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## **An Administrative Guide for Effective Use of Standardized Test Results**

Connie J. Miller

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**An Administrative Guide for  
Effective Use of Standardized Test  
Results**

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**A Project Report  
Presented to  
The Graduate Faculty  
Central Washington University**

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**In Partial Fulfillment  
of the Requirements for the Degree  
Master of Education**

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**by  
Connie J. Miller  
July, 1990**

**APPROVED FOR THE GRADUATE FACULTY**

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**COMMITTEE CHAIRMAN**

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**An Administrative Guide for  
Effective Use of Standardized Test  
Results**

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The purpose of this project was to develop a reference guide for administrators to use with standardized test data. Standardized tests are regularly given to students in our public schools. Often, the results are published for the community. It is important for the building principal to use these data in positive ways to enhance student growth. The suggestions in the guide are meant to facilitate effective use of standardized test data by administrators.

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## Chapter I

### Background of the Study

#### Introduction

Since the 1930's when psychologists began looking at education as a legitimate field of study, testing has become more and more important as a measure of effectiveness. (Rippa, 1988) During the early stages of industrializing America, Frederick Winslow Taylor's refined concept of standardizing work performance impacted educational curriculum. (Rippa, 1988) After all, children were being prepared to fit into a factory economy. Standardized tests evolved as a means of uniformly measuring student performance when psychology became a legitimate field of study in the early 1900's. (Rippa, 1988) In the 1960's, federal legislation aimed at educational equity created a need for objective evaluation of federally funded programs. (Johns, et.al., 1983) In 1966, the Coleman Report surveyed accessibility of public schooling for all children and used academic achievement as its main indicator. (Cooper, 1983)

Cooper (1983) has looked at the question of school effectiveness in terms of academic mastery, measured by standardized testing "...the most realistic, accurate, and

equitable basis for portraying individual pupil progress". (p. 33) Currently, educators involved in the effective schools movement turn to standardized test data for measurement of how well a school is meeting the needs of its clients. In the last ten years, standardized testing has reached such wide-spread use that many people measure the quality of a school by its test scores alone. (Houlihan, 1983) Test scores are routinely published in newspapers and school districts are applauded or criticized accordingly. Public school accountability is synonymous with standardized test scores today.

Test scores can certainly give some evidence about meeting goals and objectives, but may not always be inclusive of all the needs of individual students. (Cooper, 1983) What a standardized test may do is to help teachers and administrators make instructional decisions about what is best for students. There are several options open to the building administrator for using standardized test data. The most obvious and frequent use is an objective report to local school boards on student performance. This often means that test scores are used only once during a school year and only as a report. Administrators can use test data to impact curriculum in a positive, effective, and ongoing way. The guide from this project will provide suggestions for dialogue with staff, school boards, and parents about student performance.

Controversy exists about the use of test data to rate school effectiveness. (Frederick, 1987) However, professional

debates over test validity or test appropriateness are not likely to stem the widespread use of standardized tests. Standardized testing appears to be here to stay. Research cautions against the exclusive use of test data to guide students and warns that test data may only be one facet of measurement that must be looked at. (Serow, 1983)

### Purpose

The purpose of this project was to develop a reference for administrators to use with standardized test data. The guide should be an easy to read reference for building principals. One or more activities may be selected to extend the usefulness of test data. Activities may involve staff, students, or parents, or may be analytical in nature. The guide uses a listing format of activities and is not necessarily sequential.

### Definitions

1. Standardized Achievement Test: A test where a student's performance is compared with students across the nation.
2. Norm-referenced Test: Measurement on the test is based on how well others did nationally.
3. Criterion Referenced Test: Measurement on the test is based on specific objectives taught in school.



The percentage of questions answered correctly indicates mastery.

4. **Percentile Ranks:** Indicates the relative standing of a pupil in comparison with other pupils in the same grade who took the test at a comparable time. The range of scores is from a low of 1 to a high of 99, with 50 being average performance.
5. **Normal Curve Equivalents:** This score is derived from the percentile score, but is divided in 99 equal units. It serves to spread the percentile scores out evenly.
6. **Grade Equivalents:** A score that represents the average performance of students tested in a given month. This score is reported in terms of grade and month of the student.
7. **Standardized Test Data:** The collection of student scores reported from norm referenced tests.

## Chapter 2

### Review of the Literature

"Standardized achievement tests continue to be used as the primary criterion measures in the evaluation of basic skills programs..." (Hanson, 1986, p. 103) More and more, educators have been forced to answer to standardized test data for accountability. (Hanson, 1986) In Washington State, fourth, eighth, and tenth grade scores are published in newspapers and compared district by district. Frequently, principals are held accountable for school performance based on standardized tests. (Serow, 1983)

Weiss (1978) estimates that 93 percent of American school districts use standardized tests of math in grade schools. Porter (1983) estimates 67 percent of American high schools use standardized tests of math. Student performance on standardized test scores is often used to describe school success. Schools with high student test averages are often tagged as superior schools, whereas schools with average or below average test scores are often judged as needing special assistance." (Houlihan, 1983) What role do building principals play in the measurement of this school effectiveness? "The wise principal regularly reviews testing

objectives and student progress toward measured objectives and skills as these relate to ...instructional objectives." (Marso, 1986, p. 146) Cooper (1983) pointed out that principals in 55 successful schools demonstrated instructional leadership by determining trouble areas that students were experiencing and helping teachers find alternative ways of teaching. This was done in effective schools by closely monitoring students through the use of standardized testing. Ineffective schools were characterized by a lack of action when test results pointed to low achievement. (Cooper, 1983) It is particularly critical for principals to recognize their role in regard to using standardized test data to enable teachers to expand their instructional flexibility and acquire instructional expertise. (Leithwood, 1990) The building principal can direct student assessment to focus on instructional goals. Program decisions could be based on informed assessment. Harold Hodgkinson also concludes "...that the most important single factor in school improvement is the leadership of the individual school principal." (Hodgkinson, 1982) He goes on to say that schools must provide a definition of quality of student performance. Most schools communicate standardized test data to their communities as measurement of school performance. Principals who convey a vision of achievement to their staffs are likely to create schools where high achievement on standardized tests is evident. (Wilcox, 1983) Effective

schools research points out that use of student assessment related to school goals is a factor identified with effective schools. (Porter, 1983) Improvement within the school is possible despite socio-economic variables of school populations. (Hodgkinson, 1982) In this new era of educational administration, principals participate in setting, clarifying, and measuring goals. "The principal's participation in this process is mandatory for ultimately they will be held accountable for the progress made in reaching these goals." (MacPhail-Wilcox, 1983)

Once the principal's role is established, a plan must be formulated for action. At what point can a principal feel comfortable with school success? The first, but by no means the only step is objective measurement. Student performance measured by standardized test scores is often the first objective indicator of school success. Thomas Houlihan suggests that principals need to understand where students fit on the continuum of achievement. (Houlihan, 1983) Understanding student needs and determining what needs are unmet are preliminary to structuring alternatives. The principal needs to understand what the standardized test is measuring and how accurately it relates to what is being taught. (Hanson, 1986) If the test does not correspond closely with the scope of instruction, the principal must make efforts to match the two more closely. "What we have are really two curricula - the tested and the taught. The idea

is to make them as congruent as possible..." (O'Rourke, 1987, p. 135)

Once correspondence is established, the principal needs interpretation skills. There is some disagreement on the best means of interpretation. "Score interpretation should be based on simple percent scores rather than on grade equivalents, percentile ranks, or other normed scores." (Serow, 1983, p. 22) Frederick prefers percentile scores because they are easily understood by the public. (Frederick, 1987)

Percentile ranks, grade equivalents, and other normed scores alone will not give a total picture of student achievement. (O'Rourke, 1987) Changes in percentile scores only measure fluctuations in a student's relative position to the norm. Principals should use clusters of scores to denote patterns of performance rather than to strictly measure gains or losses in actual knowledge. (Serow, 1983) There appears to be many gaps between what is being taught and what is being tested.

The best use of standardized test data by a building principal is as validation of other indicators of achievement. (Serow, 1983) Other indicators may include pre-instructional factors, during-instruction factors, climate factors, and post-instructional factors. (Belanger, 1986) Belanger explains these pre-instructional factors as planning lessons and covering content. He goes on to say that during-instruction factors include academic learning time, time on

task, and supervised practice. Post-instructional factors include praise, correction, and judicious use of grades. (Belanger, 1986) Critics point out that standardized tests may not accurately measure the diverse goals of public education. Still, standardized test scores do provide one objective piece of information for consideration of effectiveness. The actual uses of test data are as varied as they are controversial. Fredrick reported that McCormack (1982) used an internal standard where the performance of each achievement group was compared to the group's performance from the year before. (Frederick, 1987) External normed standards were applied by Brookover (1981) whose definition specifies that students must score at or above the national level (50th percentile) in order for the school to be described as effective. Clauset and Gaynor (1982) do not accept the validity of student performance unless it has been analyzed over a six year period. Whatever time frame is used, these authors seem to agree that it is essential to follow the process of tracking the same set of students over time in order to discern a pattern. Computer programs may be the most time efficient way to build comprehensive assessment over time. (Frederick, 1987)

Is testing a necessary evil or do principals really need to pay attention to testing trends? Edmonds (1979) includes the use of measures of pupil achievement as one of the five characteristics of effective schools. In other words, student

assessment tied to school goals makes a school more effective. (Porter, 1983) Ideals for student achievement are paramount to a school's function. A strong testing program, selected or created by staff, supports goals. The responsibility to have a strong testing program that reflects the taught curriculum lies with the principal because it is the principal who bears the task of explaining results. It is the principal who sets the tone and the pace for a school and it is the principal who focuses on achievement. (Houlihan, 1983)

#### Summary

Chapter 3 explains the method of gathering data and describes the survey used. Chapter four includes the finished handbook, "Outcomes: Making Test Results Work" completed for this project. Chapter five summarizes, concludes, and makes recommendations on the basis of the survey data.

## Chapter 3

### Procedures

Forty-five Washington State school districts were selected and contacted to acquire information on existing guides for using standardized test data and to ask specific questions about uses of test scores. An informational survey was sent to twenty-five randomly selected school districts in Washington State. An informal survey was also sent to twenty local principals. The informal survey asked questions concerning usage of standardized test results by local principals. A review of literature was also conducted. The focus of the review of literature was to ascertain what practices were effectively being used to make standardized test data useful. Using the gathered information, a guide was written. Local district building principals field tested the guide in its first draft form. Revisions were made and a final copy was printed. The final copy was sent to five local principals for further field testing. These principals were interviewed to assess usability of the final handbook.



## Chapter 5

### Summary, Conclusions, Recommendations

#### Summary

Daniel Duke suggested that the principal of the 1990's will have to be a person of vision who prioritizes time to plan for effective schooling. (Duke, 1990) One of the most important uses of time by a principal is reviewing standardized test data. These data may reveal trends in achievement; these trends must be used to impact curriculum design or program development. Standardized test data can be used to measure deviation from expectations and draw comparisons between current and past years' scores in order to improve instruction.

Staff development is another area that can be impacted by analyzing test data. Grade level meetings can be used to look at patterns of student performance, and staffings can be scheduled to relate school mission to academic achievement. Principals can provide leadership in developing strategies with staff to pinpoint areas for focus.

A critical factor for principals in promoting school success is cultivating an attitude that all students can learn. (Frederick, 1987) To achieve this ideal, professional

consensus of goals is essential. Principals can provide clear leadership toward these goals by promoting understanding of objectives and measurement standards. Standardized test scores provide one objective indicator of achievement, and these scores are readily available.

In the survey responses received from forty-five school districts in Washington State, (Appendix A) it was suggested that it may be helpful to provide in-service on how not to use standardized test results. Principals could periodically in-service staff on appropriate application of standardized test data. If teachers are well-prepared for standardized testing and expect follow-up sessions, they may view standardized testing as a valuable tool for curricular adjustment. Teachers may consider instructional methods as a result of standardized testing in-service.

### Conclusion

The results of a survey of principals conducted for this survey during Fall, 1989 indicated that:

1. Eighty-five percent of the respondents do not believe they spend enough time looking at standardized test results.
2. Eighty-five percent also indicated that they would use a handbook on using test results.
3. Administrators seemed willing to do more to make standardized test results useful. Eighty-five

percent said they would attend in-service on how to use standardized test results.

4. Twelve percent of the respondents indicated that there was material available on the uses of standardized test data. Of these twelve percent, the available material mentioned dealt only with administering the test or reporting to the school board.
5. School districts invest great amounts of time and money in giving standardized tests, but it appears that there is very little use made of the quantity of data returned to the school district. Based on the low percentage of respondents who indicated the use of materials in connection with standardized test data there is evidence that administrators do not have sufficient ways to use standardized test data.

#### Recommendations

On the basis of the above conclusions the following recommendations are made:

1. Principals need to prioritize their time to include reviewing standardized test data. Survey respondents indicated they needed more time. Perhaps existing time needs to be rearranged.
2. Districts need to place a priority on using valuable

test data and communicate this priority to building principals. Workshops need to be scheduled to prepare administrators in standardized test interpretation. Local networks can be organized for principals to share ideas on using standardized test results.

3. Districts should collect and distribute published materials such as articles and handbooks. Survey data indicates that a majority of principals would use a handbook on using test results. Educating administrators about standardized testing should include cautions about how not to use standardized test data. Districts can contact the Testing Supervisor, Office of State Superintendent of Public Instruction, to acquire information on appropriate uses of standard test data.
4. Standardized test data will be more useful when the tested and taught curriculum are the same. Principals need to work at changing situations where standardized tests do not coincide with what is being taught in classrooms. This can be done through instructional leadership in content areas.
5. Principals can make effective use of standardized test data by prioritizing time, staying abreast of new material on standardized testing, and providing leadership to staff.

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APPENDICES



**APPENDIX A**

**Cover Letter and Questionnaire**

HOQUIAM SCHOOL DISTRICT NO. 28

312 Simpson Avenue  
Hoquiam, Washington 98550  
(206)532-6543

DIRECTORS

Steven T. Barry  
Alvin J. Dick  
JoAnn H. Stritmatter  
Dr. Edward J. Wayman  
Betty L. Wynn

ADMINISTRATION

Stanley G. Pinnick  
Superintendent

Larry R. Jones  
Assistant Superintendent

Dear Sir:

I am a teacher in the Hoquiam School District working on my Master's Degree in Supervision/Curriculum from Central Washington University.

My project is to develop an administrative guide for the use of standardized test results at the building and district level. This project is a joint effort between myself and the administrative team of the Hoquiam School District.

We are asking your district for assistance in this project. We would appreciate a copy of any material you have in relation to use of tests and test results. By looking at samples from other districts, we hope to write our own guide.

Please send a copy of material you have or respond by filling out and returning the bottom of this letter.

Thank you for your cooperation.

Sincerely,

Connie Miller

Stan Pinnick  
Superintendent

-----  
We are sending material and would like a copy of your guide when completed. \_\_\_\_\_

We do not have material to send at this time. \_\_\_\_\_

Name \_\_\_\_\_

Address \_\_\_\_\_

*Your public schools...There's no better place to learn.*

Please note: Signatures on this page have been redacted due to security concerns.

TESTING SURVEY

1. Do you analyze standardized test data when it comes back into your building?

Yes \_\_\_\_\_ No \_\_\_\_\_

2. Which scores do you look at?

Percentiles \_\_\_\_\_

Grade Equivalent Scores \_\_\_\_\_

NCE Scores \_\_\_\_\_

3. Do you plan staff meetings just to discuss administering standardized tests?

Yes \_\_\_\_\_ No \_\_\_\_\_

4. Do you plan staff meetings just to discuss test results?

Yes \_\_\_\_\_ No \_\_\_\_\_

5. Do you use standardized test results to identify students who need academic help?

Yes \_\_\_\_\_ No \_\_\_\_\_

6. What do you look at usually: building or individual scores?

Building \_\_\_\_\_

Individual \_\_\_\_\_

Both \_\_\_\_\_

7. Do you feel you spend enough time looking at standardized test results?

Yes \_\_\_\_\_ No \_\_\_\_\_

8. Do you item analyze the test results?

Yes \_\_\_\_\_ No \_\_\_\_\_

9. Do you ask teachers for input on low scores?

Yes \_\_\_\_\_ No \_\_\_\_\_

10. Do you follow through on low scores?

Yes \_\_\_\_\_ No \_\_\_\_\_

11. What content area scores do you look at most?

Reading \_\_\_\_\_

Math \_\_\_\_\_

Language Arts \_\_\_\_\_

Other \_\_\_\_\_

12. Would you attend an in-service on how to use test scores?

Yes \_\_\_\_\_ No \_\_\_\_\_

13. Would you attend an in-service on interpreting test scores?

Yes \_\_\_\_\_ No \_\_\_\_\_

14. Would you like to have a handbook on how to use test results?

Yes \_\_\_\_\_ No \_\_\_\_\_

15. What would be helpful for principals to enable them to use standardized test results?

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-----  
-----

TESTING SURVEY (RESULTS)

1. Do you analyze standardized test data when it comes back into your building?  
Yes 100% No \_\_\_\_\_
2. Which scores do you look at?  
Percentiles 100%  
Grade Equivalent Scores 100%  
NCE Scores 80%
3. Do you plan staff meetings just to discuss administering standardized tests?  
Yes 85% No 15%
4. Do you plan staff meetings just to discuss test results?  
Yes 100% No \_\_\_\_\_
5. Do you use standardized test results to identify students who need academic help?  
Yes 100% No \_\_\_\_\_
6. What do you look at usually: building or individual scores?  
Building \_\_\_\_\_  
Individual \_\_\_\_\_  
Both 100%
7. Do you feel you spend enough time looking at standardized test results?  
Yes 15% No 85%
8. Do you item analyze the test results?  
Yes 15% No 85%

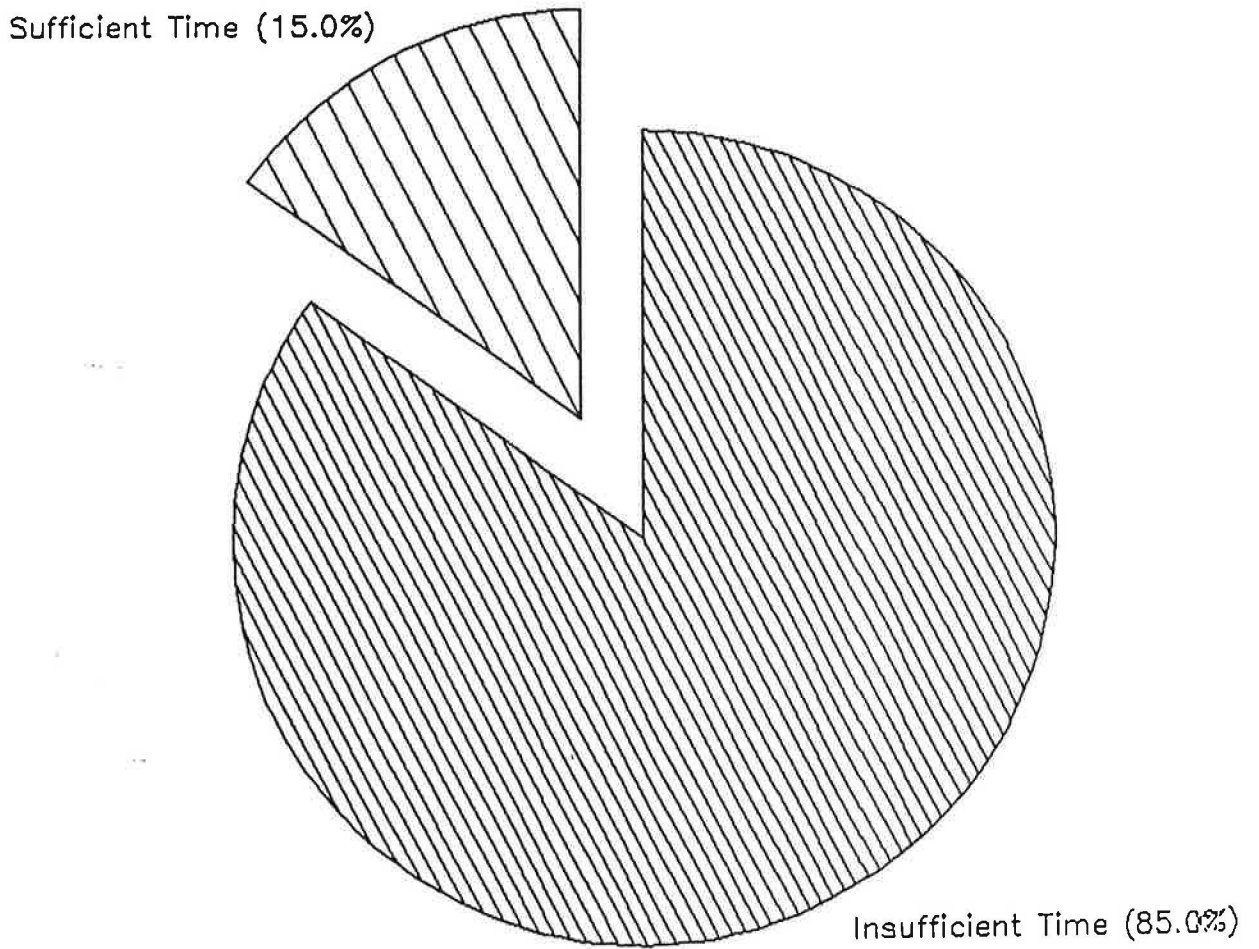
9. Do you ask teachers for input on low scores?  
Yes 100% No \_\_\_\_\_
10. Do you follow through on low scores?  
Yes 100% No \_\_\_\_\_
11. What content area scores do you look at most?  
Reading 100%  
Math 100%  
Language Arts 100%  
Other Spelling
12. Would you attend an in-service on how to use test scores?  
Yes 85% No 15%
13. Would you attend an in-service on interpreting test scores?  
Yes 85% No 15%
14. Would you like to have a handbook on how to use test results?  
Yes 85% No 15%
15. What would be helpful for principals to enable them to use standardized test results?
1. Network with other principals.
  2. Instruct teachers on using test results.
  3. Prioritize time better.
  4. Instruction on how not to use standardized test data.

**APPENDIX B**

**Graphs**

**GRAPH 1**

**Is Enough Time Spent on Reviewing Test Data?**

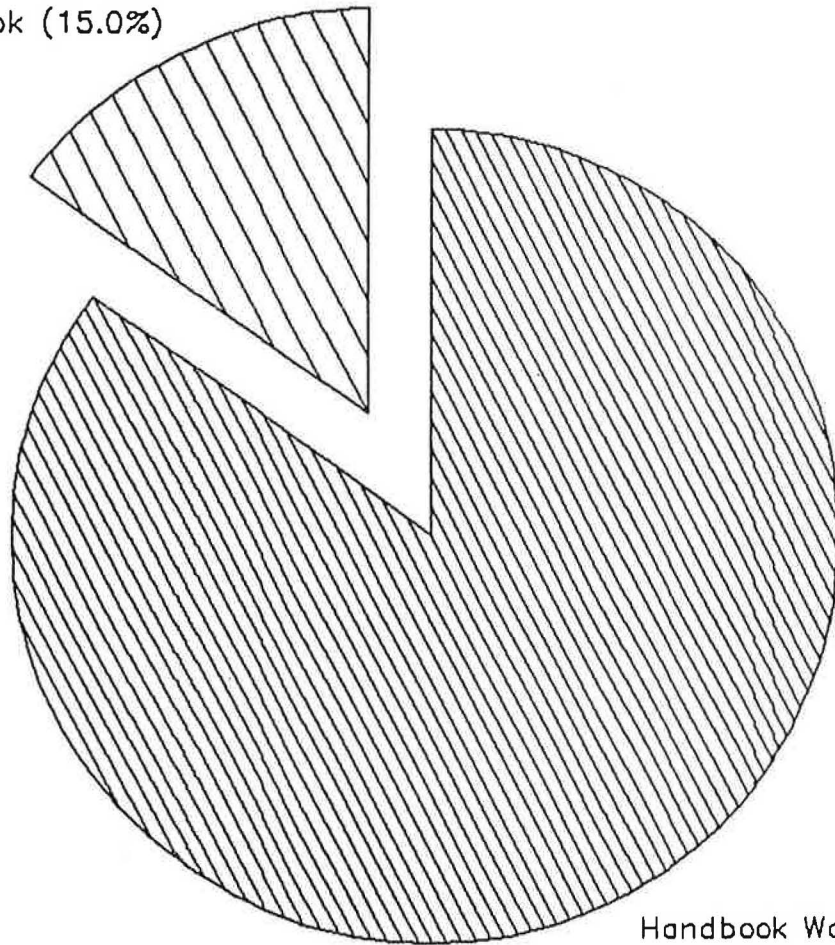




**GRAPH 2**

**Would a Handbook for Testing Be Used?**

Wouldn't Use a Handbook (15.0%)



Handbook Would Be Used (85.0%)

**GRAPH 3**

**Are Materials Available to Help Principals Use  
Test Results?**

