parents are not kept fully informed of student progress, curricular needs are not discovered and corrected, and the results are not reported to various audiences that need to receive this information and need to know what is being done with the information.

In some countries, there are prescribed policies for grading and reporting test results to the parents. For example, Michigan Educational Assessment Policy (MEAP) is revised periodically in view of parents' suggestions and feedback. MEAP consists of criterion-referenced tests, primarily in mathematics and reading, that are administered each year to all fourth, seventh and tenth graders. MEAP recommends that policy makers at state and local levels must develop strong linkages to create, implement and monitor effective reporting practices. (Barber, Paris, Evans, & Gadsden, 1992).

Without any doubt, it is more effective to talk parents to face about their children's scores than to send a score report home for them to interpret on their own. For a variety of reasons, a parent-teacher or parent-student-teacher conference offers an excellent occasion for teachers to provide and interpret those results to the parents.

1. Teachers tend to be more knowledgeable than parents about tests and the types of scores being interpreted.
2. Teachers can make numerous observations of their student's work and consequently substantiate the results. In-consistencies between test scores and classroom performance can be noted and discussed.
3. Teachers possess work samples that can be used to illustrate the type of classroom work the student has done. Portfolios can be used to illustrate strengths and to explain where improvements are needed.
4. Teachers may be aware of special circumstances that may have influenced the scores, either positively or negatively, to misrepresent the students' achievement level.

5. Parents have a chance to ask questions about points of misunderstanding or about how they can work. The student and the teacher in addressing apparent weaknesses and in capitalizing on strengths wherever possible, test scores should be given to the parents at the school. (Iowa Testing Program, 2011).

Under the Act of 1998, schools are required to regularly evaluate students and periodically report to parents on the results of the evaluation, but in specific terms, the NCCA guidelines make a recommendation that schools should report twice annually to parents – one towards the end of 1st term or beginning of 2nd term, and the other towards the end of school year.

Under existing data protection legislation, parents have a statutory right to obtain scores which their children have obtained in standardized tests. NCCA have developed a set of reports card templates to be used by schools in communicating with parents and taken in conjunction with the Circular 0138 which was issued by the Department of Education in 2006.

In a case study conducted in the US context (www.uscharterschools.org) it was found that ‘the school should be a source for parents, it should not dictate to parents what their role should be’. In other words, the school should respect all parents and appreciate the experiences and individual strengths they offer their children.

9.2 Types of Test Reporting and Marking

Usually two types of tests are used in schools, criterion-referenced and norm-referenced. Criterion-referenced tests are used to measure student mastery of instructional objectives or curriculum rather than to compare one student’s performance with another or to rank students. They are often used as benchmarks to identify areas of strengths and/or weaknesses in a given curriculum. Norm-referenced tests compare an individual’s performance to that of his/her classmates, thus emphasizing relative rather than absolute performance. Scores on norm-referenced tests indicate the students’ ranking relative position to that group. Typical scores used with norm-referenced tests include raw scores, grade norms, percentiles, stanines, and standard scores.

1. Raw scores

The raw score is simply the number of points received on a test when the test has been scored according to the directions. For example, if a student responds to 65 items correctly on an objective test in which each correct item counts one point, the raw score will be 65.

Although a raw score is a numerical summary of student’s test performance, it is not very meaningful without further information. For example, in the above example, what does a raw score of 35 mean? How many items were in the test? What kinds of the problems were asked? How the items were difficult?

2. *Grade norms*

Grade norms are widely used with standardized achievement tests, especially at elementary level. The grade equivalent that corresponds to a particular raw score identifies the grade level at which the typical student obtains that raw score. Grade equivalents are based on the performance of students in the norm group in each of two or more grades.

3. *Percentile ranking*

A percentile is a score that indicates the rank of the score compared to others (same grade/age) using a hypothetical group of 100 students. In other words, a percentile rank (or percentile score) indicates a student's relative position in the group in terms of percentage of students.

Percentile rank is interpreted as the percentage of individuals receiving scores equal or lower than a given score. A percentile of 25 indicates that the student's test performance is equal or exceeds 25 out of 100 students on the same measure.

4. *Standard scores*

A standard score is also derived from the raw scores using the normal information gathered when the test was developed. Instead of indicating a student's rank compared to others, standard scores indicate how far above or below the average (Mean) an individual score falls, using a common scale, such as one with an average of 100. Basically standard scores express test performance in terms of standard deviation (SD) from the Mean. Standard scores can be used to compare individuals of different grades or age groups because all are converted into the same numerical scale. There are various forms of standard scores such as z-score, T-score, and stanines.

Z-score expresses test performance simply and directly as the number of SD units a raw score is above or below the Mean. A z-score is always negative when the raw score is smaller than Mean. Symbolic representation can be shown as: $z\text{-score} = \frac{X-M}{SD}$.

T-score refers to any set of normally distributed standard scores that has a Mean of 50 and SD of 10. Symbolically it can be represented as: $T\text{-score} = 50 + 10(z)$.

Stanines are the simplest form of normalized standard scores that illustrate the process of normalization. Stanines are single digit scores ranging from 1 to 9. These are groups of percentile ranks with the entire group of scores divided into nine parts, with the largest number of individuals falling in the middle stanines, and fewer students falling at the extremes (Linn & Gronlund, 2000).

5. *Norm reference test and traditional letter-grade system*

It is the most easiest and popular way of grading and reporting system. The traditional system is generally based on grades A to F. This rating is generally reflected as: Grade A

(Excellent), B (Very Good), C (Good), D (Satisfactory/Average), E (Unsatisfactory/Below Average), and F (Fail).

This system does truly assess a student's progress in different learning domains. First shortcoming is that using this system it is difficult to interpret the results. Second, a student's performance is linked with achievement, effort, work habits, and good behaviour; traditional letter-grade system is unable to assess all these domains of a student. Third, the proportion of students assigned each letter grade generally varies from teacher to teacher. Fourth, it does not indicate patterns of strengths and weaknesses in the students (Linn & Gronlund, 2000). In spite of these shortcomings, this system is popular in schools, colleges and universities.

6. *Criterion reference test and the system of pass-fail*

It is a popular way of reporting students' progress, particularly at elementary level. In the context of Pakistan, as majority of the parents are illiterate or hardly literate, therefore they have concern with 'pass or fail' about their children's performance in schools. This system is mostly used for courses taught under a pure mastery learning approach i.e. criterion-referenced testing.

This system has also many shortcomings. First, as students are declared just pass or fail (successful or unsuccessful) so many students do not work hard and hence their actual learning remains unsatisfactory or below desired level. Second, this two-category system provides less information to the teacher, student and parents than the traditional letter-grade (A, B, C, D) system. Third, it provides no indication of the level of learning.

7. *Checklist of Objectives*

To provide more informative progress reports, some schools have replaced or supplemented the traditional grading system with a list of objectives to be checked or rated. This system is more popular at elementary school level. The major advantage of this system is that it provides a detailed analysis of the students' strengths and weaknesses. For example, the objectives for assessing reading comprehension can have the following objectives.

- Reads with understanding
- Works out meaning and use of new words
- Reads well to others
- Reads independently for pleasure (Linn & Gronlund, 2000).

8. *Rating scales*

In many schools students' progress is prepared on some rating scale, usually 1 to 10, instead letter grades; 1 indicates the poorest performance while 10 indicates as the excellent or extra-ordinary performance. But in the true sense, each rating level

corresponds to a specific level of learning achievement. Such rating scales are also used by the evaluation of students for admissions into different programmes at university level. Some other rating scales can also be seen across the world.

In rating scales, we generally assess students' abilities in the context of 'how much', 'how often', 'how good' etc. (Anderson, 2003). The continuum may be qualitative such as 'how good a student behaves' or it may quantitative such as 'how much marks a student got in a test'. Developing rating scales has become a common practice now-a-days, but still many teachers don't possess the skill of developing an appropriate rating scale in context to their particular learning situations.

9. Letters to parents/guardians

Some schools keep parents inform about the progress of their children by writing letters. Writing letters to parents is usually done by a few teachers who have more concern with their students as it is a time consuming activity. But at the same time some good teachers avoid to write formal letters as they think that many aspects are not clearly interpreted. And some of the parents also don't feel comfortable to accept such letters.

Linn and Gronlund (2000) state that although letters to parents might provide a good supplement to other types of reports, their usefulness as the sole method of reporting progress is limited by several of the following factors.

- Comprehensive and thoughtful written reports require excessive amount of time and energy.
- Descriptions of students learning may be misinterpreted by the parents.
- Fail to provide a systematic and organized information

10. Portfolio

The teachers of some good schools prepare complete portfolio of their students. Portfolio is actually cumulative record of a student which reflects his/her strengths and weaknesses in different subjects over the period of the time. It indicates what strategies were used by the teacher to overcome the learning difficulties of the students. It also shows students' progress periodically which indicates his/her trend of improvement. Developing portfolio is really a hard task for the teacher, as he/she has to keep all record of students such as teacher's lesson plans, tests, students' best pieces of works, and their assessments records in an academic year.

An effective portfolio is more than simply a file into which student work products are placed. It is a purposefully selected collection of work that often contains commentary on the entries by both students and teachers.

No doubt, portfolio is a good tool for student's assessment, but it has three limitations. First, it is a time consuming process. Second, teacher must possess the skill of developing portfolio which is most of the time lacking. Third, it is ideal for small class size and in

Pakistani context, particularly at elementary level, class size is usually large and hence the teacher cannot maintain portfolio of a large class.

11. Report Cards

There is a practice of report cards in many good educational institutions in many countries including Pakistan. Many parents desire to see the report cards or progress reports in written form issued by the schools. Although a good report card explains the achievement of students in terms of scores or marks, conduct and behaviour, participation in class activities etc. Well written comments can offer parents and students' suggestions as to how to make improvements in specific academic or behavioural areas. These provide teachers opportunities to be reflective about the academic and behavioural progress of their students. Such reflections may result in teachers gaining a deeper understanding of each student's strengths and needs for improvement. Bruadli (1998) has divided words and phrases into three categories about what to include and exclude from written comments on report cards.

A. Words and phrases that promote positive view of the student

1. Gets along well with people
2. Has a good grasp of ...
3. Has improved tremendously
4. Is a real joy to have in class
5. Is well respected by his classmates
6. Works very hard

B. Words and phrases to convey the students need help

1. Could benefit from ...
2. Finds it difficult at time to ...
3. Has trouble with ...
4. Requires help with ...
5. Needs reinforcement in ...

C. Words and phrases to avoid or use with extreme caution

1. Always
2. Never
3. Can't (or unable to)
4. Won't

Report card usually carries two shortcomings: a) regardless of how grades are assigned, students and parents tend to use them normatively; and b) many students and parents (and some teachers) believe that grades are far more precise than they are. In most grading schemes, an 'F' denotes to fail or unsatisfactory. Hall (1990) and Wiggins (1994) state that not only grades imprecise, they are vague in their meaning. They do not provide parents or students with a thorough understanding of what has been learned or accomplished.

12. *Parent-teacher conferences*

Parent-teacher conferences are mostly used in elementary schools. In such conferences portfolio are discussed. This is a two-way flow of information and provides much information to the parents. But one of the limitations is that many parents don't come to attend the conferences. It is also a time consuming activity and also needs sufficient funds to hold conferences.

Literature also highlights 'parent-student-teacher conference' instead 'parent-teacher conference', as student is also one of the key components of this process since he/she is directly benefitted. In many developed countries, it has become the most important way of informing parents about their children's work in school. Parent-teacher conferences are productive when these are carefully planned and the teachers are skilled and committed.

The parent-teacher conference is an extremely useful tool, but it shares three important limitations with informal letter. First, it requires a substantial amount of time and skills. Second, it does not provide a systematic record of student's progress. Third, some parents are unwilling to attend conferences, and they can't be enforced.

Parent-student-teacher conferences are frequently convened in many states of the USA and some other advanced countries. In the US, this has become a striking feature of Charter Schools. Some schools rely more on parent conferences than written reports for conveying the richness of how students are doing or performing. In such cases, a school sometimes provides a narrative account of student's accomplishments and status to augment the parent conferences. (www.uscharterschools.org).

13. *Other ways of reporting students results to parents*

There are also many other ways to enhance communication between teacher and parent, e.g. phone calls. The teachers should contact telephonically to the parents of the children to let them inform about child's curriculum, learning progress, any special achievement, sharing anecdote, and invite parents in open meetings, conferences, and school functions.

9.3 *Calculating CGPA and Assigning Letter Grades*

CGPA stands for Cumulative Grade Point Average. It reflects the grade point average of all subjects/courses regarding a student's performance in composite way. To calculate CGPA, we should have following information.

- Marks in each subject/course
- Grade point average in each subject/course
- Total credit hours (by adding credit hours of each subject/course)

Calculating CGPA is very simple that total grade point average is divided by total credit hours. For example if a student MA Education programme has studied 12 courses, each of 3 credits. The total credit hours will be 36. The CGPA will be $36/12 = 3.0$

Sr. #	Course Title	Credits	Marks	Grade	GPA	CGPA
1.	Philosophy of Education	3	85	A	4.0	
2.	Curriculum and Instruction	3	78	B+	3.3	
3.	Edu. Admin.& Supervision	3	72	B	3.0	
4.	Computer in Education	3	77	B+	3.3	
5.	Educational Technology	3	77	B+	3.3	
6.	Instructional Technology	3	71	B	3.0	
7.	Teacher Edu. in Islamic Pers.	3	79	B+	3.3	
8.	History of TE in Pakistan	3	76	B+	3.3	
9.	Master Research Project	3	81	A-	3.7	
10.	Islamic System of Education	3	85	A	4.0	
11.	Research Methods in Edu.	3	86	A	4.0	
12.	Edu. Assessment & Evalu.	3	75	B+	3.3	
13.	Comparative Education	3	82	A-	3.7	
14.	Methods of Teaching Islamiat	3	85	A	4.0	
15.	Teaching of Urdu	3	80	A-	3.7	
16.	Islamic Ideology & Ideology	3	81	A-	3.7	
17.	Student Teaching & Obs. 1	3	80	A-	3.7	

18.	Student Teaching & Obs. 2	3	88	A	4.0	
19.	Education in Pakistan	3	88	A	4.0	
20.	Teaching of Social Studies	3	81	A-	3.7	
21.	Total	60				

Assigning letter grades

Letter grade system is most popular in the world including Pakistan. Most teachers face problems while assigning grades. There are four core problems or issues in this regard; 1) what should be included in a letter grade, 2) how should achievement data be combined in assigning letter grades?, 3) what frame of reference should be used in grading, and 4) how should the distribution of letter grades be determined?

1. *Determining what to include in a grade*

Letter grades are likely to be most meaningful and useful when they represent achievement only. If they are communicated with other factors or aspects such as effort of work completed, personal conduct, and so on, their interpretation will become hopelessly confused. For example, a letter grade C may represent average achievement with extraordinary effort and excellent conduct and behaviour or vice versa.

If letter grades are to be valid indicators of achievement, they must be based on valid measures of achievement. This involves defining objectives as intended learning outcomes and developing or selecting tests and assessments which can measure these learning outcomes.

2. *Combining data in assigning grades*

One of the key concerns while assigning grades is to be clear what aspects of a student are to be assessed or what will be the tentative weightage to each learning outcome. For example, if we decide that 35 percent weightage is to be given to mid-term assessment, 40 percent final term test or assessment, and 25% to assignments, presentations, classroom participation and conduct and behaviour; we have to combine all elements by assigning appropriate weights to each element, and then use these composite scores as a basis for grading.

3. *Selecting the proper frame of reference for grading*

Letter grades are typically assigned on the basis of one of the following frames of reference.

- a) Performance in relation to other group members (relative grading)

- b) Performance in relation to specified standards (absolute grading)
- c) Performance in relation to learning ability (amount of improvement)

Assigning grades on relative basis involves comparing a student's performance with that of a reference group, mostly class fellows. In this system, the grade is determined by the student's relative position or ranking in the total group. Although relative grading has a disadvantage of a shifting frame of reference (i.e. grades depend upon the group's ability), it is still widely used in schools, as most of the time our system of testing is 'norm-referenced'.

Assigning grades on an absolute basis involves comparing a student's performance to specified standards set by the teacher. This is what we call as 'criterion-referenced' testing. If all students show a low level of mastery consistent with the established performance standard, all will receive low grades.

The student performance in relation to the learning ability is inconsistent with a standard-based system of evaluating and reporting student performance. The improvement over the short time span is difficult. Thus lack of reliability in judging achievement in relation to ability and in judging degree of improvement will result in grades of low dependability. Therefore such grades are used as supplementary to other grading systems.

4. Determining the distribution of grades

The assigning of relative grades is essentially a matter of ranking the student in order of overall achievement and assigning letter grades on the basis of each student's rank in the group. This ranking might be limited to a single classroom group or might be based on the combined distribution of several classroom groups taking the same course.

If grading on the curve is to be done, the most sensible approach in determining the distribution of letter grades in a school is to have the school staff set general guidelines for introductory and advanced courses. All staff members must understand the basis for assigning grades, and this basis must be clearly communicated to users of the grades. If the objectives of a course are clearly mentioned and the standards for mastery appropriately set, the letter grades in an absolute system may be defined as the degree to which the objectives have been attained, as followed.

A = Outstanding (90 to 100%)

B = very Good (80-89%)

C = Satisfactory (70-79%)

D = Very Weak (60-69%)

F = Unsatisfactory (Less than 60%)