THE ATTITUDES OF TEACHERS IN ONE COUNTY IN KANSAS TOWARD THEIR SCHOOL IMPROVEMENT PLAN ASSESSMENTS

BY R. UBEL

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by

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ABSTRACT

In 1989, the Kansas State Board of Education initiated a process for school reform in Kansas which resulted in Quality Performance Accreditation (QPA). A key component of the QPA process is the school improvement plan. School improvement plans include a variety of assessments to measure and document student learning. This study was designed to investigate the attitudes of teachers in one county in Kansas toward the assessments they chose to measure student learning.

Three questions guided this study: Question 1: Do the attitudes of primary, intermediate, middle, secondary, and 'other' level teachers differ regarding particular assessments chosen for their school improvement plans? Question 2: Do the attitudes of teachers who were involved in the decision-making process differ from the attitudes of teachers who were not involved in the process? Question 3: Do the attitudes of teachers differ toward particular types of assessments?

Using the Teacher Attitude Survey, data were collected from teachers regarding their attitudes toward seven types of assessments used in school improvement plans: standardized norm-referenced tests, criterion-referenced tests, the Kansas Reading Assessment, portfolio assessment, the Kansas Writing Assessment, publishers' textbook tests, and Accelerated Reader™ tests.

Initial data analysis included calculating mean scores and standard deviations for each assessment type according to the independent variables of teaching level and participation in decision making. One-way analysis of variance and paired sample t-tests were also conducted to examine differences between teachers' attitudes.

Significant differences between attitudes of teachers of various levels of students were identified for three assessments: standardized norm-referenced tests, criterion-referenced tests, and the Kansas Reading Assessment. Generally, teachers of younger students held more negative attitudes than teachers of older students.

Significant differences between the attitudes of teachers according to level of participation in decision making were identified. Teachers who provided input into the decision to use particular assessments held more positive attitudes toward those assessments than teachers who did not provide input with one exception. Based on level of decision input, there were no significant differences in attitudes regarding standardized norm-referenced tests.

In general, teachers held the most positive attitudes toward portfolio assessment and the most negative attitudes toward standardized norm-referenced tests.

ACKNOWLEDGEMENTS

"Do your best to present yourself to God as one approved, a workman who does not need to be ashamed and who correctly handles the word of truth.
2 Timothy 2:15 (NIV)

I wish to acknowledge the support of my family and friends. My parents, Orvil and Charlene Pohl, gave me their love, their guidance, and the desire for learning. My husband, Raymond, gave me his patient acceptance of things left undone. My daughter, Sarah, gave me a plentiful supply of enthusiastic encouragement for the journey. My friends and colleagues generously offered their approval and support.

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I also wish to acknowledge the hundreds of students who look to teachers like me to be their voice in matters of importance. Without them there would be no need to speak.

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CHAPTER I: INTRODUCTION TO THE STUDY

The Call for Educational Reform

> If an unfriendly foreign power had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war.
>
> A Nation at Risk, p. 5

The cry across the land has become "God save our schools". The Nation at Risk has not been the only call for reform. In 1986 the Holmes Group and the Carnegie Forum released reports identifying concerns and proposing reforms to improve the quality of the teaching profession and that of education. State legislatures have initiated studies of education in their respective states and are mandating changes in their state educational structures (Page & Page, 1988). During the campaign of 1988, President George Bush called for educational reform and issued America 2000, a plan developed with the nation's governors. President Bush proposed a plan for revamping the country's educational system. The first step in this plan was to put nationwide testing and accountability as the initial thrust of the campaign (Shavelson, Baxter, & Pine, 1992; Paris, 1992). In the spring of 1997 President Clinton announced plans for a national test. "And so the idea of giving the exam would -- not to be to identify failures, but to show schools and school districts how well children are reading based on what they understand so that everybody would reach a certain understanding. That way, their performance in all subsequent grades would improve....It's an instrument of accountability, and a pathway to success" (Clinton, 1997).

School Reform in Kansas

In 1989 the State Board of Education initiated school reform in Kansas when it began the work of providing a quality instruction framework for Kansas children. The result of this work was Quality Performance Accreditation (QPA), a method of accrediting schools based on the mission of improvement of school and student performance. The focus of this improvement is academic achievement. Rather than become accredited based on numbers of books in the library or the square footage devoted to classrooms, schools will receive accreditation on the basis of students' performance and their continual academic improvement. The accomplishment of improved academic achievement cannot be attained by emphasis on student learning outcomes alone. QPA includes five basic components: 1) a focus on the effective schools principles; 2) emphasis on creating a learning community; 3) staff training and retraining; 4) emphasis on high academic performance; 5) meet world class standards using integrated curricular instruction. The primary focus is on the process, a process grounded in local control--teachers, parents, community members. After aligning curriculum with Kansas Curricular Standards, developing a building profile, and establishing a mission for the school, each faculty, in cooperation with parents and community members, began the task of writing the driving force behind school reform in Kansas -- the school improvement plan (Kansas State Board of Education, 1993).

School Improvement Plans

School Improvement Plans include several components: targeted

outcome(s) to be pursued; the goals to be met; strategies to employ in meeting the goals; staff development needs; persons responsible for implementing each action; methods of measuring progress; a timeline for achieving the outcome; resources needed for implementation and staff development. Generally, each school appointed a steering committee to provide leadership but all members of the school faculty were to have a part in planning, implementing, and evaluating the improvement plan and working toward the chosen outcomes. Progress is reported annually to the state and local Boards of Education. In addition, schools host on-site visits by State Quality Performance Accreditation Teams two times during the four or five year cycle. At the end of the cycle, each school receives a recommendation regarding the accreditation status of that school. All accreditation reports are available and open to the public (Kansas State Board of Education, 1993).

Introduction to the Study

Teachers in the state of Kansas have been mandated to develop data-based school improvement plans. Each building staff is expected to study the existing data or information, target areas for improvement based on the data, set goals, and develop plans to meet those goals. An integral part of each plan is the identification of indicators to be used for determining gains in student achievement. These indicators generally take the form of various types of assessments that are administered to students periodically to document improvement in learning.

Consequently, entire faculties of teachers have participated in developing school improvement plans which include a variety of

assessments. This study was designed to investigate the attitudes of teachers in one county in Kansas toward the assessments they are using to measure student learning as described in their respective school improvement plans.

The Research Questions

> Question 1: Do the attitudes of primary, intermediate, middle, secondary, and 'other' level teachers differ regarding particular assessments chosen for their school improvement plans?

Do secondary teachers have more favorable attitudes toward certain types of assessments than primary teachers? If so, which ones? On the other hand, do all teachers feel the same about some measurement instruments and tests? This question addressed differences and similarities between the attitudes of primary, intermediate, middle, secondary, and 'other' level teachers.

> Question 2: Do the attitudes of teachers who were involved in the decision-making process differ from the attitudes of teachers who were not involved in the process?

The Kansas Quality Performance Accreditation plan emphasizes faculty collaboration. Teachers who serve on leadership committees are in the position of helping lead the building staff in the choice of assessments for showing improvement. Individuals participating in the decisions should be in the position of being more knowledgeable about the process, understand the circumstances, and entertain more positive

attitudes toward the assessments chosen for their particular school improvement plans. On the other hand, if their knowledge of assessments is limited, they may have chosen the only options they believed to be available and still not carry a particularly positive attitude. This question addressed differences between the attitudes of teachers who participated in decision making and the attitudes of teachers who did not participate in decision making.

> Question 3: Do the attitudes of teachers differ toward particular types of assessments?

Schools have chosen many types of assessments to measure student learning in communications. Traditionally, some of these assessments have been more popular with teachers than others. This question addressed the assumption of positive and negative attitudes associated with certain types of assessments and identified significant differences in attitudes toward these assessments.

CHAPTER II: REVIEW OF LITERATURE

Assessment and Reform

Many groups have been commissioned to study reform and have often times recommended major changes in the existing educational structures. It is the purpose of much of our mandated assessment programs to produce educational change and to "improve the performance of pupils, teachers, and the educational system in general" (Airasian, 1993, p. 23). The "Back to the Basics" movement has also helped spur external testing programs. The problem has become actually identifying what the basics are. Some educators have suggested that children are the basics (Farr & Carey, 1986). Wraga (1994) confirms that educators are often assigned a peripheral role when politicians and business interests are busy changing schools. Politicians, in particular, work within a limited time frame and must make decisions limited to a period of relatively short duration. They push for changes and answers quickly, particularly if elections or other imminent political changes are near (Levin, 1991). Finn and Reparber (1992) relate that "taxpayers are no longer content to hand over their wallets and ask no questions" (p. 184). Policy makers are anxious to reform education and provide data to the voters that their reform initiatives are getting the job done (Farr & Carey, 1986). Shavelson et al (1992) caution that accountability systems which quickly follow political rhetoric may be just as likely to drive education in unwanted directions as the desired direction.

Politicians and policy makers support achievement tests as a critical and necessary feature of the accountability movement. They

believe that by examining scores the public can know whether schools are fulfilling their mission -- educating children successfully (Paris, 1992). While it may be possible for certain educational tests to reflect the skills that are important for today's student to possess, the standardized tests usually chosen by policy makers are given more powers than they were intended to have. They are used as instruments to select, assess, prescribe, reward, punish, and guide, not serve merely as indicators of what has been taught and learned (National Education Association, 1991). Standardized tests have become a political tool and educators have little recourse but to conform (Wraga, 1994). State mandated tests eliminate local discretion and generally provide information to a wide audience which continues to chip away at local control (Corbett & Wilson, 1991). The problems of achievement testing in America are unrecognized and unacknowledged by many people. Changes have often been mandated by policy makers whose "specific expertise may not exceed the vantage point offered by their former position of student in the educational process" (Page & Page, 1988, p. 1). Both the public and professional educators must become aware that the goals we are striving to meet are not adequately reflected in standardized test scores (Livingston, Castle, & Nations, 1989). They threaten the validity of the tests and "more importantly, threaten the motivation and learning of students and the effectiveness of teachers" (Paris, 1992, p. 96). Costa (1989) encourages us to redesign assessment from product-oriented assessments toward those designed to measure a process-oriented education. Corbett and Wilson (1989) believe that the pressure for uniformity and quick success "contradicts everything that is known about the process of improving

schools" (p. 25). Schools improve when all factors of the school, demographics, culture and organization, are considered and adequate time and technical assistance is offered. Our education must change to fit the demands of the information age and our conception of effective schools must broaden so that we can actively seek and promote alternative forms of assessment and accountability (Livingston et al, 1989).

High-stakes Assessment

Tests which are used for important decisions are high-stakes assessments. These purposes may include promotion, graduation, and certification. The consequence does not need to be as serious as loosing accreditation to be considered a high-stakes assessment. Publishing scores in the newspaper is considered to be a severe consequence by some teachers, schools and districts (Monsaas & Engelhard, 1994). Low-stakes tests generally impose no sanctions or rewards. Because of the importance attached to high-stakes tests their original purposes and limitations become obscured. They take on greater importance and significance than they merit leading to a narrowing of instruction and emphasizing the curriculum content that will be tested (Meisels, 1989). Madaus (1988) reports that research findings prior to 1988 indicated a minor role for traditional standardized test information but he reminds his reader that this was during the pre-'reform with a test' era. When tests are used to drive reform, many unintended behaviors and outcomes are likely to occur.

Impact on Curriculum

State-mandated standardized tests have a profound influence on

the curriculum. As textbooks become geared to the test objectives, as time is allocated to the objectives covered by the test and objectives not tested are not taught, as the cost of testing paraphernalia takes away monies which could otherwise be spent on curriculum appropriate to the local school, the test actually becomes the foundation of the curriculum and the testing agency has become the controlling agent of the curriculum (Livingston et al, 1989; Meisels, 1989; Shepard, 1989). Farr and Carey (1986) expressed the fear that as tests become more influential in curriculum choice, schools will be little more "than test preparation academies where the curriculum becomes what can be tested" (p. 210).

Impact on Teachers and Instruction

When a district adopts a test structured around a particular instructional method, teachers often feel constrained to use that approach. For example, if a test for reading is a cloze test, one that requires the student to fill in blanks, the teacher may emphasize that technique in teaching. If the test requires a written response to an open ended question, the teacher will concentrate on written responses (Meisels, 1989). As teachers use a narrowed curriculum and teach with methods that may not be ethical or developmentally sound, a deprofessionalization of teaching occurs. Teachers find themselves in an awkward position when teacher judgment and non-test documentation of student learning can be invalidated by a single test score (Corbett & Wilson, 1989; Livingston et al, 1989).

Impact on Students

Livingston et al (1989) reported that "only rote learning takes place when teachers 'pound' information and skills into students who lack

readiness. Testing students on skills for which they lack readiness causes failure. Repeated failure breeds low self-esteem and negative attitudes toward learning, perhaps causing some students to drop out. Students become bored with repeated testing; some become cavalier about taking tests, increasing their likelihood of school failure" (p. 24). Madaus (1988) is concerned that school programs which use test results for grade-to-grade promotion will not improve student learning, but will eventually increase the dropout rate.

Ethos of the School

The Nation at Risk describes the American promise:

> All, regardless of race or class or economic status, are entitled to a fair chance and to the tools for developing their individual powers of mind and spirit to the utmost. This promise means that all children by virtue of their own efforts, competently guided, can hope to attain the mature and informed judgment needed to secure gainful employment, and to manage their own lives, thereby serving not only their own interest but also the progress of society itself (p. 8).

One can hear the spirit of the individual in this pledge. However, as standardization of education becomes the goal, a quality of sameness settles over all students. The same standardization of instruction begins to permeate teaching. Traditionally, teachers have a great deal of flexibility in deciding how to teach, what to teach, and when to teach it. Testing programs challenge this ethos. Tests dictate curriculum,

instructional techniques, even the sequence and order objectives are taught. Corbett & Wilson (1991) remind us that impact is not the same as improvement.

Impact on Businesses, Taxpayers, Parents.

Test scores have a general appeal to the public and enjoy a great deal of public acceptance. Tests have played a part in the lives of most citizens and because of that experience, are meaningful to individuals. They represent order and control. The language associated with testing is powerful. The connotations of words like standard, competent, excellence, objective, reliable, and valid symbolize important educational concepts. Tests are symbolic of values that society holds dear -- hard work and reward for effort (Airasian, 1993). Test results are generally reported at a local school board meeting and relayed to the press which, in turn, prints scores in the local paper. Particular circumstances which impact scores, such as socioeconomic differences and other school differences, get lost in the rhetoric that follows publication of scores (Farr & Carey, 1986). Parents, often ill-equipped to understand the scores reported for the schools in their neighborhoods, make use of these same results and request placement of their children in high scoring buildings. Real estate agents use test scores to advertise housing in certain districts, allowing the housing market, and sales commissions to adjust upward according to the scores. Commercial publishers sell achievement tests, scoring services, and data reports in order to make a profit. In 1993 it was estimated that state and local tests cost over $1 billion per year (Stiggins, 1993). Added to the cost should be expense of commercial test training materials many districts employ to raise scores. The consequences of

testing policies are far more reaching than the designers of tests ever anticipated (Corbett & Wilson, 1989; Paris et al, 1991).

Kansas State Assessments

When the State of Kansas adopted the Quality Performance Accreditation model for school reform the state also initiated a state-wide system of assessments designed to measure student improvement in selected areas and to drive instruction. In 1994 the State Board of Education issued the criteria which would be used to determine the accreditation status of each school at the conclusion of that school's Quality Performance Accreditation cycle.

One basis for accreditation is continuous improvement of performance by all student groups in academic areas over time. Performance by student groups on state assessments are measured against standards of excellence determined by the state as well as used to identify trends in achievement in individual buildings. Each school must also maintain or improve other indicators such as attendance rates, acts of violence and mastery of algebraic concepts.

Large scale assessments have traditionally been objective pen-and-pencil multiple choice tests (Stiggins, 1993). As we continue through the 90s, the Kansas State Department of Education has included standardized performance tests as well as more traditional types of tests. The Kansas Writing Assessment requires students to write an essay over a given period of time incorporating the process model of writing. These essays are scored by trained teachers using a six-trait analytical model rubric. The Kansas Reading Assessment features both narrative and expository text. The questions include multiple answer items and written

responses to more open-ended questions. Trained teachers score the written portions using a five-point rubric while the more objective portions of the test are sent to a testing center to be scored.

In addition to using the state assessments, schools were advised to consider a variety of additional measures to show continuous improvement toward identified goals. No one indicator will be used to determine accreditation status and schools are encouraged to consider multiple indices of student growth. Accreditation information furnished each school states "multiple measures collected over multiple years will be reviewed holistically in order to determine whether or not improvement has occurred. From this review, an accreditation recommendation will be made" (Kansas State Board of Education, 1993). Buildings have been encouraged to include both statistical data as well as qualitative information. Examples of statistical measurements include standardized norm-referenced achievement tests, state assessments, and district wide tests. Qualitative information might be teacher observations, performance ratings, portfolio assessments and projects. Because the state assessments are considered in the accreditation process, they are viewed as mandated measures. Other assessments are determined by each building. Measurements chosen by each school must be approved by the On-site team and the Kansas State Department of Education representative for that particular school. Because of the nature of the accreditation process, these measures, though self-determined in part, can be considered high-stakes measurements.

School Improvement Plan Assessments

Like other schools and districts across the country, Kansas schools have many decisions to make when selecting measurements or assessments to show improvement in targeted areas. They may choose direct measures, indirect measures or a combination of the two.

A direct measure is one in which the student actually does what the assessment is presumed to measure. Writing an essay would be an example of a direct measure or assessment. Multiple choice questions about writing, such as those found in many achievement tests, constitute an indirect measure. It 'indirectly' measures the skill it is designed to assess. Stiggins (1982) notices advantages for both types. Direct assessments give information about an examinee's actual proficiency, stimulus and response are generally in agreement, exercises can be adapted to authentic circumstances, high face validity, and low test development costs. Indirect assessments offer high score reliability, relatively low test scoring costs, and a high degree of control over the nature of the skills tested. Each type also has disadvantages. Direct assessments may incur high scoring costs and there is a potential lack of uniformity of proficiencies assessed among examinees. Indirect assessments often lack authenticity, rely heavily on non-tested skills, and often lack face validity.

Most objective tests are indirect measures. An objective test item has one right answer known to the test-maker. Choosing one appropriate answer is only one indication of comprehension. There are many other ways to demonstrate proficiency. Students who are only 'allowed' to answer multiple choice questions are denied other ways to demonstrate

their abilities (Glazer, Searfoss & Gentile, 1988). Subjective measures involve judgment on the part of the evaluator. They often involve a range of answers or responses to a problem. Madaus (Brandt, 1989) believes this way of measuring to be excellent but requires a greater degree of trust in teachers than is expected with more objective measures.

As school improvement committees began the work of developing a school improvement plan for communications they looked for assessments their faculty could use to show improvement in the targeted area. There are many options available. The remainder of this chapter is devoted to a closer examination of the assessments chosen by Franklin County schools to show improvement in communication skills, generally reading and writing.

Formal Measures

The most frequent type of tests are formal measures of reading. Formal tests have been given to a large number of students to establish a norm group. Individual and small group performances can then be compared to the performance of the norm group.

Standardized norm-referenced tests. Most buildings chose one of many nationally published standardized norm-referenced achievement tests as one of the indicators of growth. These tests generally cover the usual school subjects with reading and language arts being subtests of the total battery. According to Salmon-Cox (1981), teachers use achievement test information in several ways: as confirmation of what they already believe of students, to reflect on and guide instruction, to group and track students. Teachers are thought to use test results; yet, when teachers are asked about how they assess their students, they

seldom mention standardized tests.

Teacher attitudes towards traditional multiple-choice, standardized, norm-referenced tests are fairly well documented (Corbett & Wilson, 1991, Monsaas & Engelhard, 1994, Stiggins & Bridgeford, 1984). Stiggins and Bridgeford (1984) reported that teachers viewed traditional tests as "time-consuming, not matching their instruction, failing to reflect true student characteristics, and generally not meeting important instructional needs such as identifying material to teach or reteach" (p. 278). Corbett and Wilson (1991) concluded that statewide testing programs, generally based on a standardized test, force districts to act on results (a high-stakes test) but these actions do not represent what educators call 'improvement'. Herman and Golan (cited in Nevo, 1995), found teachers did not believe that standardized testing was helping schools improve nor did it provide useful feedback to teachers or students.

Monsaas and Engelhard's (1994) research involved comparing teachers' attitudes toward standardized test preparation and actual behaviors. He found positive attitudes were negatively correlated with behaviors -- as pressure to improve test scores increased, so did the incidence of test-prep behaviors. George Madaus, in an interview with Brandt (1989), reports that "any move to school-based management will have to examine closely the implications of high-stakes measurement-driven instruction for school-based decision making" (p.27).

Young children place their trust in their teacher and assume testing is proper and appropriate, but older students report decreased motivation and feel less prepared to take the tests (Paris, Lawton, Turner, & Roth, 1991). Paris et al (1991) report that the results for low achievers become

increasing less valid. The "ironic consequence is that the scores become high-stakes confirmation of their lack of success" (p. 15). They also reported that students suffer from test anxiety, are cynical about tests, and may feel threatened, worried, or bored by standardized tests.

Criterion-referenced tests.

Criterion-referenced reading tests are generally considered very specific regarding the skills tested, the number of items developed and the relation of test objectives with those of the curriculum. Scores are interpreted as a measure of performance compared to a standard. Using a criterion-referenced test, a student's performance is reported in terms of content that has been mastered. A student is compared to a standard of proficiency rather than other students who took the test. Criterion-referenced tests focus on what a student knows and can do (Farr & Carey, 1986). Anastasi (1988) notes that criterion-referenced testing is best suited for testing basic skills at the elementary level. Mastery testing is not appropriate for such skills as critical thinking or creativity where students' achievement may be almost limitless. Criterion-referenced tests assume a linear model of learning which means knowledge is built by placing one discrete fact atop another, much in the way a brick wall is built. One cannot work at the top until the bottom bricks have been laid (Shepard, 1991).

Publishers' textbook tests.

Another formal measure of reading is the text-related test. Farr and Carey (1986) describe basal reader tests as an assessment that falls between formal standardized tests and informal observations made by the teacher. They are typically administered to pupils periodically and results

are often reported to the principal, filed in cumulative records and reported to parents. These end-of-unit tests generally measure the students' acquisition of skills during a particular instructional event--the completion of the study of a book, chapter or unit. Stiggins and Bridgeford (1985) explained that nearly half of the teachers studied report using published tests with ease with the remainder not using them at all. Stansfield (1976) noted that two-thirds of the foreign language teachers he studied use only tests they themselves have prepared. Foreign language department chairpersons surveyed rejected textbook tests overwhelmingly. Yeh, Herman, and Rudner (1981) noted that teachers with classroom aides reported greater use of curriculum-embedded tests than teachers working without aide assistance. Farr and Carey (1986) believe that these tests may be the "driving force behind classroom reading instruction" (p. 204), but very little evidence regarding use and technical aspects is available.

Teachers who reject published tests, including both standardized tests and text-related tests, express concerns about student reactions. They tended to view the tests as invalid, undependable, too long, etc. and believed that the tests were generally not helpful to students. In the Stiggins and Bridgeford (1985) study, teachers' reactions to their own paper and pencil objective tests, published tests, and performance assessments were compared. Published tests generated the most negative comments and were viewed by teachers as interfering with instruction.

Informal Measures

Formal measures of reading almost always need to be

supplemented with informal measures. Informal measures usually contain more error than formal measures but they supply useful information for teaching applications. They generally involve the actual materials and tasks used in the classroom and the teacher is able to generate a more realistic view of how the student performs in the educational setting. Paris (1992) expresses strong opinions about educational assessment. It must "be changed to serve students, teachers, and parents rather than political purposes. The public's mistrust of teachers' professional judgment must be allayed by better assessments. Teachers' frustration and hopelessness in the face of externally imposed high-stakes testing must be abolished. Students' developing discontent and disillusionment with educational assessment must be rectified" (p. 104). Paris et al (1991) also believe that performance and portfolio assessment will help remedy many of the shortcomings of standardized tests.

Performance assessments share many important characteristics. Students "are called upon to apply the skills and knowledge they have learned. Second, performance assessment involves completion of a specified task (or tasks) in the context of real or simulated assessment exercises. Third, the assessment task or product completed by the examinee is observed and rated with respect to specified criteria in accordance with specified procedures" (Stiggins & Bridgeford, 1985, p. 273). In general, teachers' concerns about performance assessments focus on accuracy, defining levels of performance, the need to be objective, providing diagnostic information, measuring growth, and the time demands of conducting performance assessment.

Many states are including performance-based assessments and portfolios in their state testing programs (Aschbacher, 1994). Kansas state assessments range from single answer multiple choice (portions of the Math Assessment) to cooperative group work scored with a rubric (fifth grade Science Assessment) to a direct measure of writing, also scored with a rubric.

Portfolio assessment.

Several schools in Franklin County have chosen portfolio assessment or a collection of work samples to document student learning. Portfolio assessment exists when the purpose is defined, guidelines for the inclusion of work in a portfolio have been determined and criteria for either the individual pieces or the collection as a whole have been identified. Portfolios, by their very nature, lend themselves to large variations in implementation, as well as in scoring (Benoit & Yang, 1996). Koretz, Stecher, Klein, and McCaffrey (1994) describe difficulties with reliability and validity in portfolio large-scale assessments. They advocate greater standardization of tasks, revision processes, and preparation but acknowledge that such standardization runs contrary to many of the goals of portfolio assessments. Teachers report that student interest and learning increase as they assume ownership of their own work. Parents also express interest in the rubrics associated with portfolio collections (Cortez, 1994). Teachers must commit time and staff development to portfolio development activities if the assessment is to be of value in improving classroom instruction (Benoit & Yang, 1996). While the costs involved include time, increased stress on teachers, and financial investment, Vermont teachers generally believed the portfolio program

was a worthwhile burden (Koretz et al, 1994).

Accelerated Reader™.

Accelerated Reader™ is a computer software package which provides students computer-generated multiple-choice tests to assess their comprehension of books they have read. Each student generally self-administers a test on one of over 1000 titles available (Turner, 1993). Teacher researchers reported that the primary benefit of Accelerated Reader™ is as an extrinsic motivator for encouraging students to read. Teachers were generally positive toward Accelerated Reader™ (McKnight, 1992; Peak & Dewalt, 1993; Turner, 1993).

Postscript

"Do reading tests really measure reading?" Farr and Carey (1986) suggest that when we consider the reading that human beings do for their own reasons the answer must be "no." "Despite what one often reads in research articles, reading is not what reading tests test. If test consumers understood, accepted and acted on the basis of this basic fact, we might witness significant improvements in the use of reading tests" (p. 16). Nickerson (1989) summarized attitudes toward assessment held by teachers. "Some people object to testing in principle, some believe too little is done, others feel testing can serve important purposes but that it is often used in inappropriate or objectionable ways" (p. 6). Frederiksen (1994) looks toward a future when tests can be used during the instructional process. Aschbacher (1994) recommends that a much better appreciation of educators' understandings of and responses to new assessments is necessary if new forms of assessment and instruction are to improve our schools.

Chapter III: METHODOLOGY

Teachers in the state of Kansas have been mandated to develop data-based school improvement plans. Each building staff is expected to study the existing data or information, target areas for improvement based on the data, set goals, and develop plans to meet those goals. An integral part of each plan is the identification of indicators to be used for determining gains in student achievement. These indicators generally take the form of various types of assessments that are given to students periodically to document improvement in learning.

Consequently, entire faculties of teachers have participated in developing school improvement plans which include a variety of assessments. This study is designed to investigate the attitudes of teachers in one county in Kansas toward the assessments they are using to measure student learning as described in their respective school improvement plans.

The Research Questions

Question 1

Do the attitudes of primary, intermediate, middle, secondary, and 'other' level school teachers differ regarding particular assessments chosen for their school improvement plans? Do all teachers feel the same about some measurement instruments and tests? This question addressed differences and similarities between the attitudes of primary, intermediate, middle, secondary, and 'other' level teachers.

Question 2

Do the attitudes of teachers who were involved in the decision-making process differ from the attitudes of teachers who were not involved in the process?

The Kansas Quality Performance Accreditation plan emphasizes faculty collaboration. Teachers who serve on leadership committees are in the position of helping lead the building staff in the choice of assessments for showing improvement. Individuals serving on the leadership team should be in the position of being more knowledgeable about the process, understand the circumstances, and entertain more positive attitudes towards the assessments chosen for their particular school's improvement plan. On the other hand, if their knowledge of assessment is limited, they may have chosen the only options they believed to be available and still not carry a particularly positive attitude. This question addressed differences between the attitudes of teachers who participated in decision making and the attitudes of teachers who did not participate in decision making.

Question 3

Do the attitudes of teachers differ toward particular types of tests?

Schools have chosen many types of assessments to measure student learning in communications. This question addressed the assumption of positive and negative attitudes associated with certain types of assessments and will seek to find significant differences between the attitudes toward these assessments.

Description of the Instrument

Purpose of the Survey

The purpose of the Teacher Attitude Survey was to collect knowledge, attitudinal, and behavioral data about the assessments used in their respective school improvement plans from elementary, middle and high school teachers in Franklin County, Kansas.

Development of the Survey.

School improvement plans were requested from each school in the four districts in Franklin County, Kansas. These plans list the assessments or indicators that each building chose to measure and document student learning. Because of changes in district personnel and variances in summer schedules, plans were received from only seven of the fifteen schools. The kinds of assessments chosen by the remaining eight schools were communicated to the researcher by an official of the Kansas Department of Education in personal correspondence. See Appendix A for a more detailed description of the buildings and a listing of the assessments each staff chose for its improvement plan.

After the preliminary survey instrument was developed, it was piloted with the researcher's building colleagues. They completed the survey and wrote comments, questions and suggestions for revision. The surveys were scored according to predetermined scoring criteria. The survey items were revised after the pilot administration and an additional response alternative was included in the final survey.

Appropriateness of Survey for Sample Population

This survey is most appropriate for educators of public school children, K-12, in the State of Kansas. Two forms of the survey were used

in this study. Form A was used with secondary teachers; Form B was given to elementary teachers. The forms are identical with one exception: the adjectives indicating grade levels were adjusted according to the respondent audience. Each individual who responded to the items on this instrument was expected to have some basic understanding of the types of assessments used on his/her school's improvement plan.

The Instrument

Cover Letter

Cover letters (Appendix B) for certified teachers were delivered to the participating buildings prior to the scheduled survey administration. The purpose of the letters was to notify teachers that approximately fifteen minutes of an upcoming faculty meeting would be devoted to completing the survey. The teachers also learned information about the research project which would encourage them to participate.

Questionnaire Items

The Teacher Attitude Survey (Appendix C) is based upon seven sets of fourteen items. The seven categories represented in this instrument are the types of assessments that are included in school improvement plans in Franklin County. These categories include standardized norm-referenced tests, criterion-referenced tests, the Kansas Reading Assessment, the Kansas Writing Assessment, portfolio assessment, publishers' textbook tests, and Accelerated Reader™ tests. Only assessments used by at least two schools were included in the survey. Other assessments may also have been used in the school improvement plans but were not included in the survey due to their limited

usage.

Two forms of the survey were written. The items were designed to reflect the level of students particular respondents teach. For example, the instrument answered by teachers of secondary students, Form A, used the term "secondary" when referring to students and teachers while Form B used the term "elementary" when referring to students and teachers.

Knowledge items.

In each set of items, the first two statements are knowledge items:

a. "X assessment" is one assessment measure in my school's communication improvement plan.

b. I am responsible for administering "X assessment" to at least one class of students.

If a respondent answered "Yes" to item a, he/she was directed to continue answering questions on that page. A "No" or "Don't know" response instructed the respondent to skip to the next set of items. Teachers were directed to respond only to items referring to the assessments in their school improvement plans.

Attitude items.

The next 10 items were designed to measure attitude. Two items addressed attitudes toward "x assessment" in general; four items addressed issues that significantly affect students; and four items addressed issues that are critical to teachers. Seven items reflected positive attitudes while three items were written as negative attitude statements. The items were not in any particular order.

The following two items addressed attitudes toward "x assessment"

in general.

c. "X assessment" is appropriate for secondary students.

k. "X assessment" is a meaningful measure of student learning.

Four items addressed teacher issues:

d. [Single answer, multiple-choice items], the assessment method used by most [standardized norm-referenced tests][1] , parallel effective instructional methods.

e. It is difficult for secondary students to improve their scores on "x assessment."

g. Secondary school teachers generally do not use the results of the "x assessment" to improve instruction.

h. Curriculum decisions should be influenced by the results of "x assessment."

Extensive research has already documented that curriculum and instructional decisions are influenced by assessments. These items identified the attitudes of teachers toward these influences. Item d relates to whether the techniques used by the assessment, i.e. multiple-choice, student response, essay, etc., are considered effective instructional methods. Item e appears to be student oriented; however, because the teacher is responsible for delivering the instruction, it was grouped with items influencing teachers. Items g and h addressed the issue of assessment influencing curriculum and instruction.

Four items address issues affecting students:

f. Secondary students become actively involved in "x

[1] Words in brackets were changed according to the assessment. For the complete set of options, see the survey instrument in Appendix C.

assessment."

i. Secondary school students can concentrate and work for extended periods of time on "x assessment."

j. Secondary school students become anxious during "x assessment."

l. "X assessment" enables secondary students to assess their own learning.

Paris (1992) described student boredom and lack of motivation as a characteristic of education testing. He believed educational assessments should be designed "to encourage students to participate enthusiastically in assessment as validation of their own academic accomplishments (p. 19)." He maintained that testing could be designed to be intrinsically motivating as well as challenging. Both Paris (1992) and Stiggins and Bridgeford (1984) believe that students should be able to evaluate their own progress toward high achievement. Students who view assessment as informative will not be threatened and will be less intimidated by testing and the results of the tests (Paris, 1992). These items addressed those issues from the teacher's perspective.

Behavior items.

The last two items related to teacher behavior.

m. I have read the communication content of the "x assessment" given to our secondary school students.

n. I helped with the decision to use "x assessment" as part of our school's communication improvement plan.

These items were designed to help determine the amount of experience teachers have had with various assessments and contributed

to the descriptive data accumulated with the survey. Responses to item m provided information about the experience teachers have had with the assessments. Some faculties have studied certain assessments extensively and each teacher has read and perhaps taken the specific assessment while other faculties have had little or no experience with a particular assessment. This item provided descriptive information about the sample. Item n provided demographic infomation. Teachers indicated whether they took part in the decision-making process to include each particular assessment in the school improvement plan. In some schools, the assessments were chosen with complete faculty participation in the decision. In others, only a few teachers, if any, participated in the discussion and decision about assessments. Even though a teacher has not served on the steering committee, he/she may have had considerable input into the decision to include a particular assessment. The reverse may also be true. Level of decision input was one of the independent variables in this study and item n provided data for one of the major research questions.

Demographics.

The last page of the instrument was designed to collect demographic information. Items identifying gender, teaching level and responsibility for teaching communication, experience with the level, previous assessment training, membership on school improvement team or committee, and personal experience with particular school improvement assessments were included. These items were used for compiling descriptive data and provide independent variable data for the major research questions.

Sampling Plan

Identification of Sample

This study was conducted in one county in eastern Kansas. The county was chosen because of its location and because the four school districts located in the county are representative in many ways of a majority of school districts in the state. One high school is classified 4A, one of sixty-three 4A high schools in the state. Three high schools are classified 3A. There are sixty-two coed 3A high schools in Kansas. The fifth high school included in this study is classified 1A, one of 111 small schools in the state. The communities served by these school districts are predominately rural or small town. The county seat, the largest town in the county, has a population of approximately 12,000 people.

Description of Districts.

Unified School District 287, West Franklin, has three attendance centers. These centers house two high schools and three elementary schools. One attendance center houses K-12 students, another has K-8, while the third has individual elementary and high schools on the same campus. The Board of Education office is located in a separate location. According to the 1997-1998 Kansas Educational Directory published by the Kansas State Board of Education, USD 287 has a total of 79 certified staff members.

Unified School District 288, Central Heights, has one attendance center. All students, K-12, are located in a sprawling building with the elementary school at one end and the high school at the other. The Board of Education office is also located in this building. According to the 1997-1998 Kansas Educational Directory, USD 288 has a total of 52 certified

staff members.

Unified School District 289, Wellsville, also has one attendance center. The elementary school is housed in one end of the structure with the high school at the other. The Board of Education office is located in this building. According to the 1997-1998 Kansas Educational Directory, USD 289 has a total of 56 certified staff members.

Unified School District 290, Ottawa, has five elementary attendance centers, one middle school, one high school, two alternative schools, and a vocational education cooperative. During the current year, the middle school is being housed in various mobile units, the Vocational Education Building, and parts of the high school while a new middle school building is being constructed. Generally, the middle school and high school faculties are separate entities and they associate with each other on friendly terms, rather than being faculties that are collaborative by design. According to the 1997-1998 Kansas Educational Directory, USD 290 has a total of 182 certified staff members.

These districts have a combined total of 369 certified staff members. Since this researcher is the chairperson of her elementary school's improvement team, that school was removed from the schools eligible to participate, reducing the number of schools to fifteen and the number of teachers to 352.

Selection of Sample.

The researcher met with administrators of each district in August, 1997, to explain the research, share the survey instrument, and ask for cooperation. In one district the principals informally polled the teachers regarding their willingness to complete the survey prior to making the

decision to participate. All principals in the county agreed to participate.

The sample of participating teachers was a convenience sample of volunteer teachers whose principal had agreed to allow his/her faculty to participate. Each school was invited to take part in this study in return for no more than two hours of staff development on assessment issues provided by the researcher.

Survey Administration.

The survey instrument was self-administered in a supervised setting to all but one faculty. Five faculties were surveyed during staff meetings prior to the start of the school year. One faculty assembled on a volunteer basis during a contract workday before classes began. Another completed the survey after a staff training session prior to the beginning of school. Seven faculties were surveyed at regularly scheduled meetings after the first day of school. Two of the seven were held in the morning before school convened for the day and five were held in the afternoon after school dismissal. One administrator was unable to schedule a faculty meeting when the researcher could be present. Instead, he agreed to distribute and collect the surveys personally.

Survey Response Rate.

The districts' response rates varied from 75% to 96% participation. Nearly 100% participation occurred in the district where the survey was administered during scheduled building faculty meetings held prior to the first day of school. The lowest response rate occurred in the building where teachers voluntarily assembled to complete the survey. Of the possible 352 certified staff respondents, 304 actually completed the survey for a total response rate of 86.36%.

Data Analysis

Scoring the Survey

Teachers' attitudes toward each assessment category were determined using the ten attitudinal items from each set of 14 statements.

The attitude items were scored using a Likert Scale. A "Strongly Agree" response was worth +3 points while a "Strongly Disagree" response was valued at -3. "Agree" and "Disagree" were worth +1 and -1 respectively. An "Unsure" response was worth 0 points. Three items, e, g, and j, carried a negative weight and were reversed scored. For example, the item "Elementary school students become anxious during standardized norm-referenced tests" has a negative weight. If a respondent circles "Strongly Agree" the total points for that item will be -1 x +3, or -3, a negative point value. A positive attitude toward "X assessment" is indicated by a positive total score while a negative total score indicates a negative attitude. The possible range of scores is from -30 to +30 for each category. Mean scores and standard deviations were calculated for each assessment according to the independent variables of level of teaching and level of decision input (Appendix D).

Statistical Data Analysis

All statistical data analysis for this research project was conducted by the researcher using SPSS for Macintosh 6.1.

Initial Descriptive Data Analysis

Initial descriptive analysis included demographic information about the 304 respondents. The following information was determined using information from the demographic section of the Teacher Attitude Survey,

p. 9 (Appendix C). Of the 304 teachers, eight did not complete the demographic page. One more respondent indicated only gender. Those nine surveys have not been included in the study.

Gender.

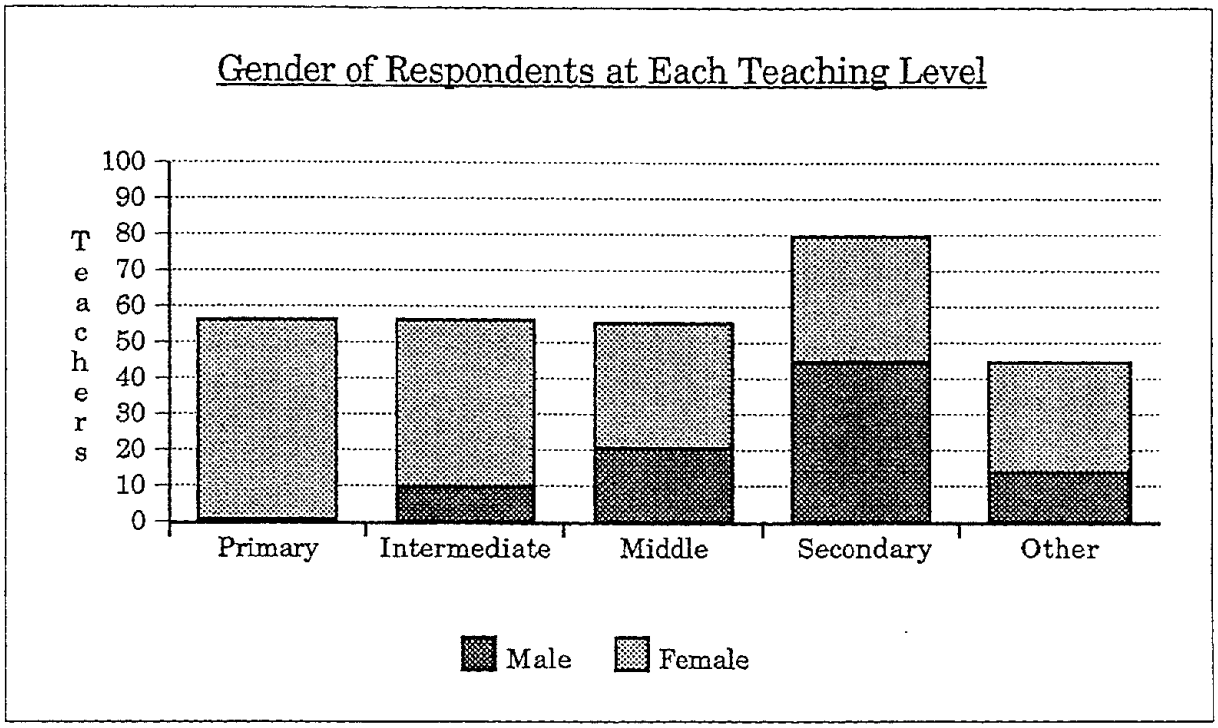
Of the 296 teachers who indicated gender, 91 were male and 205 were female.

Current teaching level.

Teachers indicated the general level they were currently teaching. Fifty-seven teachers identified themselves at the primary level, kindergarten through second grade. The intermediate level included grades three through five or six, depending on the organization of the district. Fifty-seven teachers teach intermediate level students exclusively. Teachers of middle level students, grades six through eight, number 56. The secondary level was identified as grades nine through twelve. Eighty teachers identified themselves as secondary teachers. Forty-five teachers marked "other." This category was generally marked by teachers who work with more than one level (music, physical education, special education, Title 1 services, administrators, etc.). Figure 1 shows the number of males and females at each school level. The proportion of male teachers increases as the ages of the students increase. The smallest number of males teach primary age children while the largest number of males teach secondary age students.

Figure 1

Total Number of Male and Female Respondents Teaching at Primary, Intermediate, Middle, Secondary, and 'Other' Levels



Years of experience at current teaching assignment.

Each teacher's experience was indicated by responding to one of five choices: 1-4 years, 5-9 years, 10-14 years, 15-19 years, and 20+ years. This indication was for the number of years teachers had taught at their present levels, not their total years of teaching. The 85 teachers in the largest group indicated they had taught 1-4 years at their present levels. Sixty-one teachers had taught 5-9 years at their present level, 47 had taught 10-14 years, 33 had taught 15-19 years, and 68 had taught at their present level for 20 or more years. Figure 2 shows the number of years respondents have taught a particular student level. Teachers teaching at their respective levels for more than twenty tears include the smallest number of primary level teachers and the largest number of

secondary teachers in any experience category. The majority of primary and middle level teachers have taught at their current levels for less than ten years. A majority of intermediate, secondary, and 'other' teachers have taught at their current levels for 10 years or more. The largest number of male respondents have been teaching at their level for twenty or more years. Figure 3 shows the number of male and female teachers in each experience category.

Amount of training in measurement and assessment.

Categories describing training in measurement and assessment include no training, inservice training only; three or less undergraduate hours; three or less graduate hours; more than three hours of undergraduate and/or graduate study. Figure 4 shows the numbers of teachers with various amounts of assessment training. The largest category of teachers received inservice training only followed by teachers with more than three undergraduate and/or graduate hours of training. The smallest group of teachers has no training on assessment issues.

Figure 5 presents the percentage of each level receiving the specified amount of training. Intermediate level teachers have the highest percentage of teachers receiving inservice training only. The 'other' category of teachers has the highest percentage of teachers with more than three hours of graduate and/or undergraduate credit.

Figure 2

Primary, Intermediate, Middle, Secondary, and 'Other' Level Teachers Teaching for 1-4 Years, 5-9 Years, 10-14 Years, 15-19 Years and Twenty or More Years at their Current Levels.

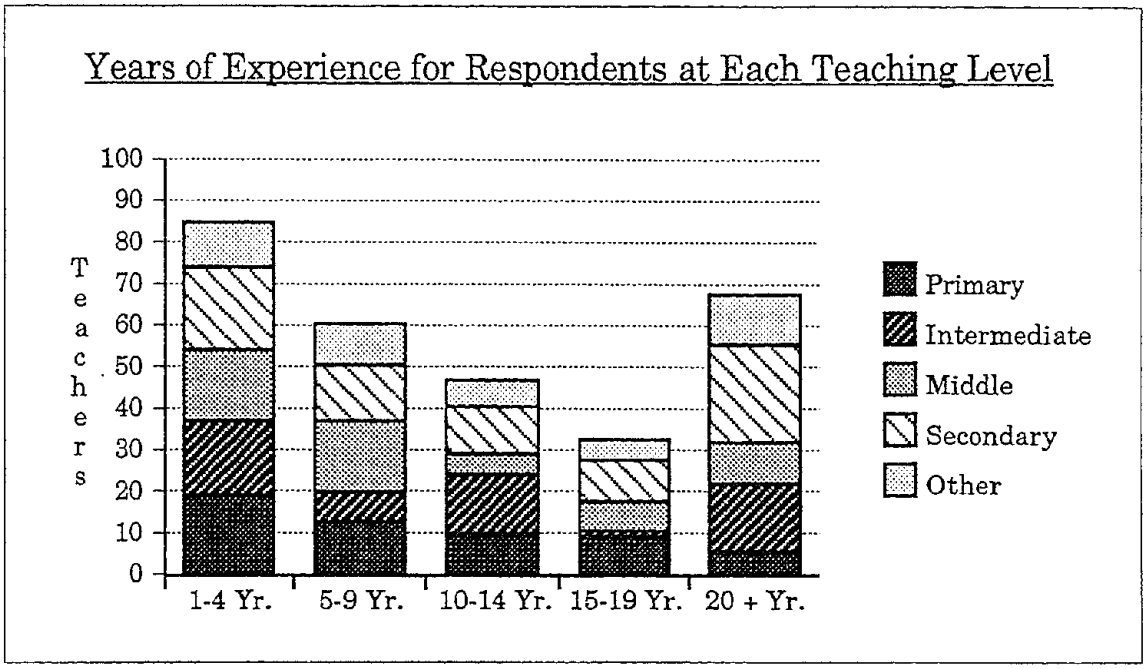


Figure 3

Number of Male and Female Respondents Teaching 1-4 Years, 5-9 Years, 10-14 Years, 15-19 Years, and 20 or More Years at their Current Levels.

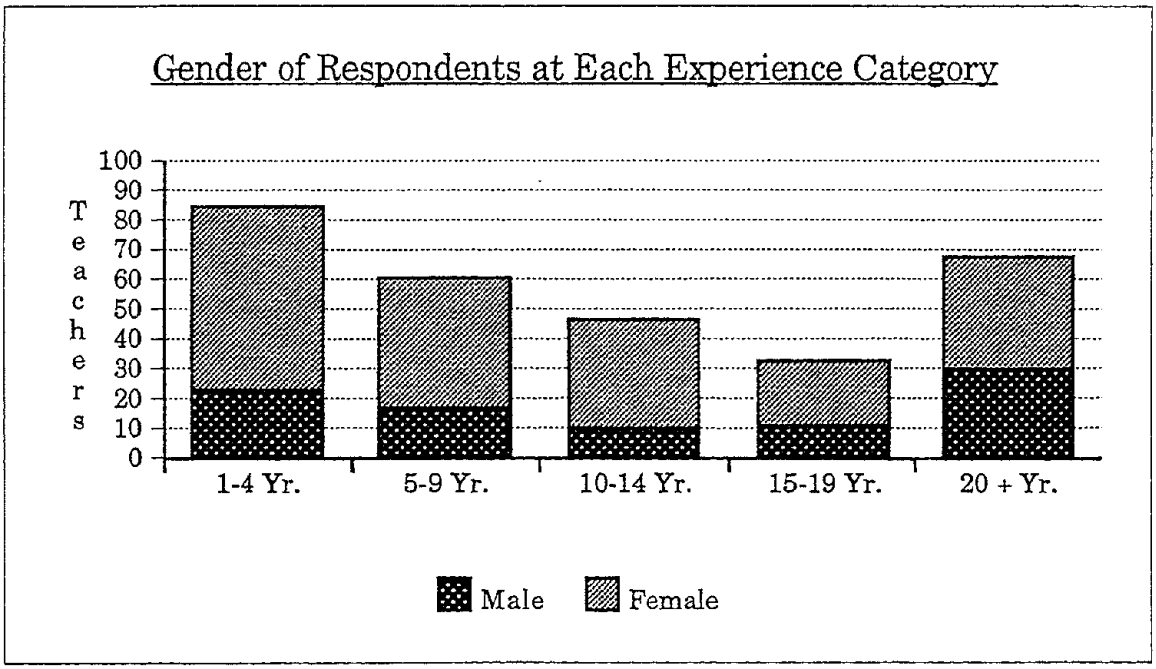


Figure 4

Number of Teachers Receiving No Training, Inservice Training Only, Three or Less Undergraduate Hours; Three or Less Graduate Hours; More than Three Hours of Undergraduate and/or Graduate Study in Assessment

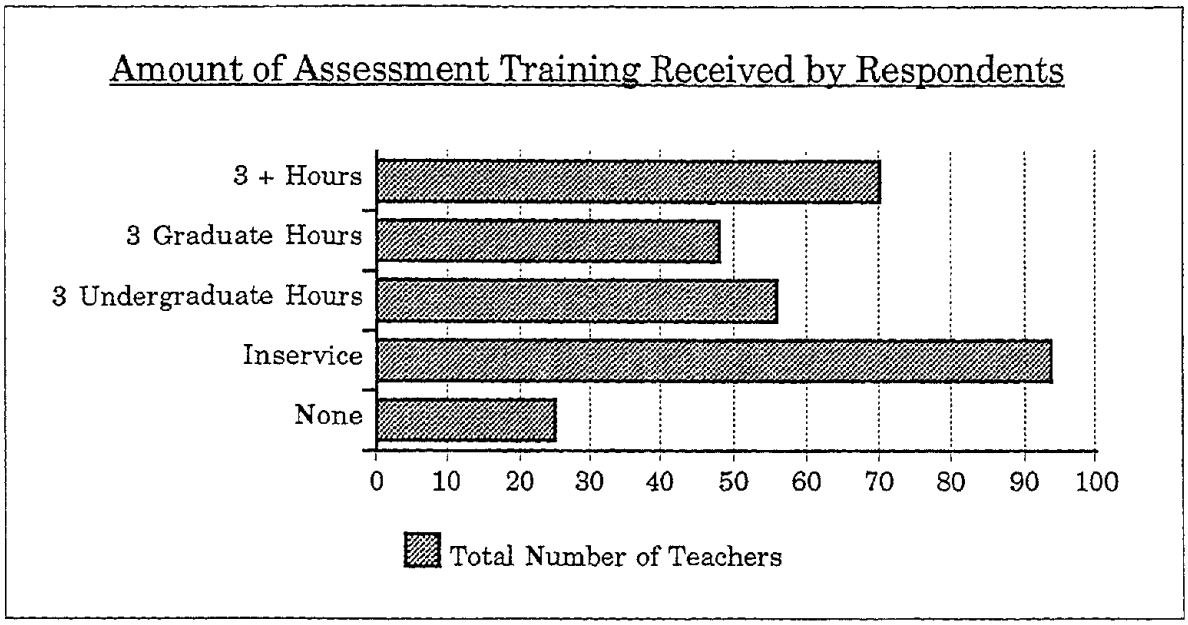
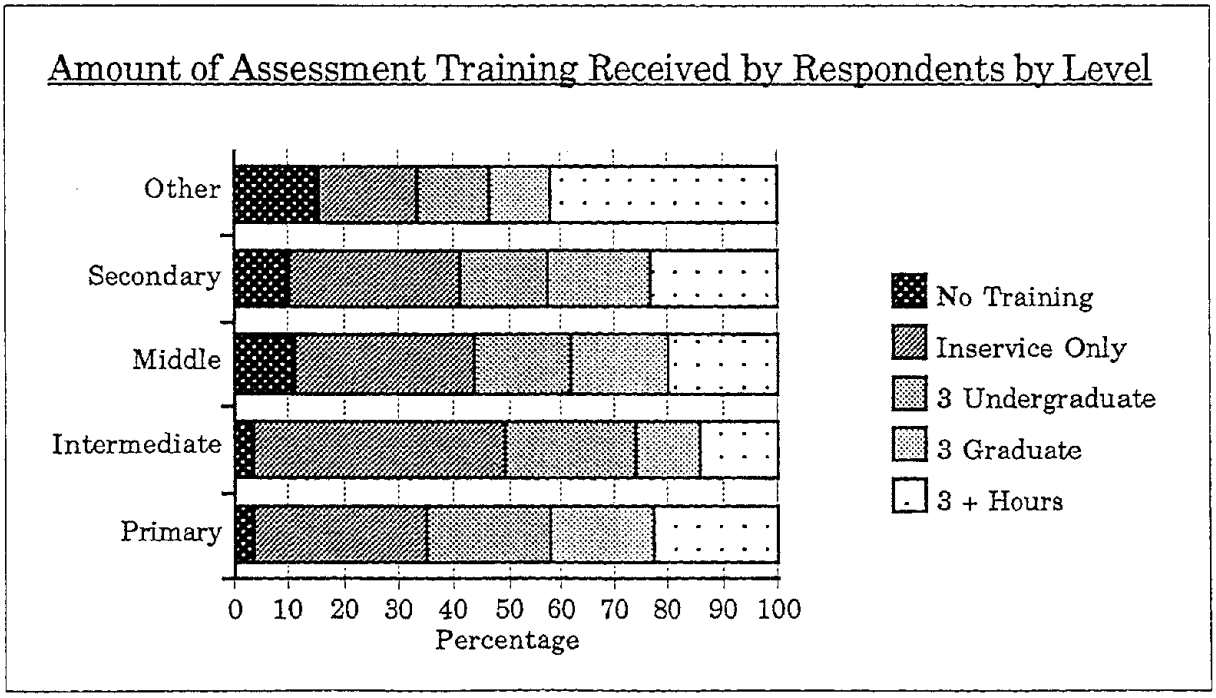


Figure 5

Percentage of Primary, Intermediate, Middle, Secondary, and 'Other' Teachers Receiving No Training, Inservice Training Only, Three Undergraduate Hours, Three Graduate Hours, and More than Three Undergraduate and/or Graduate Hours Training in Assessment



Communication skills.

Communication skills (reading, writing, speaking, and listening) are taught in varying degrees by all teachers. Respondents were asked to indicate whether they considered teaching communication skills a major part of their responsibility. Two hundred sixty-four teachers reported that they considered teaching communication skills a major part of their responsibility while thirty-one indicated a negative response.

Membership on school improvement teams.

Of the total respondent group, 120 indicated that they served on their school improvement team or committee. One hundred seventy-four teachers did not serve on a school improvement team or committee.

Assessment scoring experience.

Many types of assessments require local scoring. Respondents were asked to indicate if they had scored one or more of any of the communication assessments used in their school improvement plans. One hundred two reported scoring experience while one hundred ninety-three reported no scoring experience during the last two years.

Secondary Data Analysis

After all the surveys were scored, mean scores and standard deviations were calculated for each assessment type according to the independent variables of teaching level and participation in decision-making. Dependent variables included the score for each attitude item, the summed scores of items concerning student-centered issues, the summed scores of items dealing with teacher-centered issues, and the total attitude score for each assessment category.

Other Data Analysis

After the data were collected, post hoc analysis decisions were made. First, a one-way analysis of variance was conducted to determine if there were significant differences ($p \leq .05$) between independent variable levels. In instances where significant differences were found, the Tukey B multiple comparison test was performed to identify pairs of means that were significantly different.

In order to statistically compare the attitudes of teachers toward different assessment types, subsets of the total sample were compiled. The set of all teachers responding to assessment x was joined with the set of teachers responding to assessment y. The scores of teachers responding to only one of the two assessments were eliminated. Paired-sample t-tests were conducted to examine differences between teachers' attitudes about assessment x and assessment y using the subset of teachers who responded to both assessment x and y. This procedure was followed for all possible combinations of assessment pairs.

CHAPTER IV: RESULTS

Introduction

Teachers in the state of Kansas have been mandated to develop data-based school improvement plans. Each building staff is expected to study the existing data or information, target areas for improvement based on the data, set goals, and develop plans to meet those goals. An integral part of each plan is the identification of indicators to be used for determining gains in student achievement. These indicators generally take the form of various types of assessments that are given to students periodically to document improvement.

Consequently, entire faculties of teachers have participated in developing school improvement plans which include a variety of assessments. This study is designed to investigate the attitudes of teachers in one county in Kansas toward the assessments they are using to measure student learning as described in their respective school improvement plans.

The questions which guided this study were the following:

Question 1: Do the attitudes of primary, intermediate, middle, secondary, and 'other' level teachers differ regarding particular assessments chosen for their school improvement plans?

Question 2: Do the attitudes of teachers who were involved in the decision-making process differ from the attitudes of teachers who were not involved in the process?

Question 3: Do the attitudes of teachers differ toward particular types of tests?

This chapter is organized into two major sections. The first section consists of seven subsections, each representing one of the assessments covered by the Teacher Attitude Survey. Research questions 1 and 2 will be answered in this section. Demographic data, behavioral data, and attitudinal data about the individual assessments will be included in each subsection. Additionally, the results of statistical analysis will be discussed for each assessment.

The second section will consist of descriptive and statistical data related to comparisons between the seven assessments addressed by the survey. This section will answer Question 3 of this research project.

Standardized Norm-referenced Tests

Description of Disqualified Surveys

Of the 304 completed surveys, 267 yielded information about standardized norm-referenced tests. Thirty-seven surveys were disqualified for the following reasons: lack of demographic information, nine; nonuse or unsure of use, 21; no opinion, five; no response, two.

Demographics of Responding Teachers

Figure 6 shows the percentage of primary, intermediate, middle, secondary, and 'other' level teachers who responded to the standardized norm-referenced test survey section. The percentages of primary, intermediate, middle, and secondary teachers vary from 20.2% to 24.7%. The smallest group consists of 'other' teachers, 13.9% of the total respondent sample.

The percentage of teachers in each experience category who responded to attitude items regarding standardized norm-referenced tests

is shown in Figure 7. Teachers who have been teaching current levels for one to four years constitute the largest category, 27.8% of the total. The next category, 22.9%, includes the teachers with twenty or more years of experience at their current levels. Teachers who have taught current levels for fifteen to nineteen years comprise the smallest group or 10.9% of all teachers responding to the standardized norm-referenced test survey section.

Figure 8 illustrates the percentage of respondents who have had no assessment training, inservice training only, three undergraduate hours, three graduate hours, or more than three undergraduate and/or graduate hours who responded to the standardized norm-referenced survey section. Inservice has been the only training for 34.2% of the respondents. Nearly 7% have received no assessment training. Fifty-nine percent of the responding teachers indicated they have some college credit, including 25.2% who have more than three hours credit.

Figure 6

Percentage of Primary, Intermediate, Middle, Secondary, and 'Other' Teachers Responding to Standardized Norm-referenced Test (SNRT) Survey Items

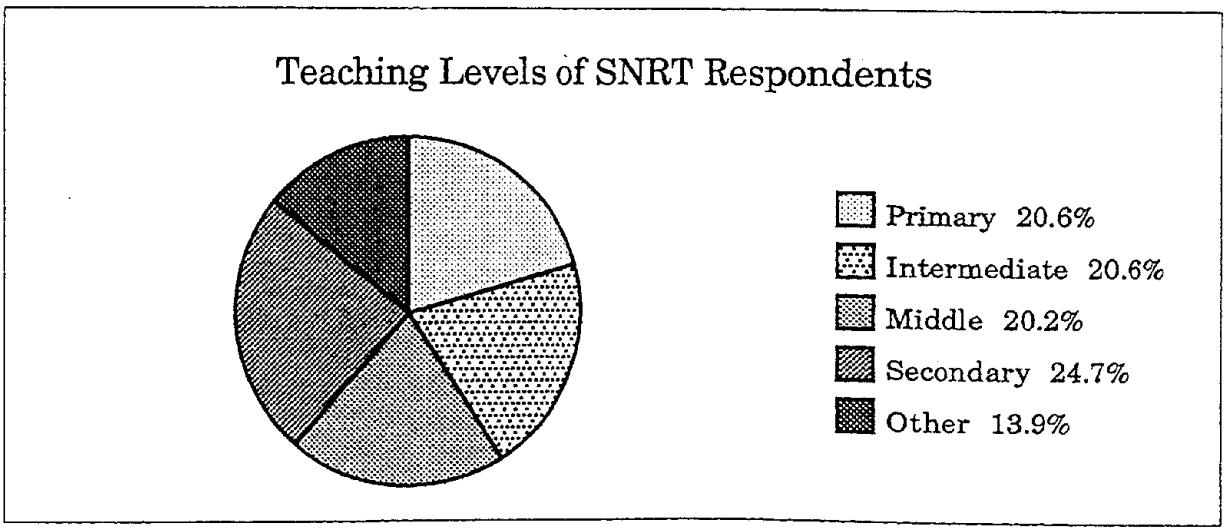


Figure 7

Percentage of Teachers Responding to the Standardized Norm-referenced Test (SNRT) Survey Section with 1-4 Years, 5-9 Years, 10-14 Years, 15-19 Years, and 20 or More Years of Experience at their Current Levels

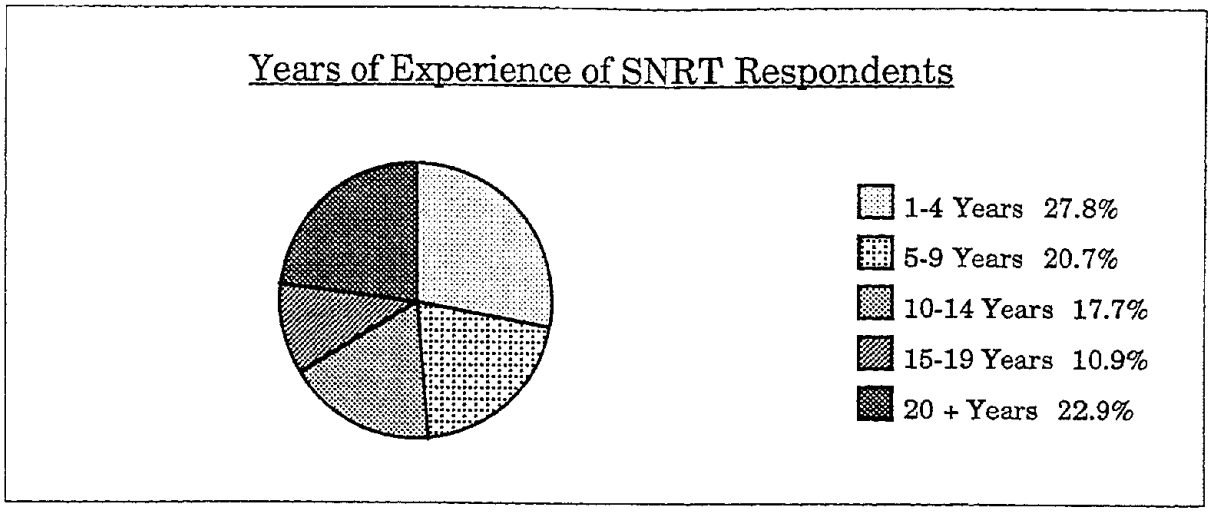
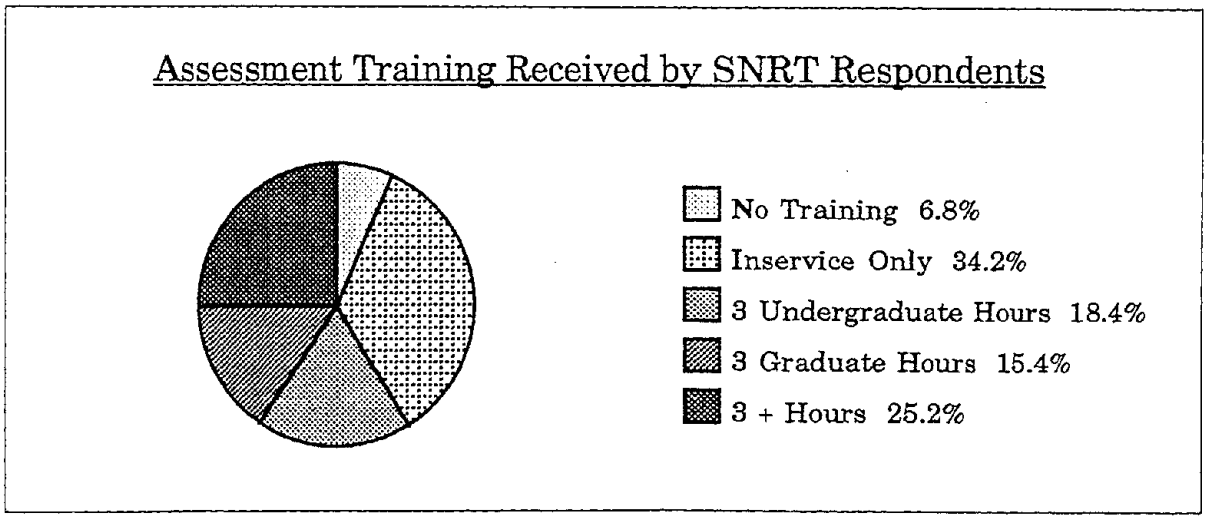


Figure 8

Percentage of Teachers Responding to the Standardized Norm-referenced Test (SNRT) Survey Section with No Training, Inservice Training Only, Three Undergraduate Hours, Three Graduate Hours, and More than Three Undergraduate and/or Graduate Hours in Assessment Issues



One hundred fifteen teachers indicated they served on their school improvement teams but only 74 teachers responded that they had input into the decision to use standardized norm-referenced tests as an

assessment in their school improvement plans. Of the 267 teachers responding, 134 reported they administered the test to at least one class of students. Five teachers did not respond to the item indicating test administration.

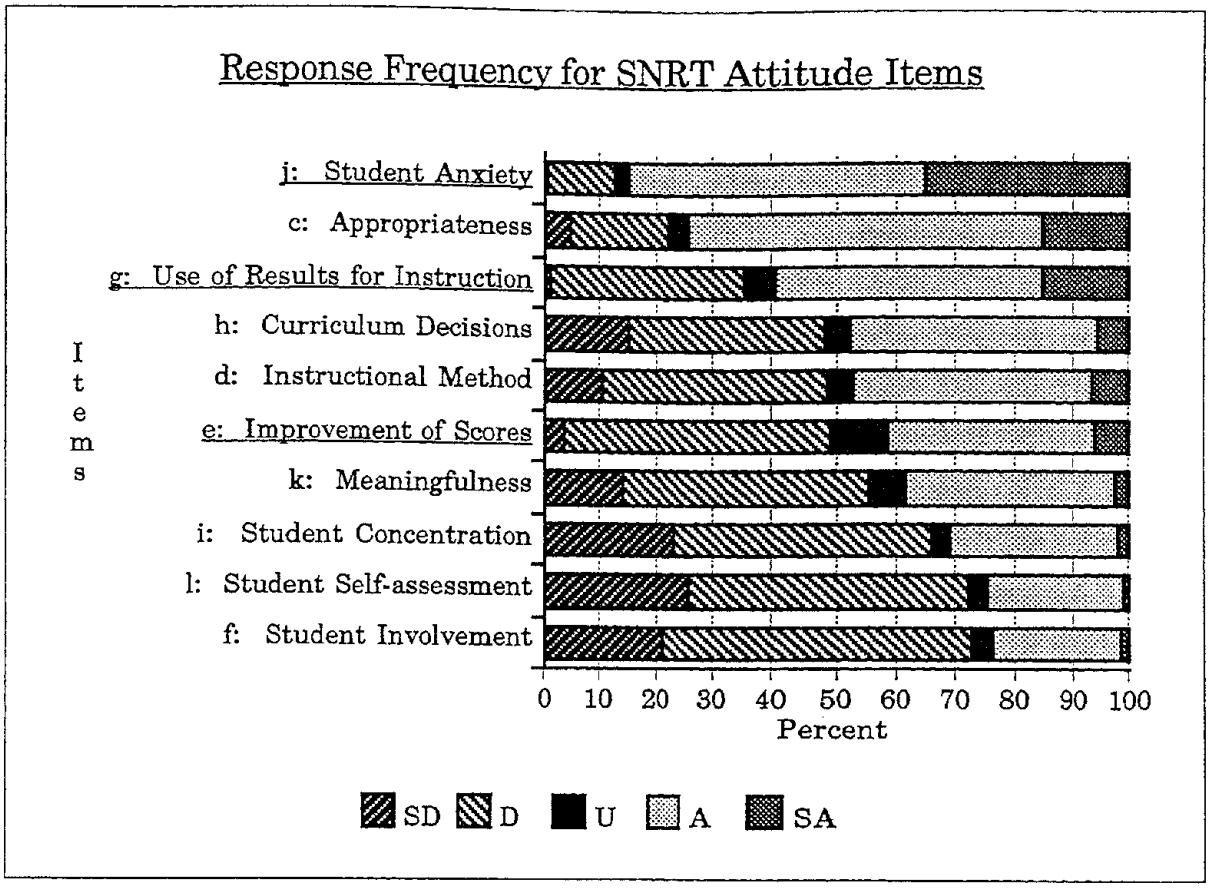
Standardized Norm-referenced Test Item Response Frequency

Figure 9 displays the proportion of strongly disagree (SD), disagree (D), unsure (U), agree (A), and strongly agree (SA) responses made for each attitude item in the standardized norm-referenced test survey section. The items have been ordered from most positive responses to least positive responses. Items with the largest percentage of agreement were item c -- appropriateness and item j -- student anxiety. Over 70% of all teachers responding to this section indicated that standardized norm-referenced tests are appropriate measures of student learning but more than 80% indicated that students exhibit anxiety during the tests. The least favorable items were item f -- student involvement and item l -- student self-assessment. Over 70% of all teachers disagreed or strongly disagreed with these two items.

Figure 10 shows the mean response score for each standardized norm-referenced attitude item. The means have been ordered to reflect decreasing positive attitudes. Eight of the ten items received a negative mean rating by teachers. Item j -- student anxiety received the most negative score of any item (M = -1.416). Item c -- appropriateness received a positive mean rating (M = .745). The mean score for item e -- improvement of scores was slightly positive, (M = 0.019).

Figure 9

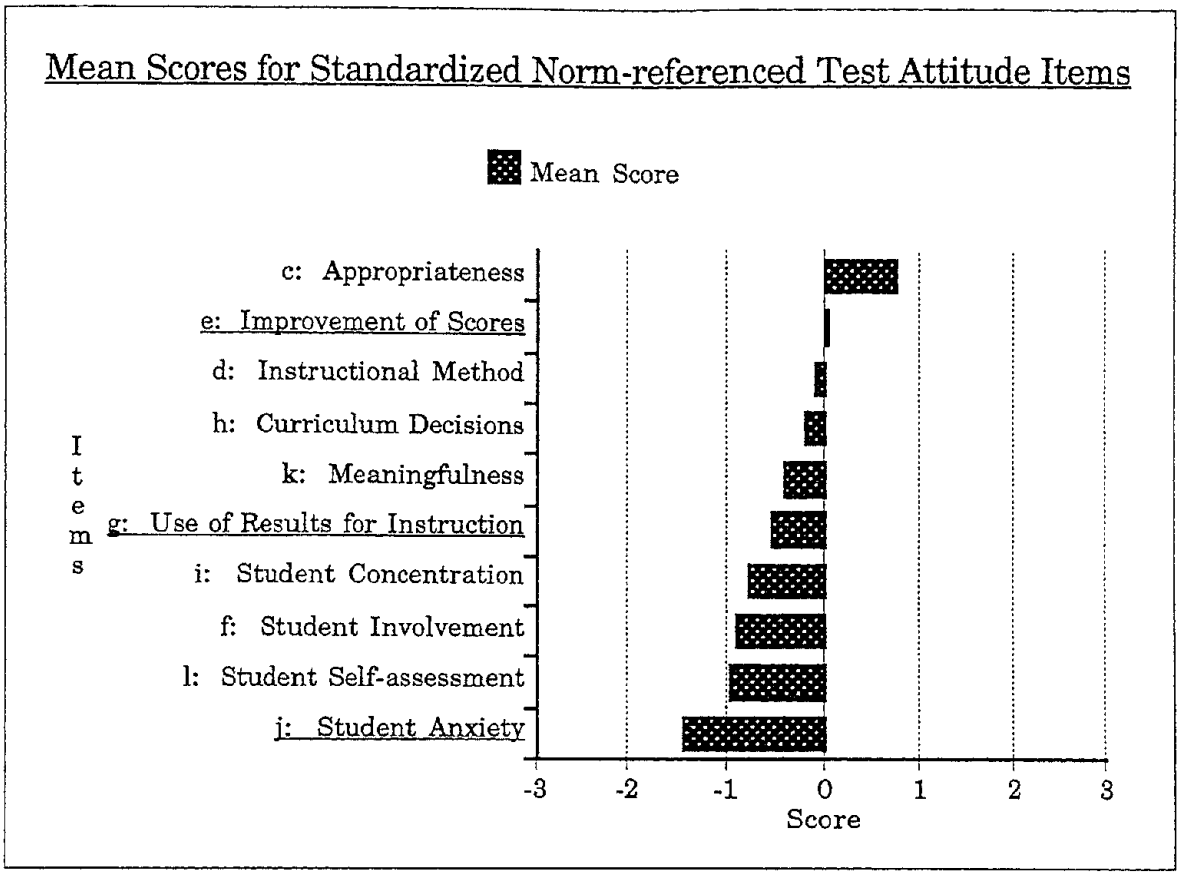
Percentage of Strongly Disagree (SD), Disagree (D), Unsure (U), Agree (A), Strongly Agree (SA) Responses to Standardized Norm-referenced Test (SNRT) Attitude Items by Respondents



Underlined items indicate negative attitude statements.

Figure 10

Mean Scores of Respondents for Standardized Norm-referenced Test Attitude Items



Underlined items indicate negative attitude statements and were reversed scored to calculate the mean scores

Statistical Analysis of Standardized Norm-referenced Test Survey Data as a Function of Teaching Levels of Respondents

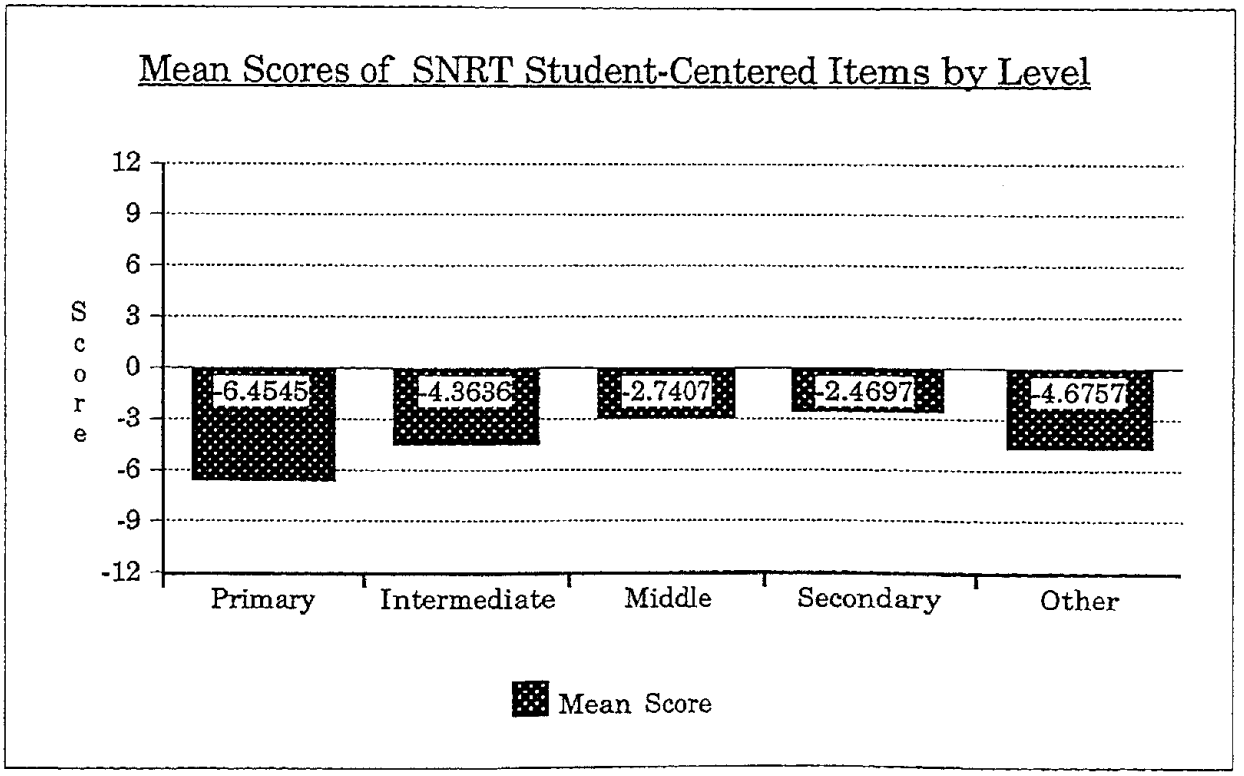
Analysis of student-centered items.

One-way analysis of variance was used to determine whether teachers at various teaching levels differed in their opinions about the effect of standardized norm-referenced testing on students. The student-centered attitude score was based on four items: item f -- student involvement; item i -- student concentration; item j -- student anxiety; and

item 1 -- student self-assessment. Figure 11 presents the means of student-centered attitude scores for each teaching level. Analysis revealed significant differences in attitudes about student-centered issues exist between levels (F (4, 262) = 9.6479, $p < .0001$). Post hoc analysis using the Tukey-B test indicated significant differences ($p < .05$) exist between the attitudes of primary level teachers and the attitudes of teachers at the intermediate, middle, and secondary levels. The attitudes of teachers in the 'other' category also differ significantly ($p < .05$) from the attitudes of secondary teachers. Primary teachers' mean score was significantly lower than the mean scores of intermediate, middle, and secondary level teachers. The mean score of 'other' teachers was significantly lower than the mean score of secondary teachers.

Figure 11

Mean Scores of Standardized Norm-referenced Test (SNRT) Student-centered Attitude Items as a Function of the Teaching Levels of Respondents



Analysis of teacher-centered items.

One-way analysis of variance was used to determine whether teachers at various teaching levels differed in their opinions about the effect of standardized norm-referenced testing on teachers. The total teacher-centered attitude score was based on four items: item d -- instructional method; item e -- improvement of scores; item g -- use of results to improve instruction; and item h -- curriculum decisions. Figure 12 presents the means of the teacher-centered items for primary, intermediate, middle, secondary and 'other' teaching levels of respondents. Using the total teacher-centered attitude score, analysis indicated no significant differences in attitudes about teacher-centered issues exist between levels.

Analysis of total attitudinal score.

One-way analysis of variance was used to determine whether teachers at various teaching levels differed in their opinions about standardized norm-referenced testing in general. Figure 13 shows the mean total scores for the ten attitude items. Analysis indicated differences in levels when the total scores of the ten attitudinal items were studied (F (4,262) = 5.0462, p = .0006). Post hoc analysis using Tukey-B test indicated that primary level teachers differ significantly ($p < .05$) from middle level and secondary level teachers. Primary teachers have a significantly more negative attitude about standardized norm-referenced tests than either middle or secondary level teachers.

Figure 12

Mean Scores of Standardized Norm-referenced Test (SNRT) Teacher-centered Attitude Items as a Function of the Teaching Levels of Respondents

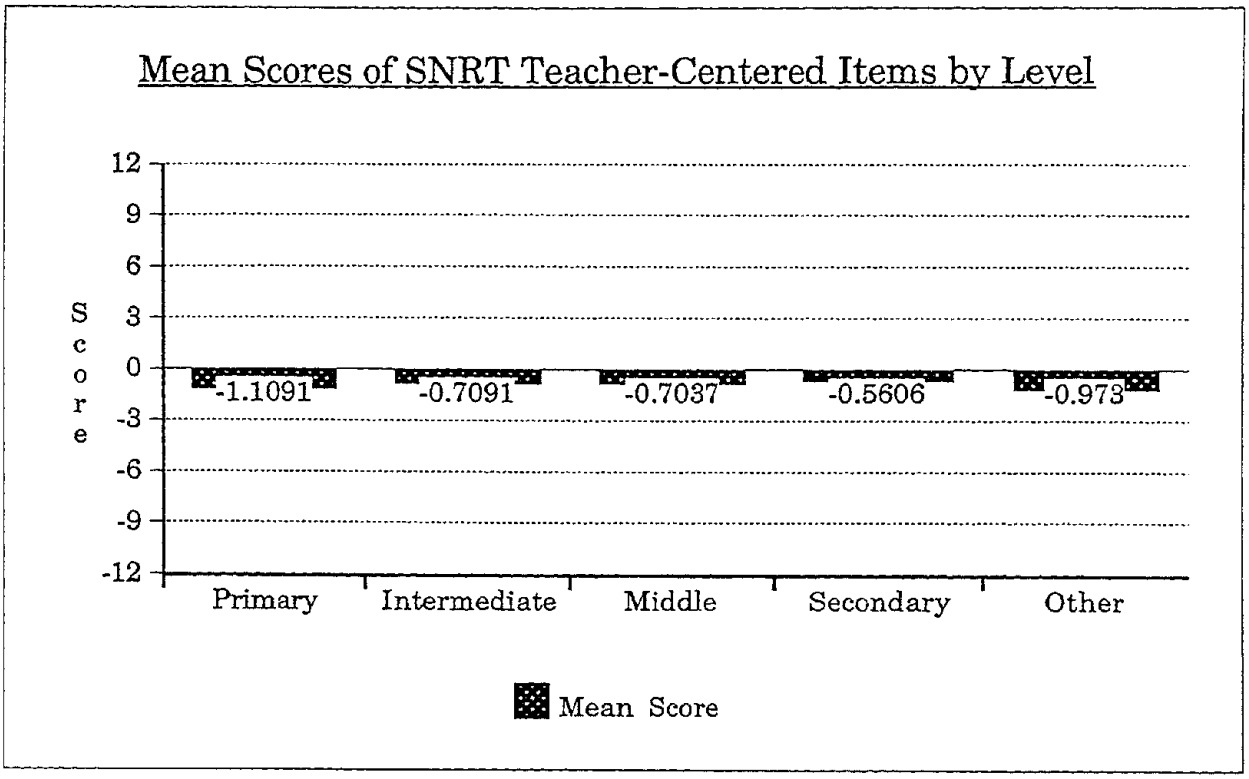
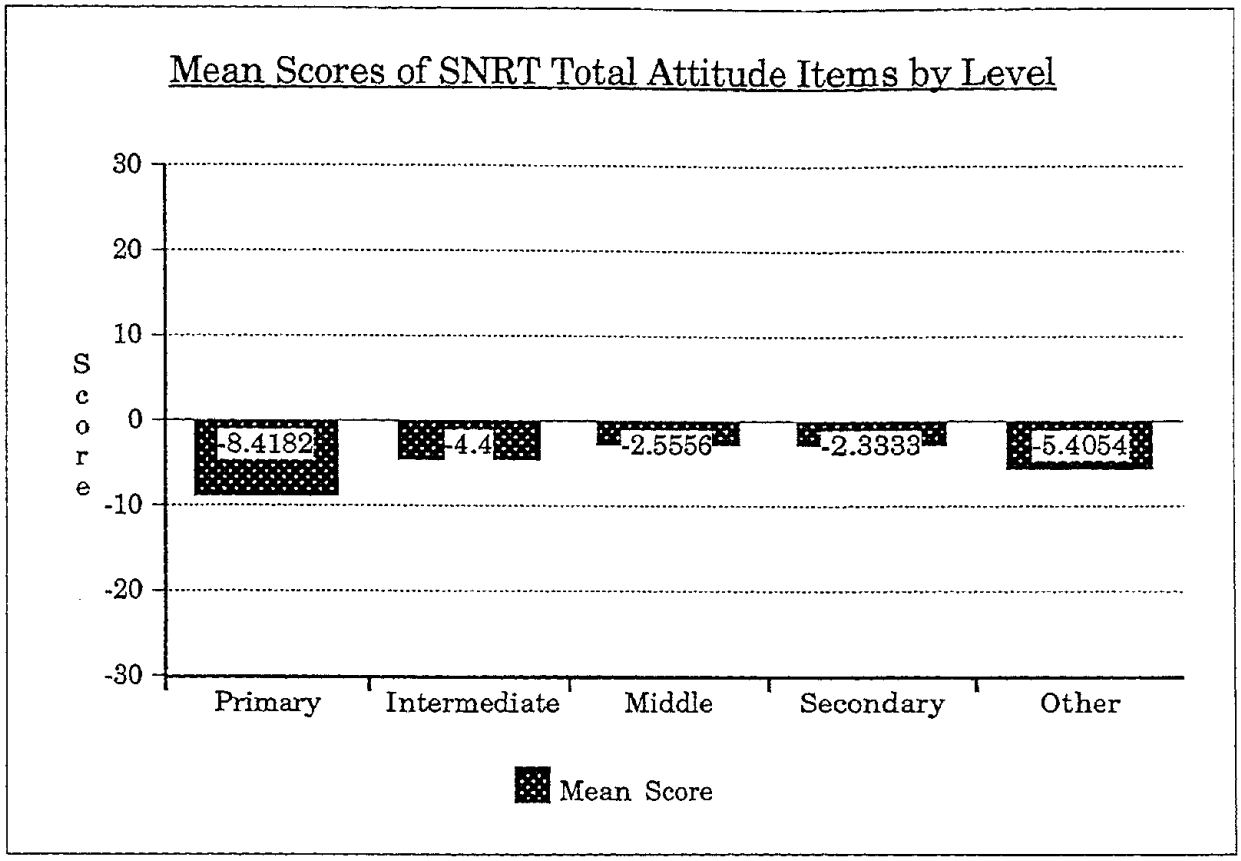


Figure 13

Mean Scores of Standardized Norm-Referenced Test (SNRT) Total Attitude Items as a Function of the Teaching Levels of Respondents



Analysis of individual items.

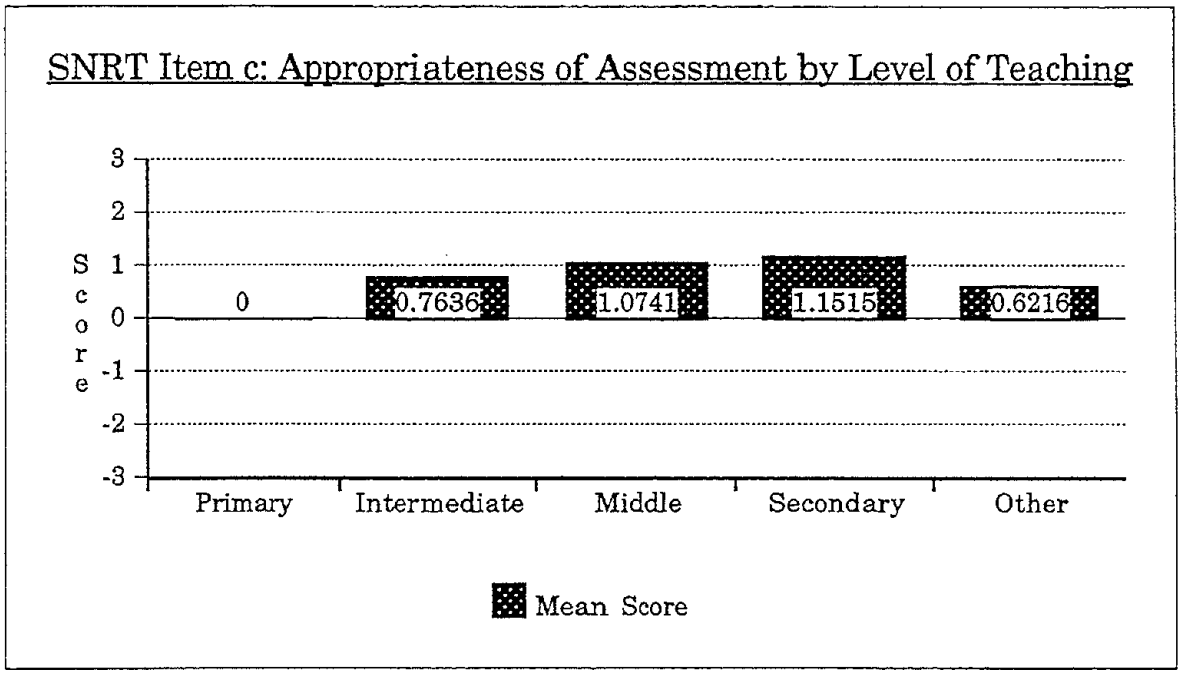
One-way analysis of variance was used to examine the attitudes of teachers at primary, intermediate, middle, secondary, and 'other' levels about each individual item. When significant differences were discovered, a post hoc analysis using the Tukey-B test was conducted to identify significant differences between levels.

Analysis of the individual items indicated differences between the groups for item c -- appropriateness (F (4, 262) = 6.3614, p = .0001). Post hoc analysis using the Tukey-B test indicates significant differences (p < .05) between teachers at the primary level and teachers at the

intermediate, middle, and secondary levels. The attitude mean of primary teachers is less positive than the means of intermediate, middle, and secondary level teachers regarding the appropriateness of standardized norm-referenced tests. Figure 14 shows the mean attitude scores of primary, intermediate, middle, secondary, and 'other' teachers for item c.

Figure 14

Standardized Norm-referenced Test (SNRT) Item c -- Appropriateness of Assessment Mean Attitude Score as a Function of the Teaching Levels of Respondents

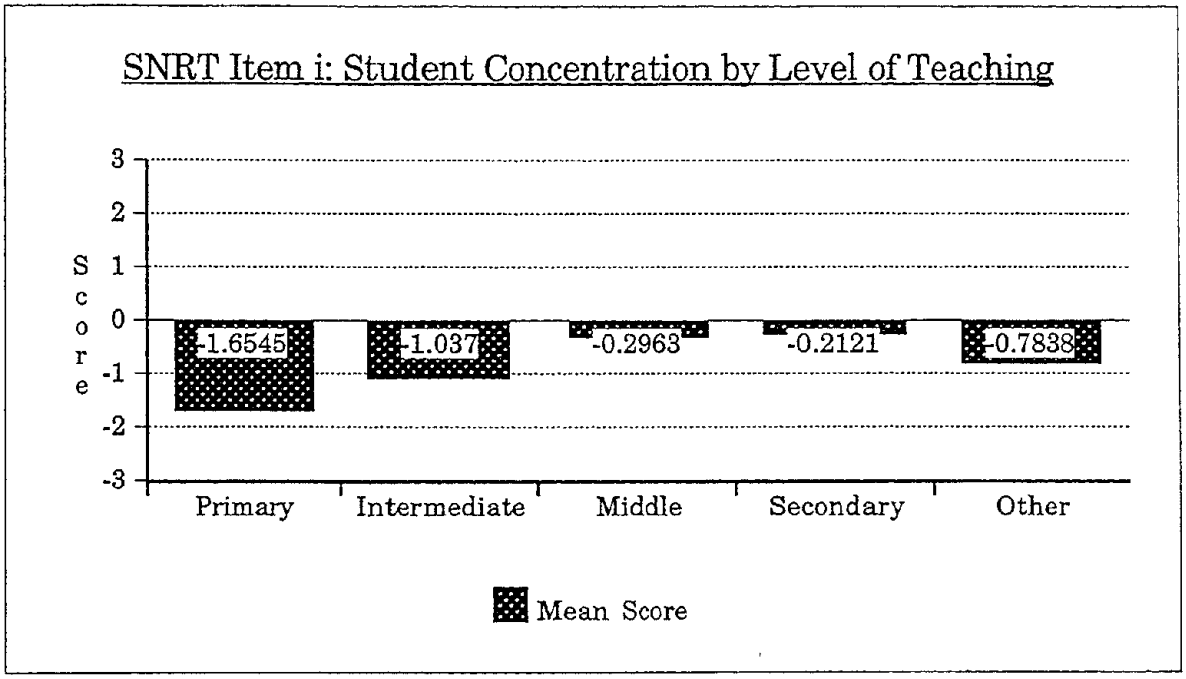


Analysis of the individual items indicated differences between the groups for item i -- student concentration (F (4, 261) = 9.3531, $p < .0001$). Post hoc analysis using the Tukey-B test indicated significant differences ($p < .05$) between the attitudes of teachers at the primary level and those of teachers at the middle, secondary, and 'other' levels. The attitudes of intermediate teachers also differ significantly ($p < .05$) from the attitudes of teachers at the middle and secondary levels. Primary and intermediate teachers have a significantly lower mean score than middle or secondary

level teachers. The mean score of primary level teachers is also significantly lower than the mean score of 'other' teachers. Figure 15 shows the mean attitude scores of primary, intermediate, middle, secondary, and 'other' teachers for item i.

Figure 15

Standardized Norm-referenced Test (SNRT) Item i -- Student Concentration Mean Attitude Score as a Function of the Teaching Levels of Respondents

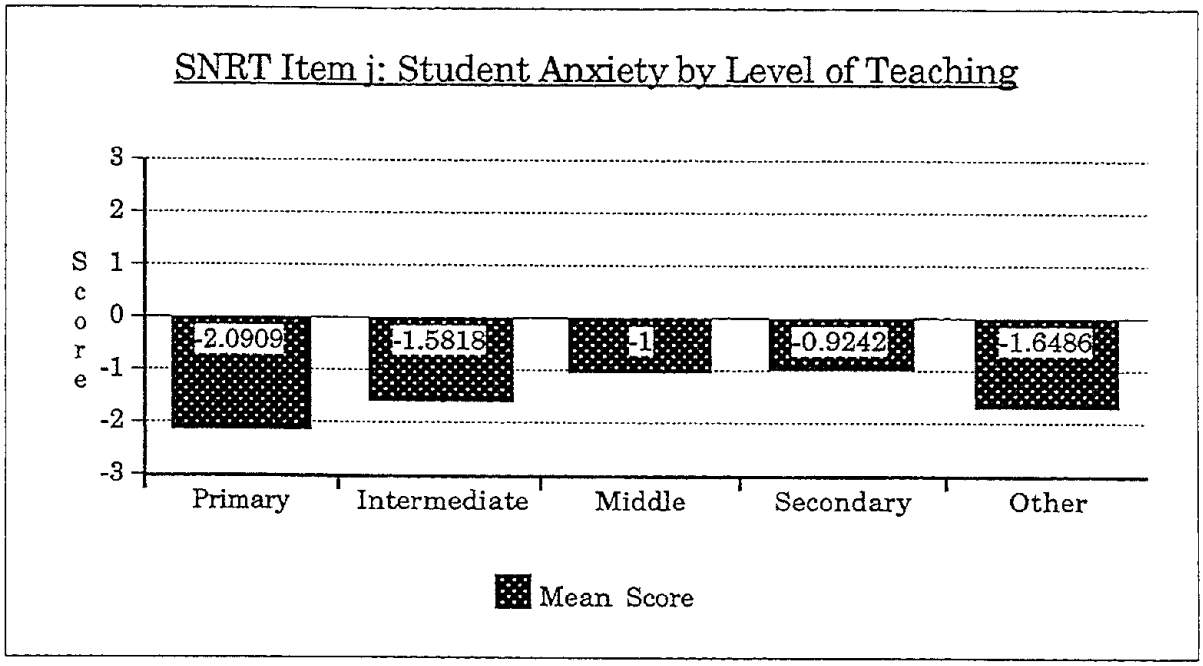


Analysis of the individual items indicated differences between the groups for item j: student anxiety (F (4, 262) = 8.0384, $p < .0001$). Post hoc analysis using the Tukey-B test indicates significant differences ($p < .05$) between the attitudes of teachers at the primary, intermediate, and 'other' levels and the attitudes of secondary level teachers. Primary level teachers also differ significantly ($p < .05$) from middle level teachers. The mean score of primary level teachers is significantly lower than the mean scores of middle or secondary level teachers. Intermediate and 'other' level teachers' mean scores are significantly lower than the mean score of

secondary level teachers. Figure 16 shows the mean attitude scores of primary, intermediate, middle, secondary, and 'other' teachers for item j -- student anxiety.

Figure 16

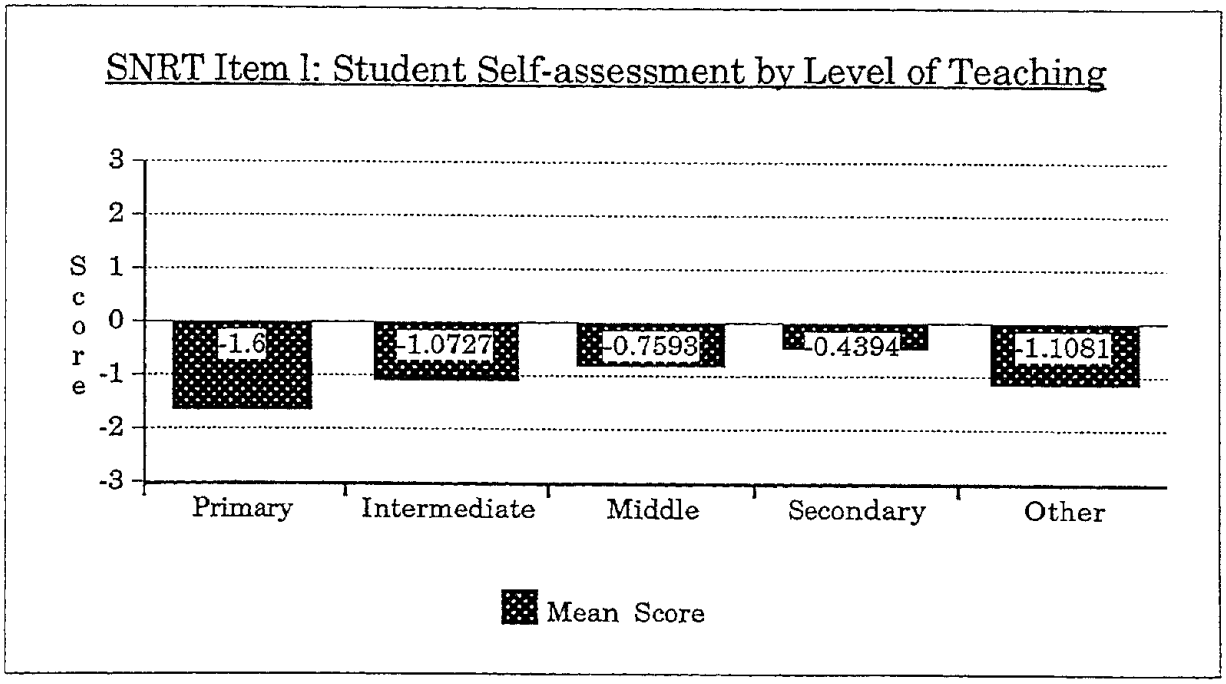
Standardized Norm-referenced Test (SNRT) Item j -- Student Anxiety Mean Attitude Score as a Function of the Teaching Levels of Respondents



Analysis of the individual items indicated differences between the groups for item l: student self-assessment (F (4, 262) = 5.3422, p = .0004). Post hoc analysis using the Tukey-B test indicated significant differences ($p < .05$) between the attitudes of teachers at the primary level and the attitudes of middle and secondary level teachers. The mean score of primary teachers is lower than the mean scores of middle or secondary level teachers. Figure 17 shows the mean attitude scores of primary, intermediate, middle, secondary, and 'other' teachers for item l -- student self-assessment.

Figure 17

Standardized Norm-referenced Test (SNRT) Item l -- Student Self-Assessment Mean Attitude Score as a Function of the Teaching Levels of Respondents



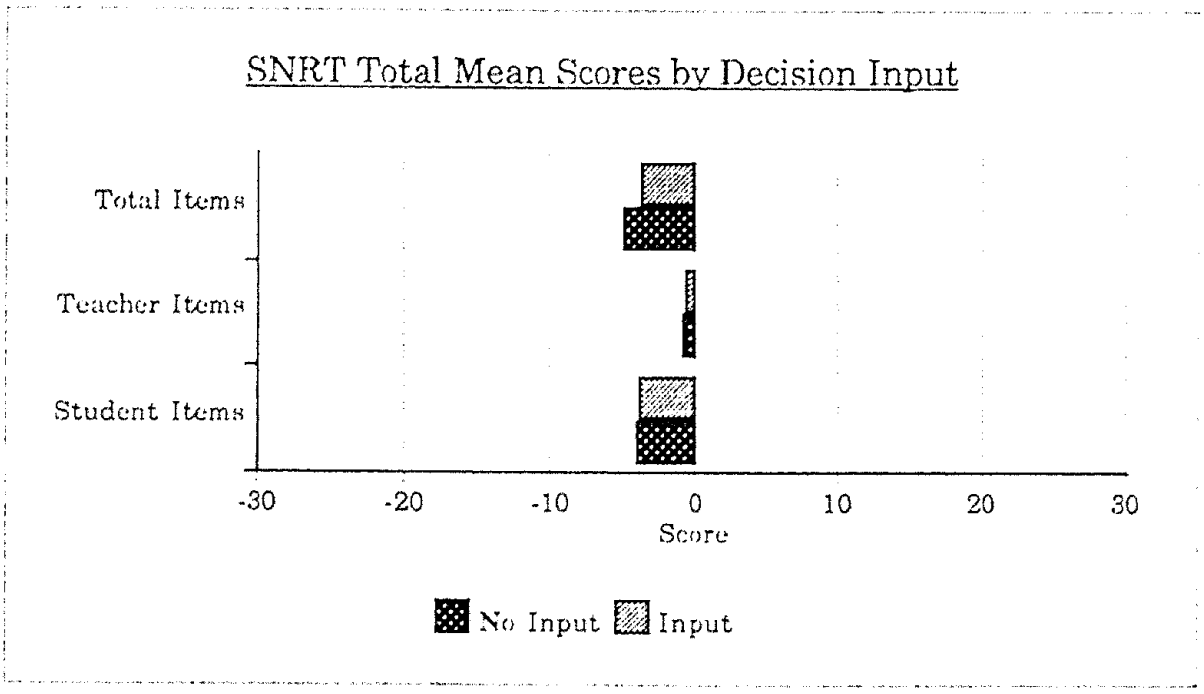
Statistical Analysis of Standardized Norm-referenced Test Attitude Data by Level of Decision Input

One-way analysis of variance was used to compare the attitudes of teachers who indicated they provided input into the decision to use a standardized norm-referenced test as part of their school improvement plan with the attitudes of teachers who indicated they did not provide input into the decision. Three comparisons were made using level of decision input as the independent variable. For the first comparison, the dependent variable was the mean of teacher responses to student-centered items f -- student involvement, i -- student concentration, j -- student anxiety, and l -- student self-assessment. For the second comparison, the dependent variable was the mean of teacher responses to

teacher-centered items d -- instructional method, e -- improvement of scores, g -- use of results for instruction, and h -- curriculum decision. The third comparison involved the mean of all ten attitude items as the dependent variable. Figure 18 shows the mean student-centered, teacher-centered, and total attitude scores of teachers providing input and those who did not provide input into the decision. In each comparison, teachers who provided input tend to have a slightly more positive attitude but no significant differences ($p < .05$) were found between mean scores of teachers who reported they provided input into the decision to use a standardized norm-referenced test in their school improvement plan and those who did not provide input.

Figure 18

Mean Scores of Standardized Norm-referenced Test (SNRT) Student-centered, Teacher-centered, and Total Attitude Items as a Function of the Level of Decision Input by Respondents



Criterion-referenced Tests

Description of Disqualified Surveys

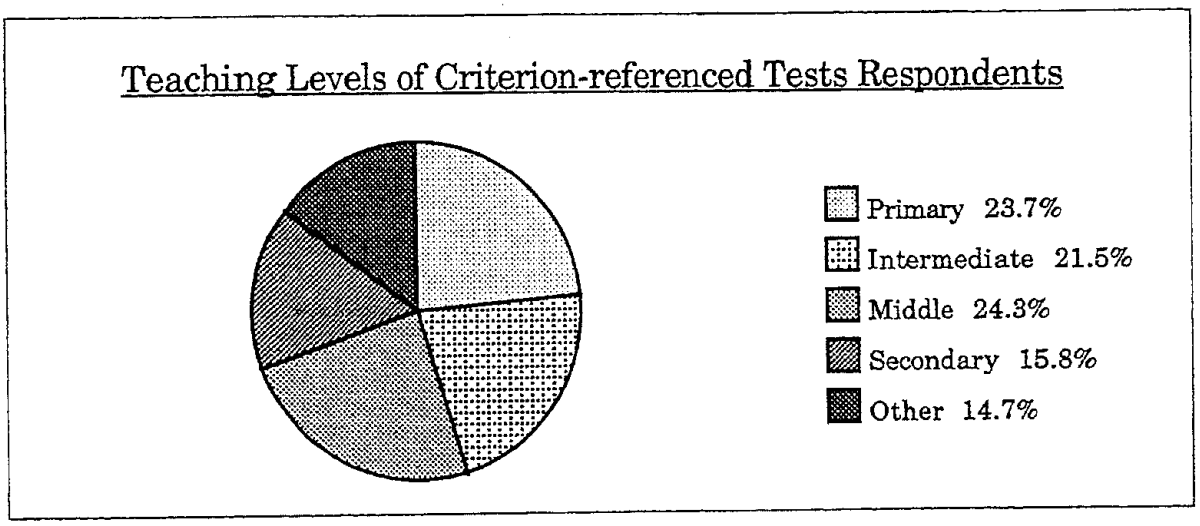
Of the 304 completed surveys, 177 yielded information about criterion-referenced tests. One hundred twenty-seven surveys were disqualified for the following reasons: lack of demographic information, nine; nonuse or unsure of use, 84; no opinion, 10; no response, 24.

Demographics of Responding Teachers

Figure 19 shows the percentage of primary, intermediate, middle, secondary, and 'other' level teachers who responded to the criterion-referenced test section. The proportion of primary, intermediate, and middle teachers to the total number of teachers is 23.7%, 21.5% and 24.3%, respectively. The two smaller groups, secondary teachers and 'other' teachers compose 15.8% and 14.7% of the total, respectively.

Figure 19

Percentage of Primary, Intermediate, Middle, Secondary, and 'Other' Teachers Responding to Criterion-referenced Test (CRT) Survey Items



The percentage of teachers in each experience category who responded to attitude items regarding criterion-referenced tests is shown in Figure 20. The largest percentage of teachers, 29.5%, has been

teaching at their current levels for one to four years. The next category includes teachers with twenty or more years of experience at their current levels, 22.7% of the total. Teachers who have taught their current levels for fifteen to nineteen years comprise the smallest group, 11.4% of all teachers responding to the criterion-referenced test section.

Figure 20

Percentage of Teachers Responding to the Criterion-referenced Test Survey Section with 1-4 Years, 5-9 Years, 10-14 Years, 15-19 Years, and 20 or More Years of Experience at their Current Levels

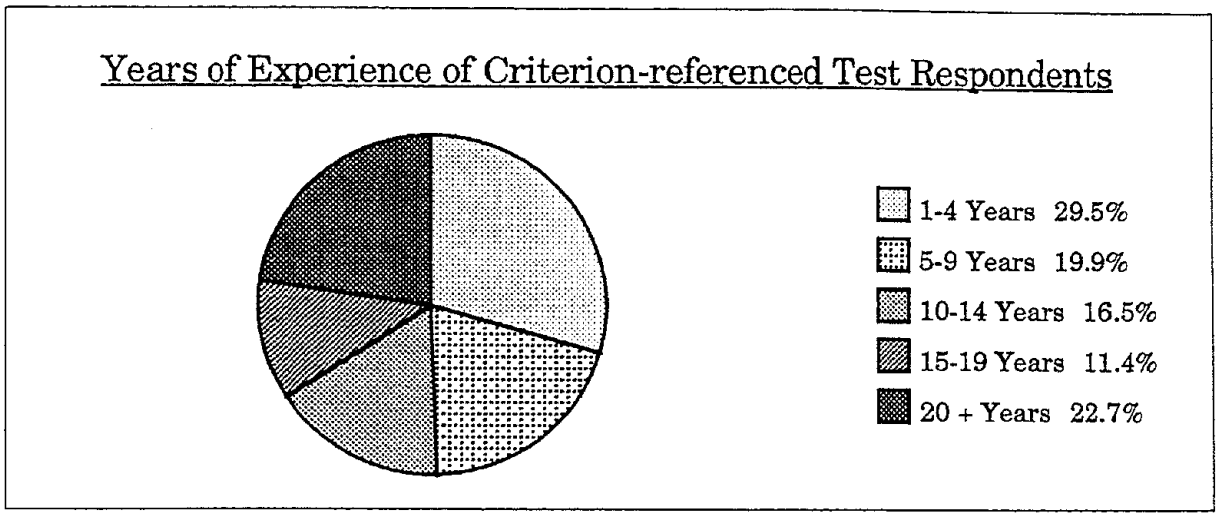
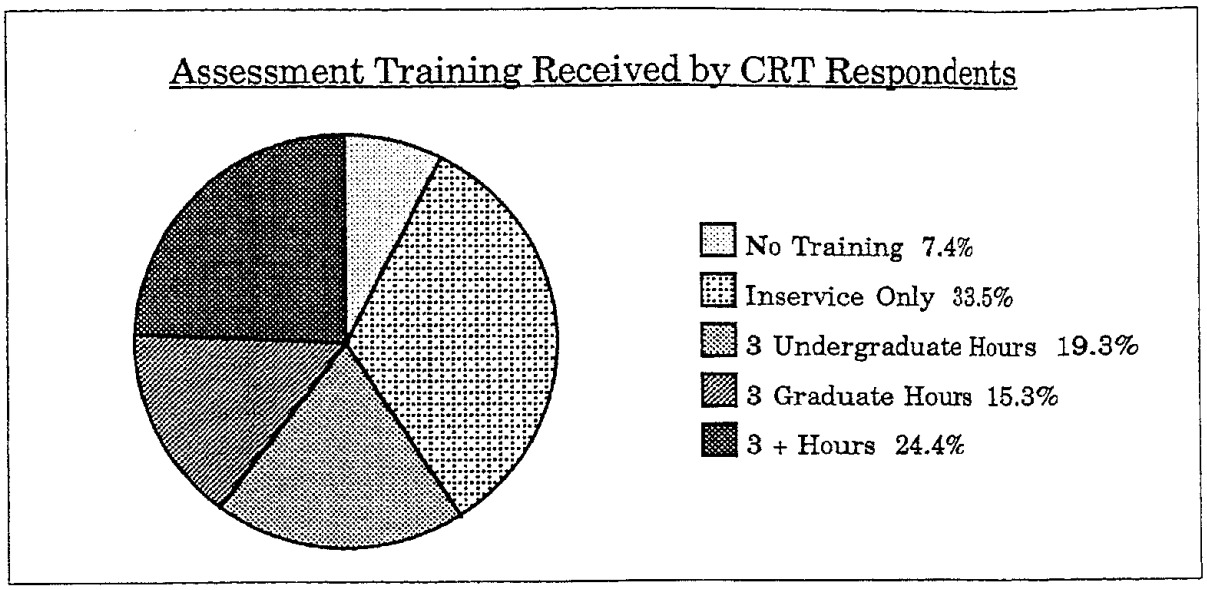


Figure 21 illustrates the percentage of teacher respondents who have had no assessment training, inservice training only, three undergraduate hours, three graduate hours, or more than three undergraduate and/or graduate hours. Inservice has been the only training for 33.5% of the respondents. Slightly more than 7% have received no assessment training. Fifty nine percent of the responding teachers indicated they have some college credit, including 24.4% who have more than three hours credit.

Figure 21

Percentage of Teachers Responding to the Criterion-referenced Norm-referenced Test Section with No Training, Inservice Training Only, Three Undergraduate Hours, Three Graduate Hours, and More than Three Undergraduate and/or Graduate Hours in Assessment Issues



Seventy-seven teachers indicated they served on their school improvement team while 74 teachers responded that they had input into the decision to use criterion-referenced tests as an assessment in their school improvement plan. Of the 177 teachers responding, 105 reported they administered the test to at least one class of students. Five teachers did not respond to the item indicating test administration.

Criterion-referenced Test Item Response Frequency

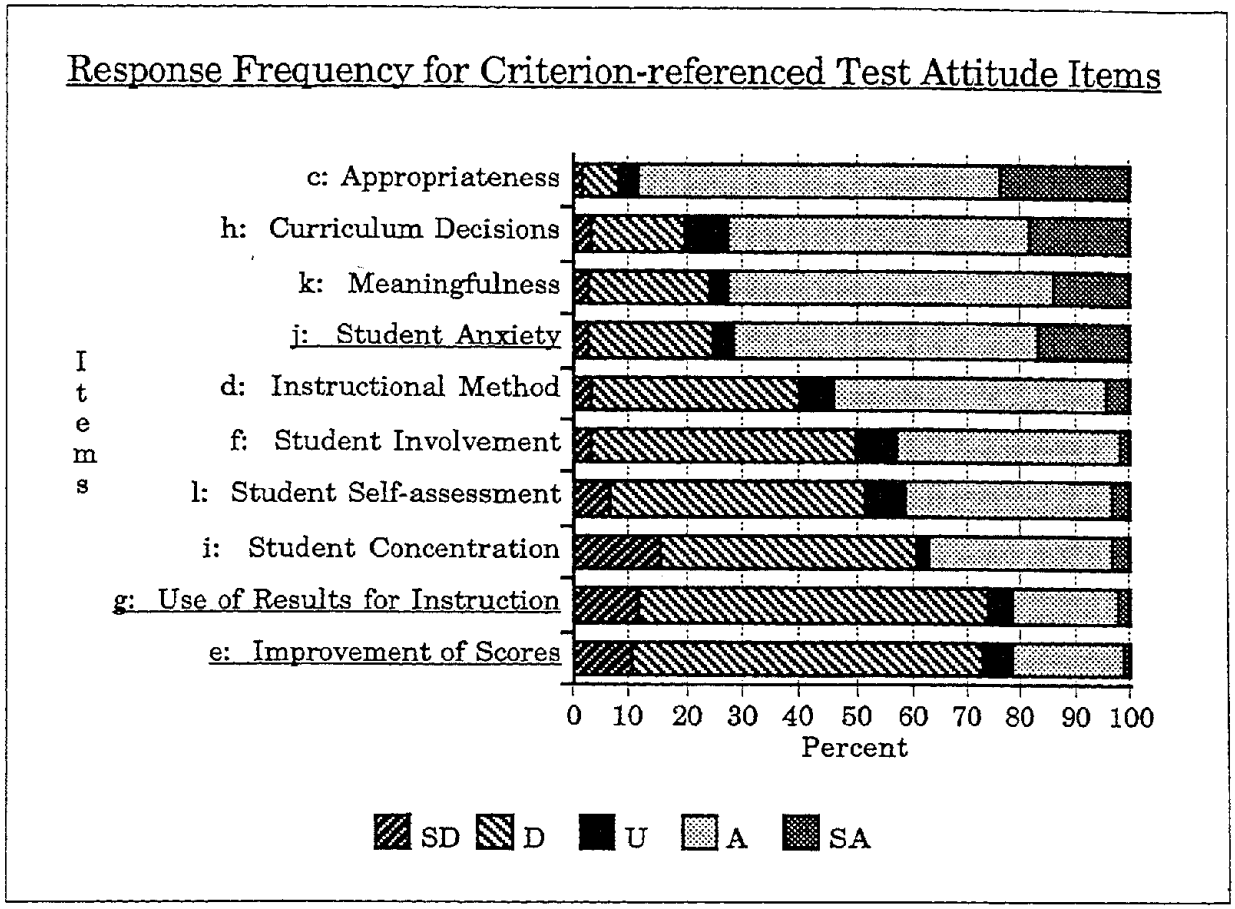
Figure 22 displays the proportion of strongly disagree (SD), disagree (D), unsure (U), agree (A), and strongly agree (SA) responses made for each attitude item in the criterion-referenced test survey section. The items have been ordered from most positive responses to least positive responses. Items with the largest percentage of agreement were items c -- appropriateness, h-- curriculum decisions, k-- meaningfulness, and j --

student anxiety. Nearly 90% of the responding teachers believe criterion-referenced tests are appropriate for their students. More than 70% of the responding teachers also agreed that criterion-referenced tests were meaningful and that the tests should influence curriculum decisions. On the other hand, over 70% of the teachers believe students became anxious during criterion-referenced tests. Over 70% of the teachers strongly disagreed with items e and g. These items were stated in negative terms so disagreement would indicate that the reverse is believed to be true. Item e indicated that it is difficult to improve criterion-referenced test scores; therefore, teachers' disagreement would indicate that they do not feel scores are difficult to improve. Item g stated that teachers generally do not use the results from criterion-referenced tests. Teachers' disagreement with this statement would indicate that they believe teachers do use the results to change instruction.

Figure 23 shows the mean response score for each criterion-referenced attitude item. The means have been ordered to reflect decreasingly positive attitudes. Generally, the four teacher-centered items, h -- curriculum decisions, g -- use of results for instruction, e -- improvement of scores, and d -- instructional method, received positive mean ratings by teachers. Student-centered items, f -- student involvement, l -- student self-assessment, i -- student concentration, j -- student anxiety, received negative mean ratings. Responding teachers indicated the most positive attitude toward the appropriateness of criterion-referenced tests to assess their students' learning ($M = 1.250$). They registered the most negative attitude for item j -- student anxiety ($M = -0.756$).

Figure 22

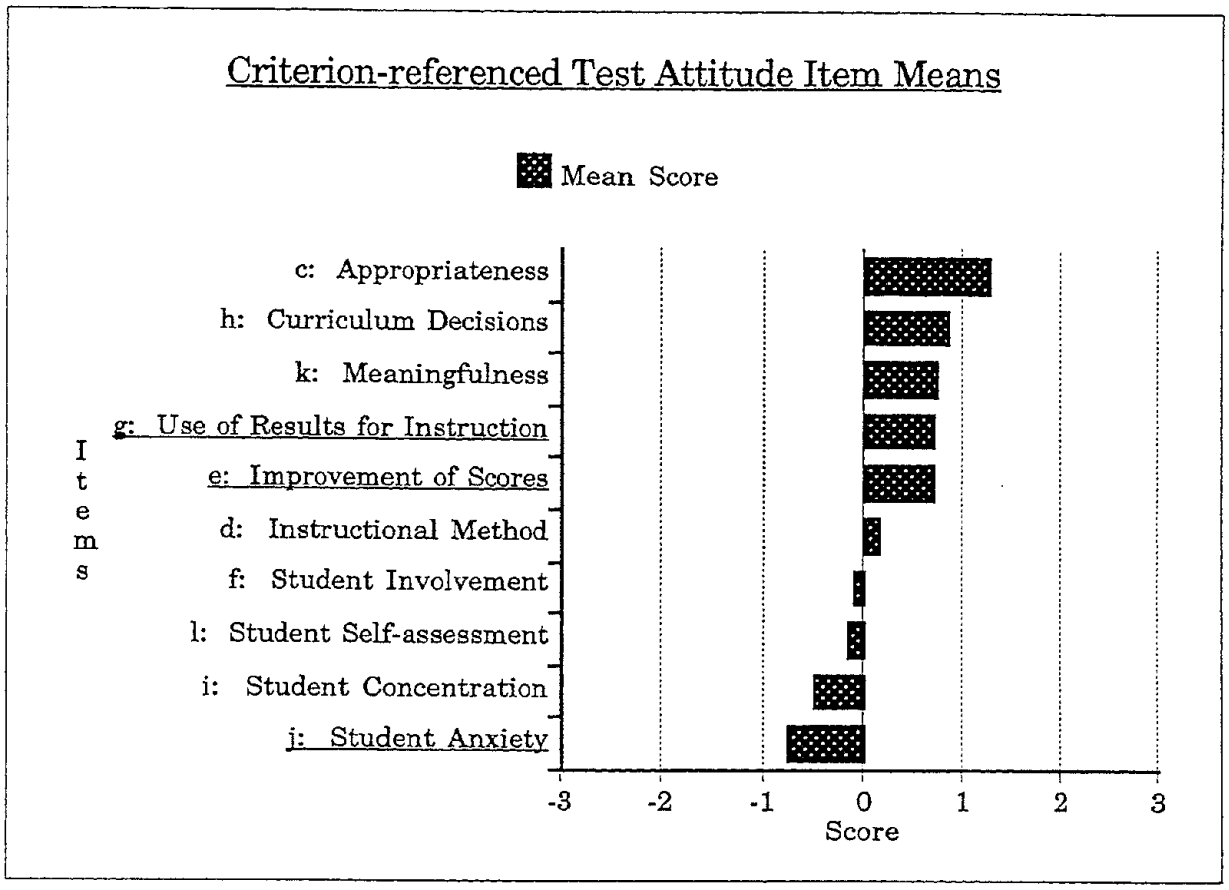
Percentage of Strongly Disagree (SD), Disagree (D), Unsure (U), Agree (A), Strongly Agree (SA) Responses to Criterion-referenced Test Attitude Items by Respondents



Underlined items indicate negative attitude statements.

Figure 23

Mean Scores of Respondents for Criterion-referenced Test Attitude Items



Underlined items indicate negative attitude statements and were reversed scored to calculate the mean scores.

Statistical Analysis of Criterion-referenced Data as a Function of the Teaching Levels of the Respondents

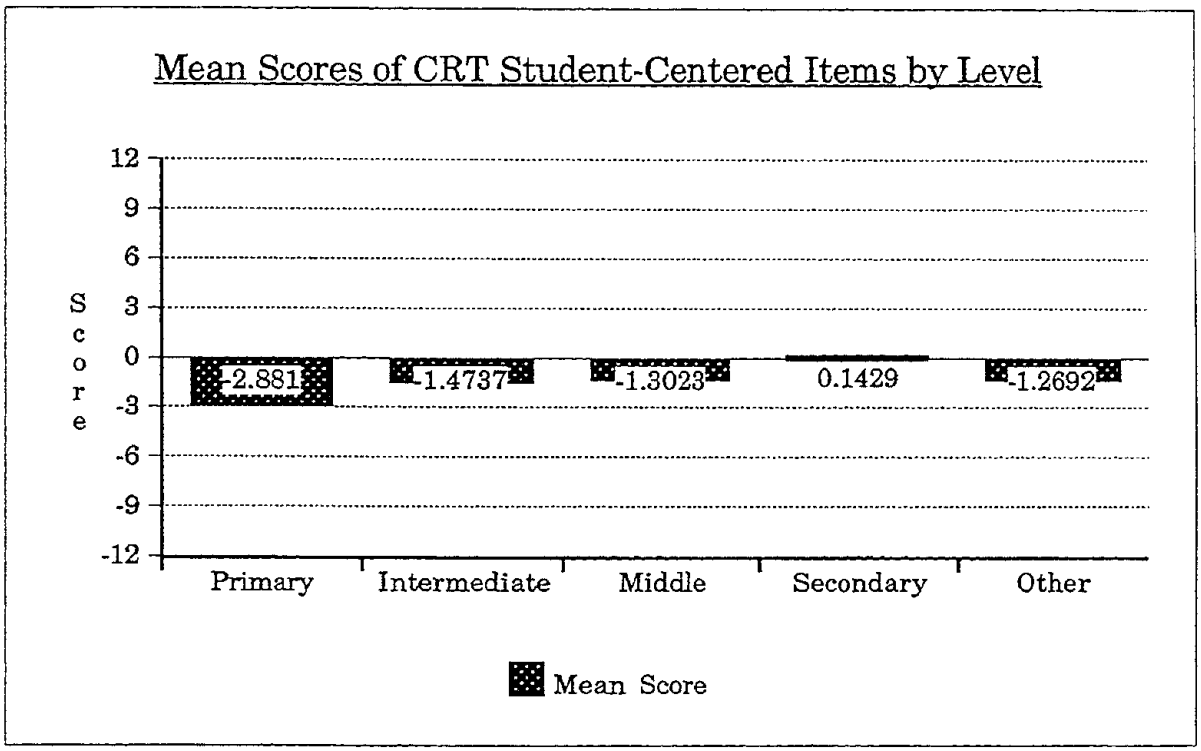
Analysis of student-centered items.

One-way analysis of variance was used to determine whether teachers at various teaching levels differed in their opinions about the effect of criterion-referenced testing on students. The total student-centered attitude score was based on four items: item f -- student involvement; item i -- student concentration; item j -- student anxiety; and item l -- student self-assessment. Figure 24 presents the mean totals of student-centered items. Using the student-centered total attitude score,

analysis indicated significant differences in attitudes about student issues exist between levels (F (4, 172) = 3.8132, p = .0054). Post hoc analysis using the Tukey-B test indicated a significant difference ($p < .05$) exists between the attitudes of primary teachers and of secondary teachers. Primary teachers are more negative in their attitudes toward criterion-referenced tests than teachers of secondary students.

Figure 24

Mean Scores of Criterion-referenced Test (CRT) Student-centered Attitude Items as a Function of the Teaching Levels of the Respondents



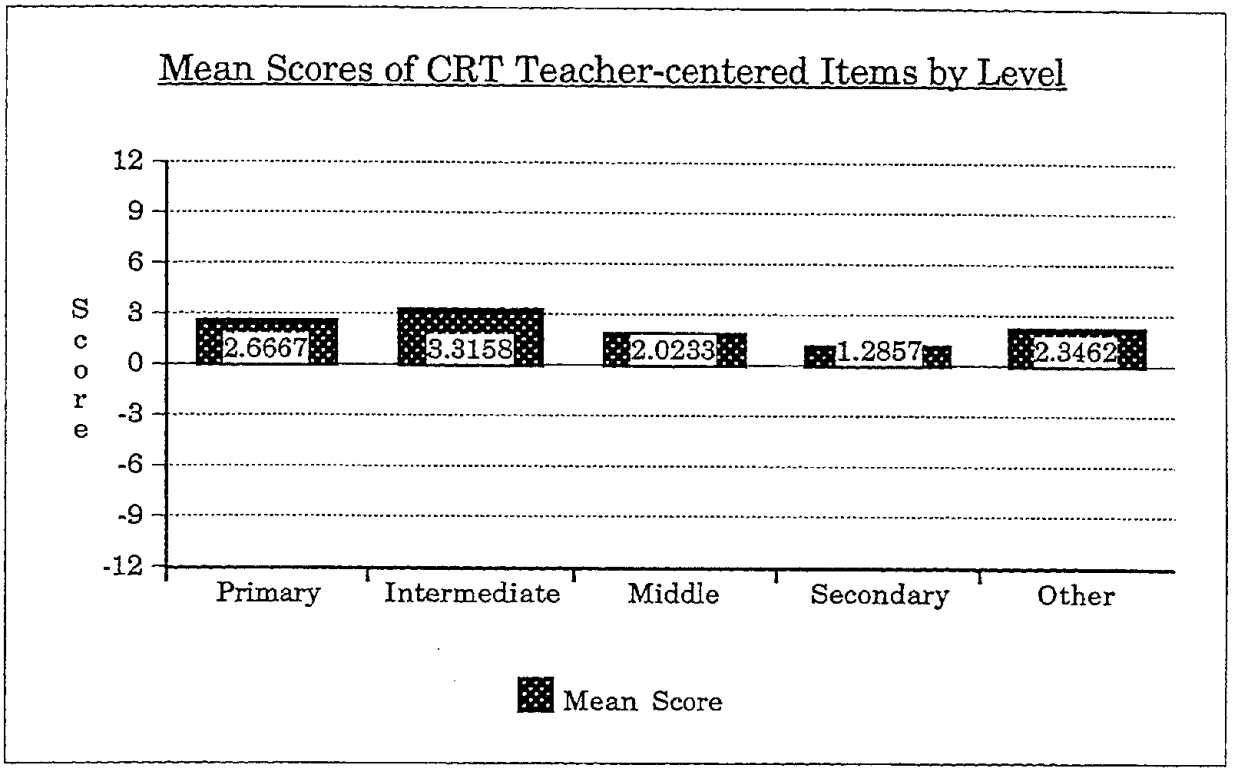
Analysis of teacher-centered items.

One-way analysis of variance was used to determine whether teachers at various teaching levels differed in their opinions about the effect of criterion-referenced testing on teachers. The total teacher-centered attitude score was based on four items: item d -- instructional method; item e -- improvement of scores; item g -- use of results to

improve instruction; and item h -- curriculum decisions. Figure 25 presents the mean total of teacher-centered items for each respondent teaching level. The attitude means are generally positive for the teacher-centered items with no significant differences ($p < .05$) in attitudes between levels.

Figure 25

Mean Scores of Criterion-referenced Test (CRT) Teacher-centered Attitude Items as a Function of the Teaching Levels of Respondents



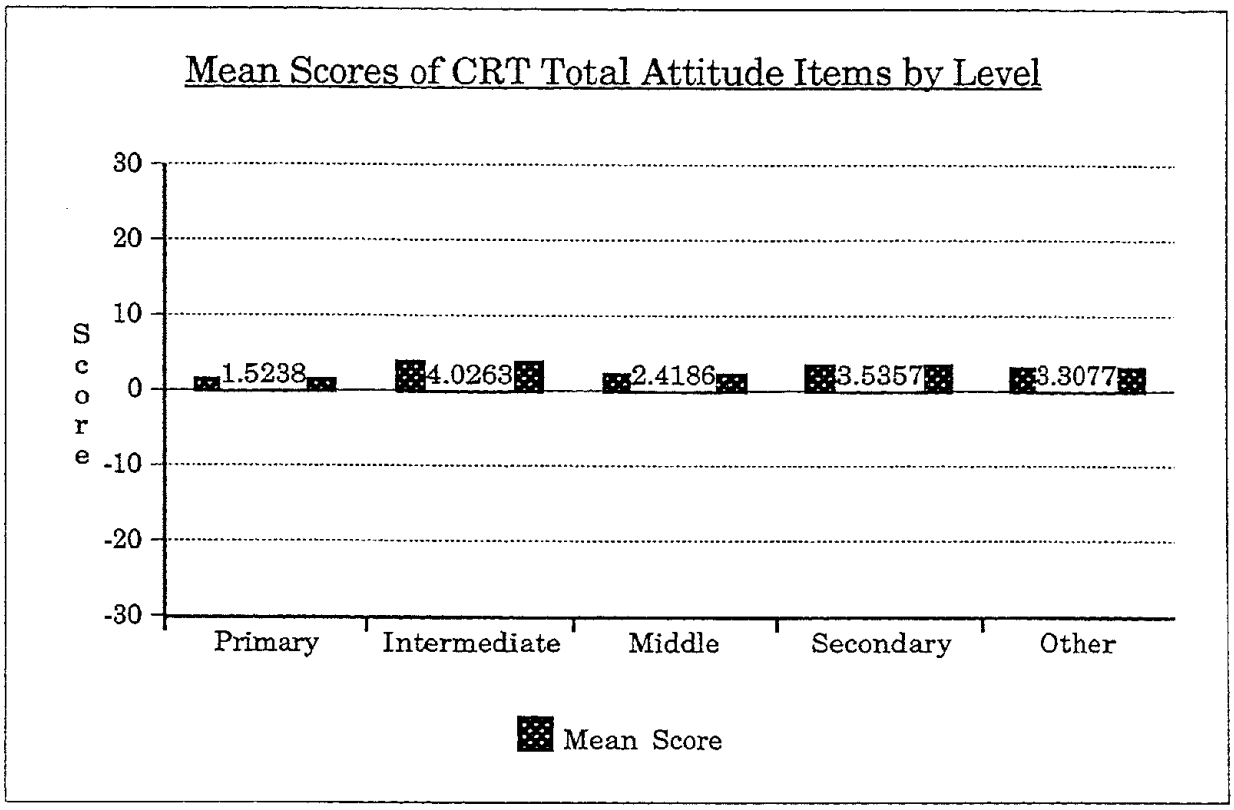
Analysis of total attitudinal score.

Figure 26 shows the mean scores for the ten attitude items. One-way analysis of variance was used to determine whether teachers at various teaching levels differed in their opinions about criterion-referenced testing in general. Analysis indicated no significant differences ($p < .05$) in attitudes about criterion-referenced testing as a function of the teaching level of the respondents. All groups held slightly positive attitudes toward

criterion-referenced tests in general.

Figure 26

Mean Scores of Criterion-referenced Test (CRT) Total Attitude Items as a Function of the Teaching Levels of Respondents



Analysis of individual items.

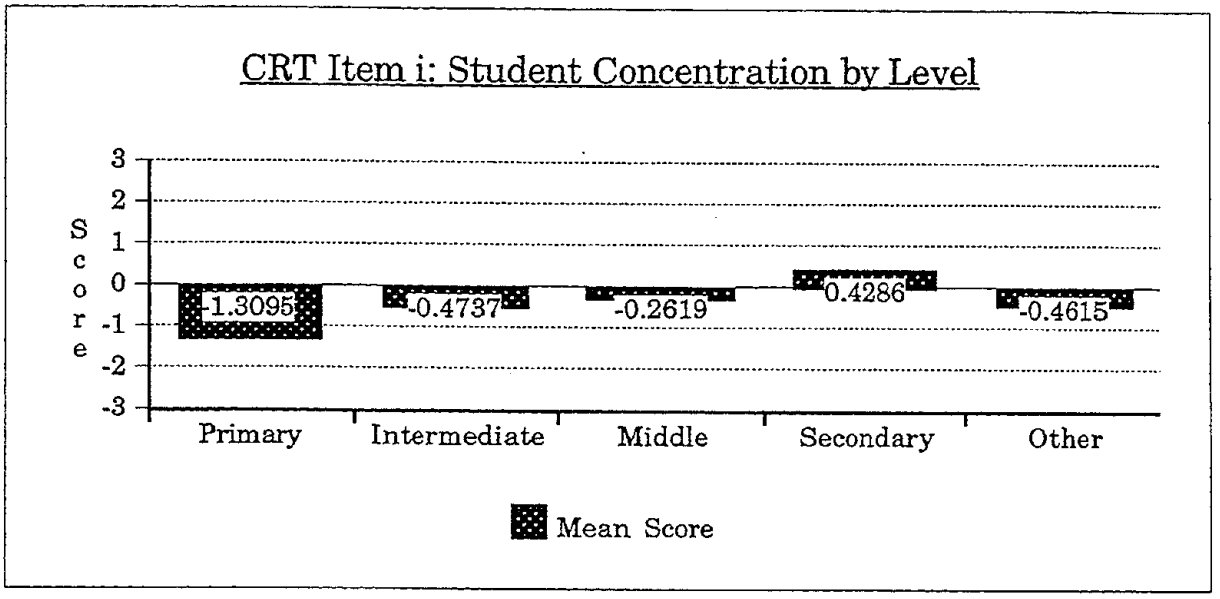
One-way analysis of variance was used to examine the attitudes of teachers at primary, intermediate, middle, secondary, and 'other' levels about each individual item. When significant differences ($p < .05$) were discovered, a post hoc analysis using the Tukey-B test was conducted to identify significant differences between levels.

Analysis of individual items indicated differences between the groups for item i -- student concentration (F (4, 171) = 6.7549, $p < .0001$). Post hoc analysis using the Tukey-B test indicated significant differences ($p < .05$) between the attitudes of teachers at the primary level and those

of teachers at the middle and secondary levels. Figure 27 shows the mean attitude scores of primary, intermediate, middle, secondary, and 'other' teachers for item i -- student concentration. Primary teachers have a significantly more negative attitude about student concentration on criterion-referenced tests than teachers of middle and secondary students.

Figure 27

Criterion-referenced Test (CRT) Item i -- Student Concentration Mean Attitude Score as a Function of the Teaching Levels of Respondents

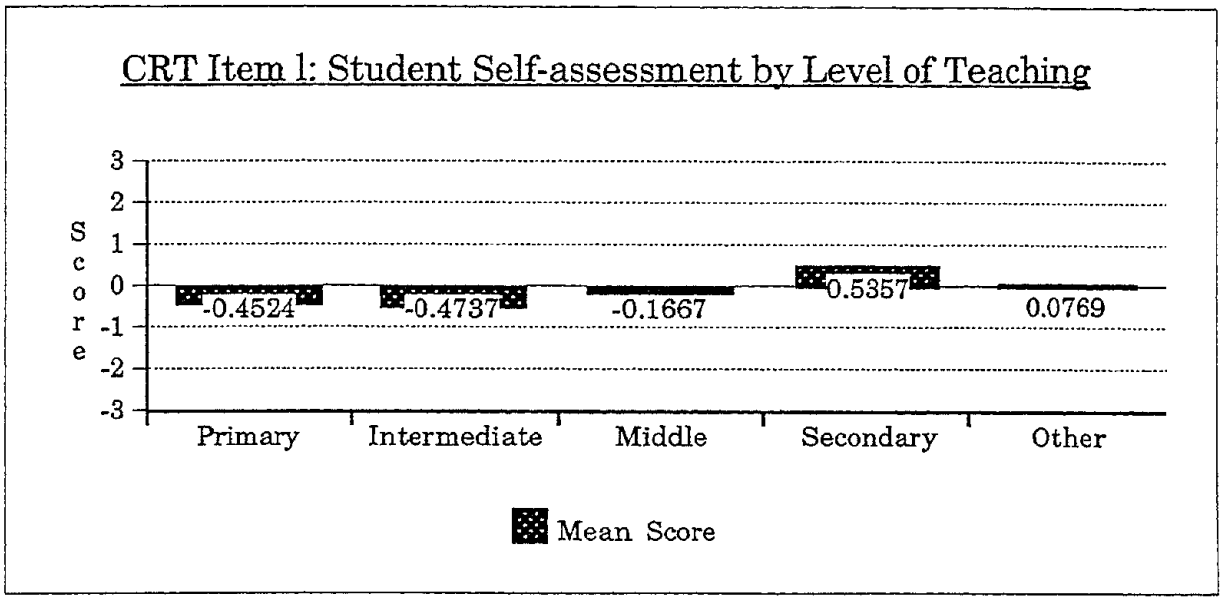


Analysis of the individual items indicated differences between the groups for item 1 -- student self-assessment (F (4, 171) = 3.5038, p = .0089). Figure 28 shows the mean attitude scores of primary, intermediate, middle, secondary, and 'other' level teachers for item 1 -- student self-assessment. Secondary level teachers generally have a positive attitude toward student self-assessment while primary, intermediate, middle, and 'other' teachers tend to have a negative attitude toward student self-assessment on criterion-referenced tests. Post hoc analysis using the Tukey-B test indicates significant differences ($p < .05$)

in attitude between secondary teachers and teachers of primary and intermediate students.

Figure 28

Criterion-referenced Test (CRT) Item 1 -- Student Self-assessment Mean Attitude Score as a Function of the Teaching Levels of Respondents



Statistical Analysis of Criterion-referenced Data as a Function of Level of Decision Input

One-way analysis of variance was used to compare the attitudes about criterion-referenced tests of teachers who indicated they provided input into the decision to use a criterion-referenced test as part of their school improvement plans with the attitudes of teachers who indicated they did not provide input into the decision. The independent variable in these comparisons was level of decision input. The dependent variables were the respective attitude scores on particular items or sets of items.

Analysis of student-centered items.

One-way analysis of variance was used to determine whether teachers providing input into the decision and teachers not providing input

into the decision to use criterion-referenced tests differed in their attitudes about the effect of criterion-referenced testing on students. The student-centered attitude score was based on four items: item f -- student involvement; item i: -- student concentration; item j -- student anxiety; and item l -- student self-assessment. Figure 29 illustrates the mean scores of student-centered items for teachers who provided input and teachers who did not provide input. Results of the one-way analysis of variance indicate that there is a significant difference in the mean scores of student-centered items (F (1, 171) = 4.1655, p = .0428). Though both attitudes are negative, teachers who indicated they provided input are significantly less negative (M = - .9054) than those who did not provide input (M = - 1.9495).

Analysis of teacher-centered items.

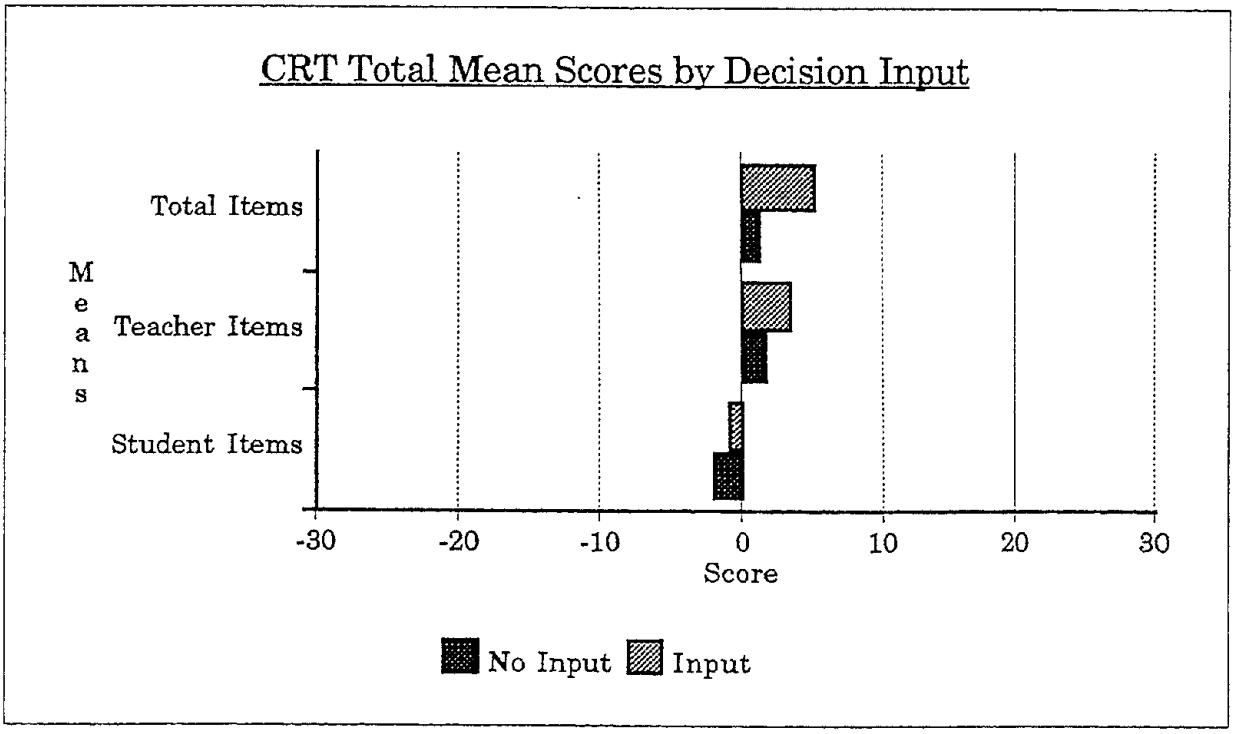
One-way analysis of variance was used to determine whether teachers providing input into the decision and teachers not providing input into the decision to use criterion-referenced tests differed in their attitudes about the effect of criterion-referenced testing on teachers. The teacher-centered attitude score was based on four items: item d -- instructional method; item e -- improvement of scores; item g -- use of results to improve instruction; and item h -- curriculum decisions.. Figure 29 illustrates the mean scores of teacher-centered items for teachers who provided input and teachers who did not provide input. Results of the one-way analysis of variance indicate a significant difference in the mean scores of teacher-centered items (F (1,171) = 11.9084, p = .0007). Though both are positive, the mean score of teachers who reported they provided input is significantly more positive (M = 3.3919) than the mean score of those who did not provide input (M = 1.7475).

Analysis of total attitudinal score.

One-way analysis of variance was used to determine whether teachers providing input into the decision and teachers not providing input into the decision to use criterion-referenced tests differed in their opinions about the effect of criterion-referenced testing in general. Figure 29 shows the mean scores for the total of ten attitudinal items for teachers who provided input and teachers who did not provide input. Analysis indicated significant differences between levels when the mean scores of the ten attitude items were examined (F (1, 171) = 14.1326, p = .0002). Teachers who indicated they provided input into the decision to use criterion-referenced tests in their school improvement plans had a significantly more positive attitude (M = 5.2027) than teachers who indicated they did not provide input into the decision (M = 1.2727).

Figure 29

Mean Scores of Criterion-referenced Test Student-centered, Teacher-centered, and Total Attitude Items as a Function of the Level of Decision Input by Respondents



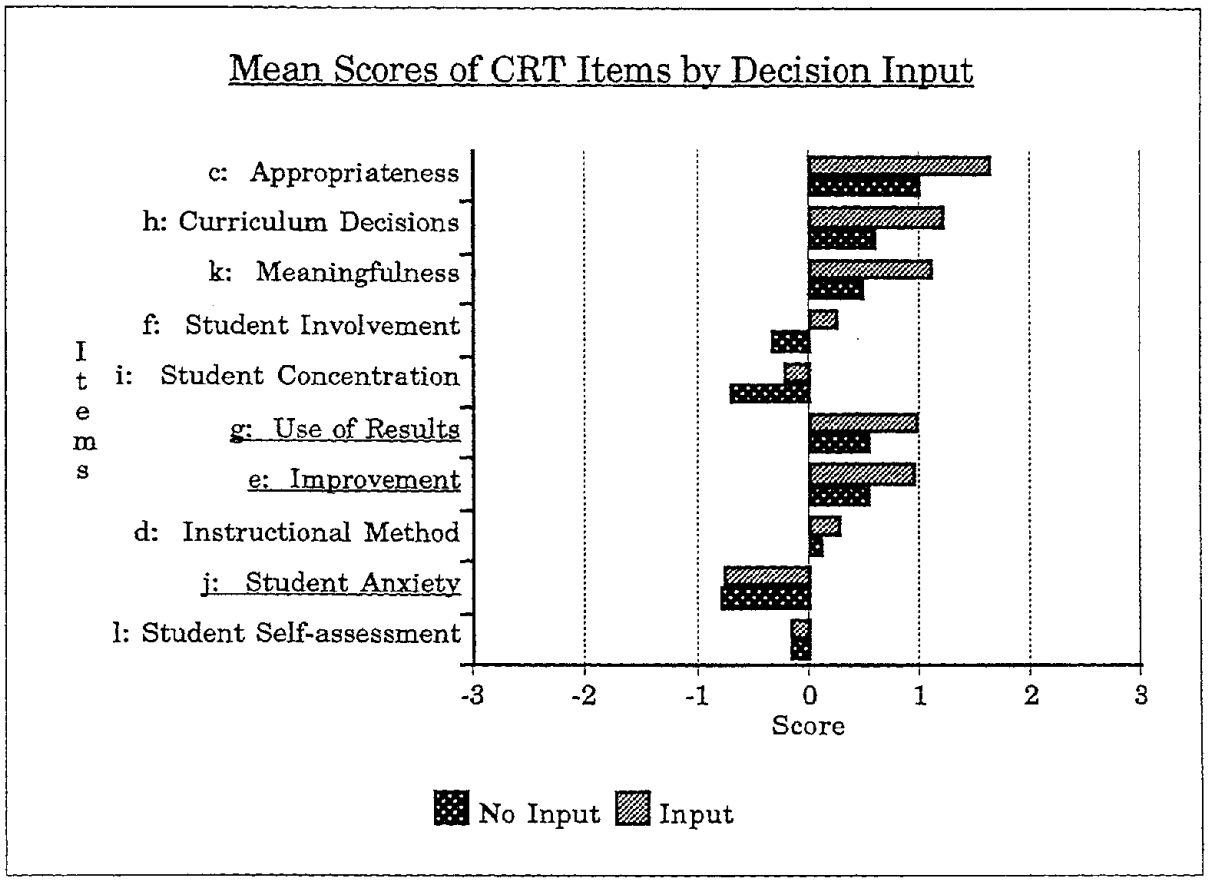
Analysis of individual items.

Using level of decision input to use a criterion-referenced test in school improvement plans as the independent variable, one-way analysis of variance was used to examine teachers' attitudes about individual criterion-referenced test attitude items. Figure 30 shows the mean scores for each item of teachers who indicated they provided input into the decision and of teachers who indicated they did not provide input into the decision to use criterion-referenced tests. The items have been ordered according to the differences in mean scores between teachers who provided input and those who did not provide input.

Significant differences were noted using the one-way analysis of variance for the following groups according to the respondents' level of input into the decision to use criterion-referenced tests as part of school improvement plans: item c -- appropriateness (F (1, 171) = 12.2245, p = .0006); item h -- curriculum decisions (F (1, 171) = 8.7044, p = .0036); item k -- meaningfulness (F (1, 171) = 9.3136, p = .0026); item f -- student involvement (F (1, 171) = 10.4785, p = .0015); item i -- student concentration (F (1, 171) = 4.1790, p = .0425); item g -- use of results (F (1, 171) = 5.3221, p = .0223); and item e -- score improvement (F (1, 171) = 5.5607, p = .0195). In all significant instances, the teachers who indicated they provided decision input had a more positive attitude than teachers who did not have decision input.

Figure 30

Mean Scores of Criterion-referenced Test (CRT) Attitude Items as a Function of the Level of Decision Input by Respondents



Kansas Reading Assessment

Description of Disqualified Surveys

Of the 304 completed surveys, 143 yielded information about the Kansas Reading Assessment. One hundred sixty-one surveys were disqualified for the following reasons: lack of demographic information, nine; nonuse or unsure of use, 44; no opinion, 88; no response, 20.

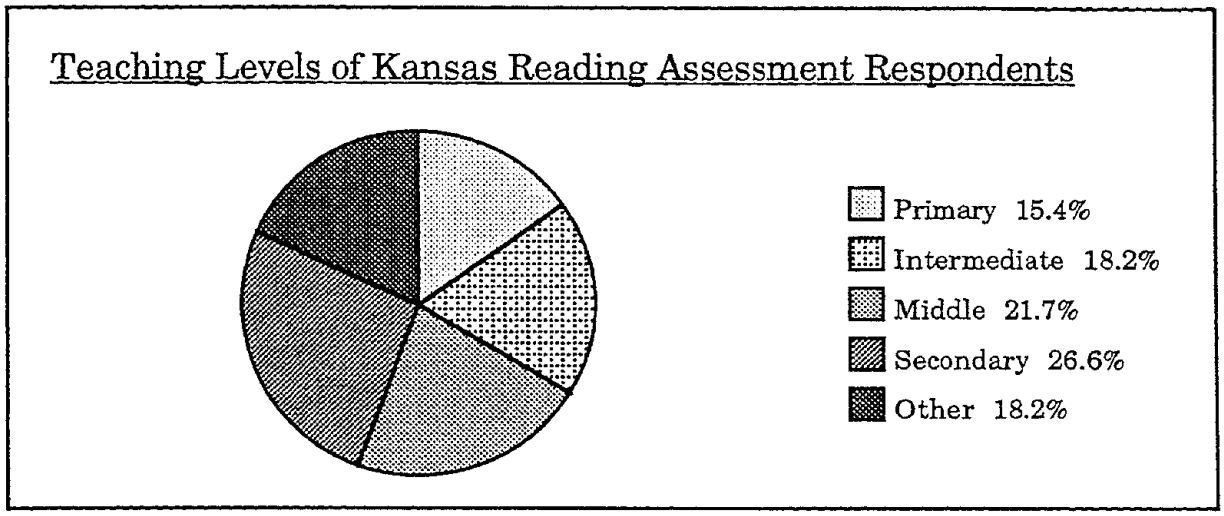
Demographics of Responding Teachers

Figure 31 shows the percentage of primary, intermediate, middle, secondary, and 'other' level teachers who responded to the Kansas

Reading Assessment survey section. The largest respondent group is composed of secondary level teachers, 26.6% of the total number of teachers. Primary teachers comprise the smallest group, 15.4% of the total Kansas Reading Assessment respondent sample.

Figure 31

Percentage of Primary, Intermediate, Middle, Secondary, and 'Other' Teachers Responding to Kansas Reading Assessment Survey Items



The percentage of teachers in each experience category who responded to items regarding the Kansas Reading Assessment is shown in Figure 32. Teachers who have been teaching at their current levels for twenty or more years make up 27.8% of the total respondent group. Teachers in the next category, 26.1%, have been teaching their current levels one to four years. Teachers who have taught their current levels for fifteen to nineteen years comprise the smallest group or 11.3% of all teachers responding to the Kansas Reading Assessment survey section.

Figure 33 illustrates the percentage of teacher respondents who have had no assessment training, inservice training only, three undergraduate hours, three graduate hours, or more than three

undergraduate and/or graduate hours. Inservice has been the only training for 31% of the respondents. Almost 8% have received no assessment training. Over 61% percent of the responding teachers indicated they have some college credit, including 29.6% who have more than three hours credit.

Sixty-five teachers indicated they served on their school improvement team but only 36 teachers reported they had input into the decision to use the Kansas Reading Assessment in their school improvement plans. Of the 143 teachers responding, 41 reported they administered the test to at least one class of students.

Figure 32

Percentage of Teachers Responding to the Kansas Reading Assessment (KRA) Survey Section with 1-4 Years, 5-9 Years, 10-14 Years, 15-19 Years, and 20 or More Years of Experience at their Current Levels.

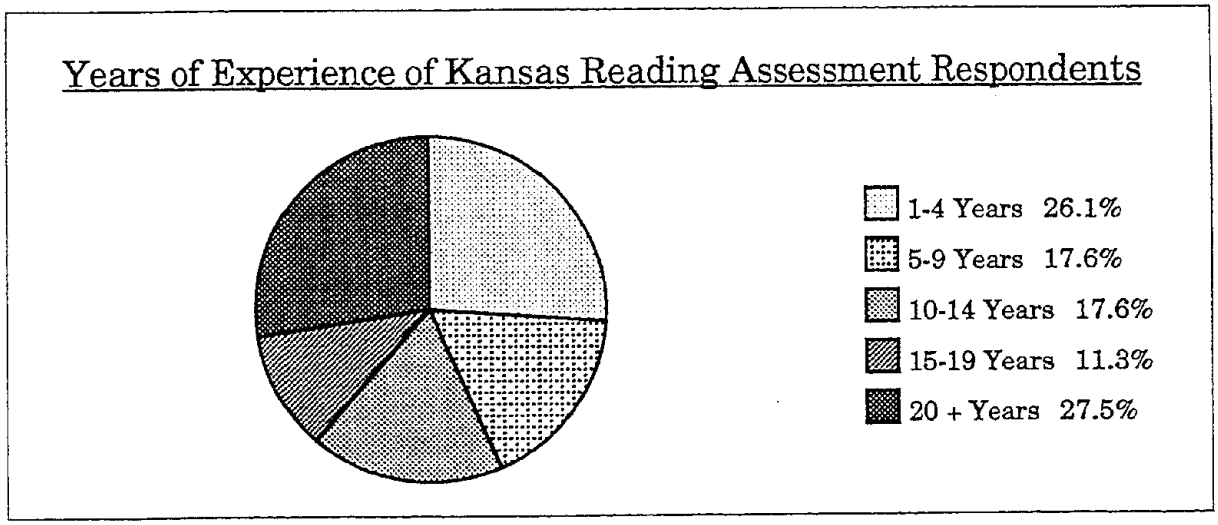
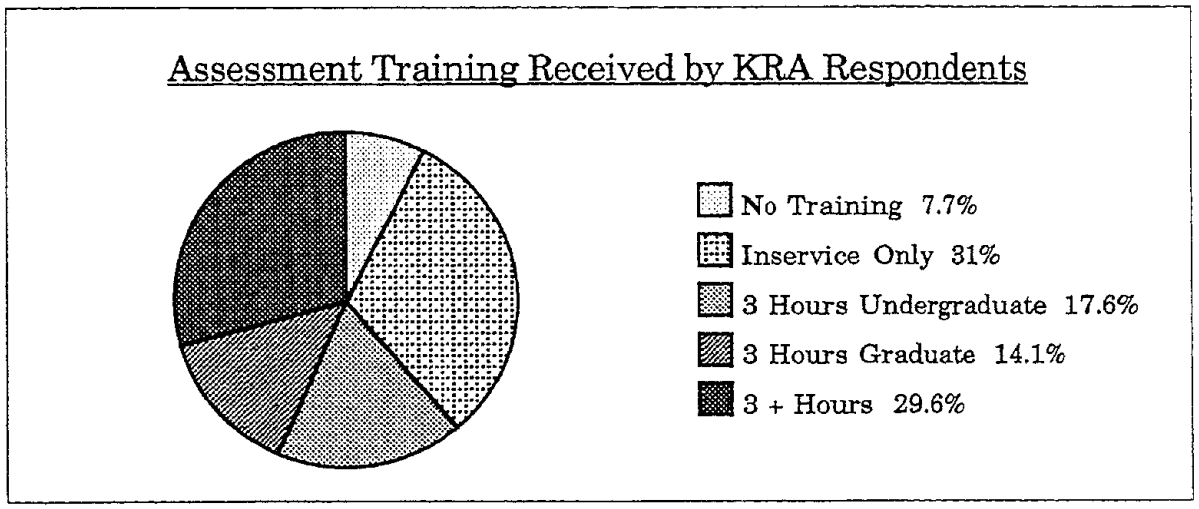


Figure 33

Percentage of Teachers Responding to the Kansas Reading Assessment (KRA) Survey Section Receiving No Training, Inservice Training Only, Three Undergraduate Hours, Three Graduate Hours, and More than Three Undergraduate and/or Graduate Hours in Assessment Issues



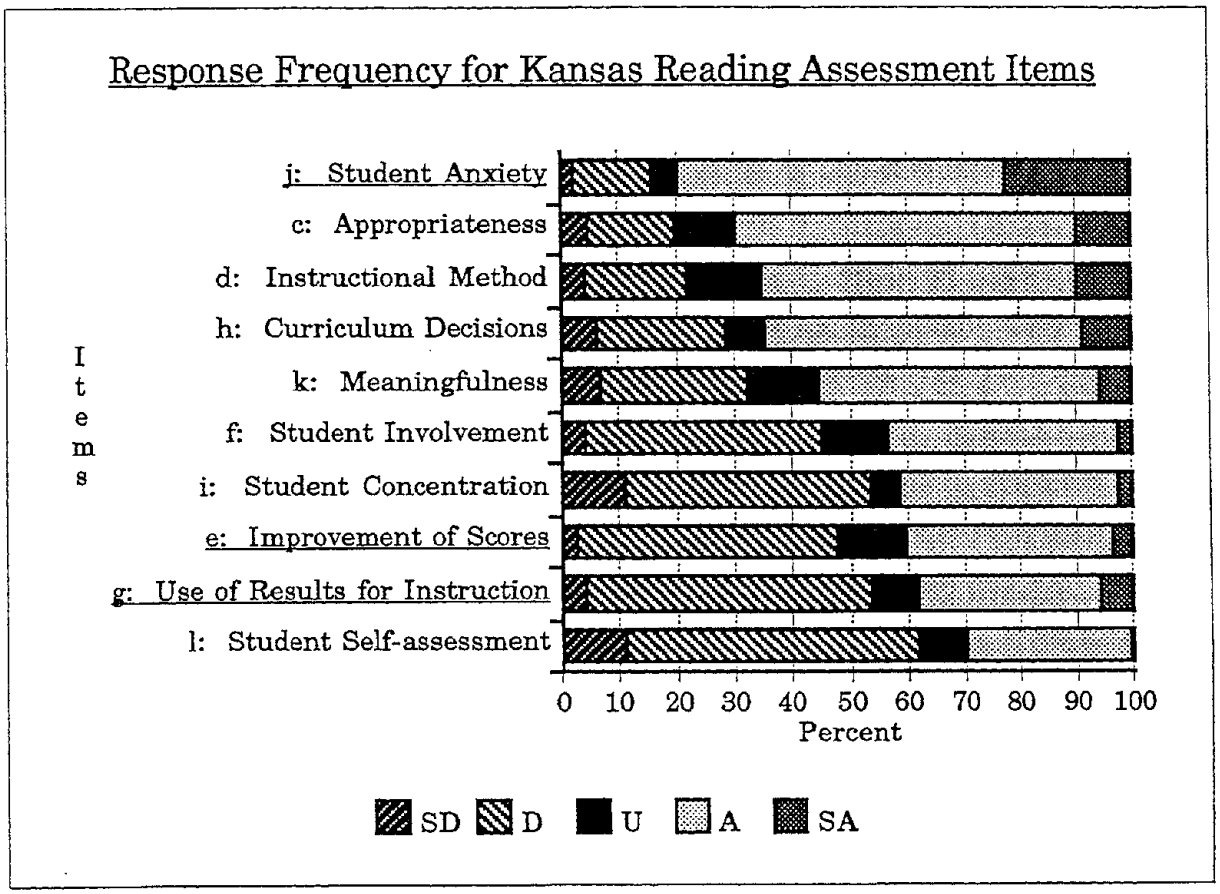
Kansas Reading Assessment Item Response Frequency

Figure 34 displays the proportion of strongly disagree (SD), disagree (D), unsure (U), agree (A), and strongly agree (SA) responses made for each attitude item in the Kansas Reading Assessment survey section. The items have been ordered from most positive to least positive responses. The item with the largest percentage of agreement was item j -- student anxiety. Almost 80% of the respondents agreed that students exhibit anxiety during the Kansas Reading Assessment. Items reflecting a positive attitude were c-- appropriateness, d -- instructional method, h -- curriculum decisions, and k -- meaningfulness. At least 10% of the teachers were unsure about their opinions on five of the items: c -- appropriateness, d -- instructional method, k -- meaningfulness, f -- student involvement, and e -- improvement of scores. Over 60% of the teachers responding disagreed to some extent with item l which states

that the Kansas Reading Assessment enables students to assess their own learning.

Figure 34

Percentage of Strongly Disagree (SD), Disagree (D), Unsure (U), Agree (A), Strongly Agree (SA) Responses to the Kansas Reading Assessment Attitude Items by Respondents



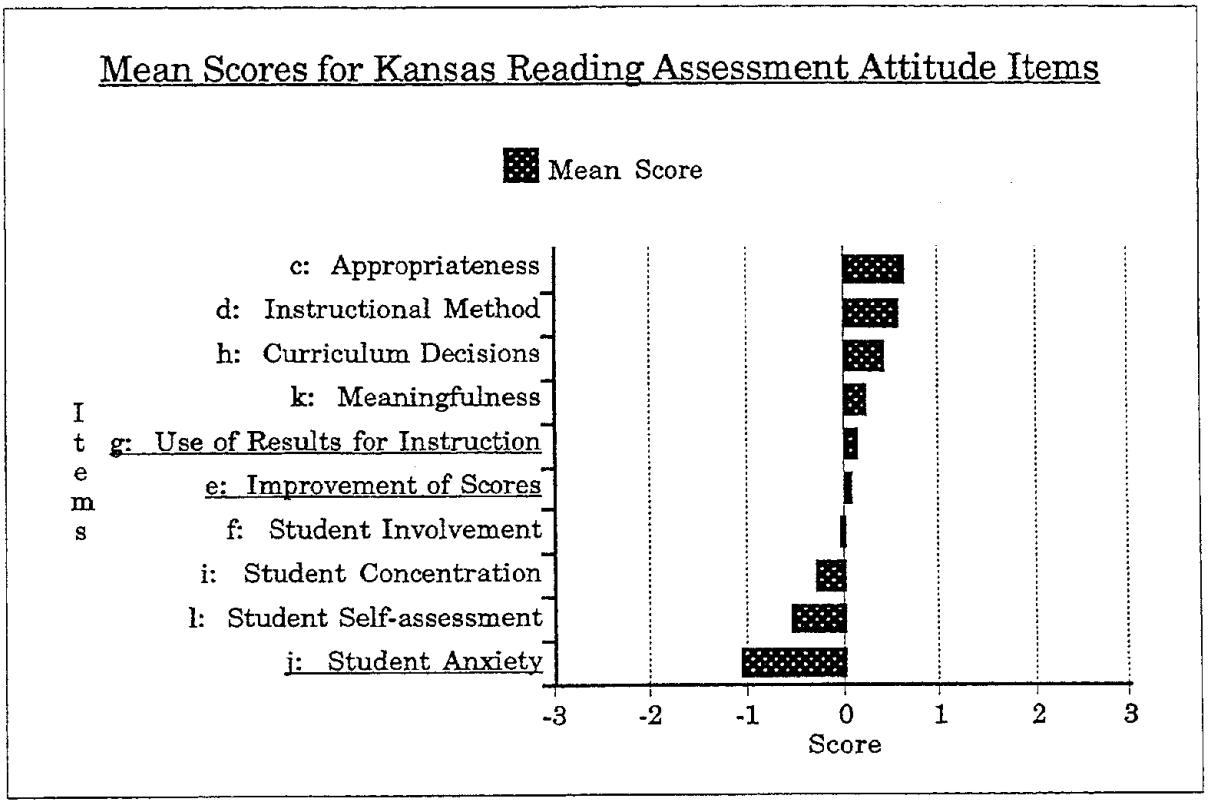
Underlined items indicate negative attitude statements.

Figure 35 shows the mean response score for each Kansas Reading Assessment survey attitude item. The means have been ordered to reflect decreasingly positive attitudes. Six of the means reflect positive attitudes while four means reflect negative attitudes toward Kansas Reading Assessment items. All four negative attitude items are student-centered: f -- student involvement; i -- student concentration; l -- student self-assessment, and j -- student anxiety. Item j -- student anxiety, has the largest mean score of any of the items (M = -1.063). The means of 5

items, e, f, g, i, and k, are between -0.5 and +0.5.

Figure 35

Mean Scores of Respondents for Kansas Reading Assessment Survey Items



Underlined items indicate negative attitude statements and were reversed scored to calculate the mean scores.

Statistical Analysis of Kansas Reading Assessment Survey Data as a Function of the Teaching Level of Respondents

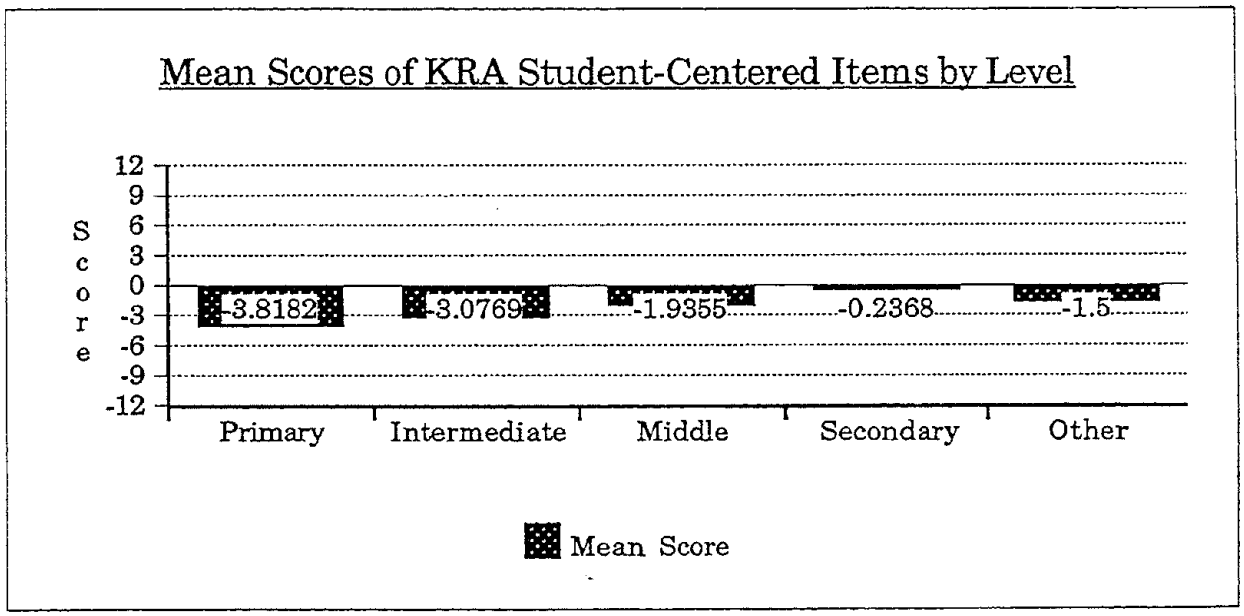
Analysis of student-centered items.

One-way analysis of variance was used to determine whether teachers at various teaching levels differed in their opinions about the effect of the Kansas Reading Assessment on students. The total student-centered attitude score was based on four items: item f -- student involvement; item i -- student concentration; item j -- student anxiety; and item l -- student self-assessment. Figure 36 presents the mean of student

centered items for each teaching level. Using the student-centered attitude score, analysis indicated significant differences in attitudes about student issues exist between teaching levels (F (1, 141) = 5.1685, p = .0007). Post hoc analysis using the Tukey-B test indicates that the mean scores of teachers of primary and intermediate students differ significantly ($p < .05$) from the mean scores of teachers of secondary students. Primary and intermediate level teachers have a significantly lower mean score than teachers of secondary students.

Figure 36

Mean Scores of Kansas Reading Assessment (KRA) Student-Centered Attitude Items as a Function of the Teaching Levels of Respondents



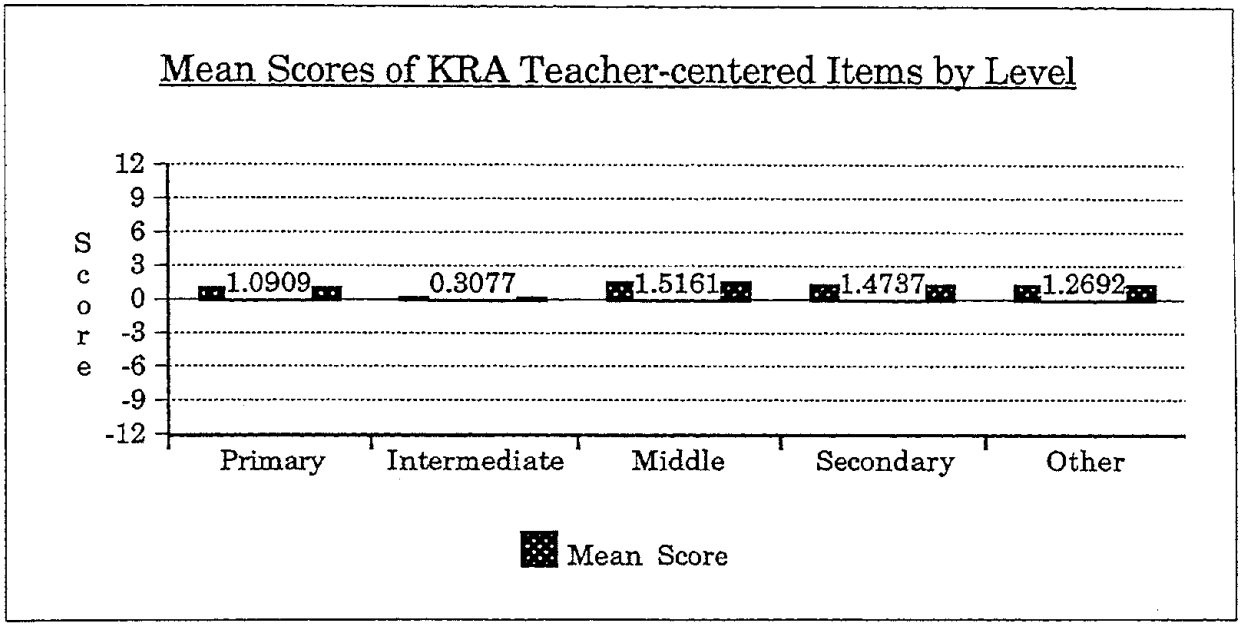
Analysis of teacher-centered items.

One-way analysis of variance was used to determine whether teachers at various teaching levels differed in their opinions about the effect of the Kansas Reading Assessment on teachers. The total teacher-centered attitude score was based on four items: item d -- instructional method; item e--improvement of scores; item g -- use of results to improve

instruction; and item h -- curriculum decisions. Figure 37 presents the mean scores of teacher-centered items for primary, intermediate, middle, secondary, and 'other' teaching levels of respondents. Each total shows a slightly positive attitude rating. Using the mean scores of teacher-centered items, analysis indicated no significant differences ($p < .05$) in attitudes about teacher-centered issues exist between levels.

Figure 37

Mean Scores of Kansas Reading Assessment (KRA) Teacher-Centered Attitude Items as a Function of the Teaching Levels of Respondents

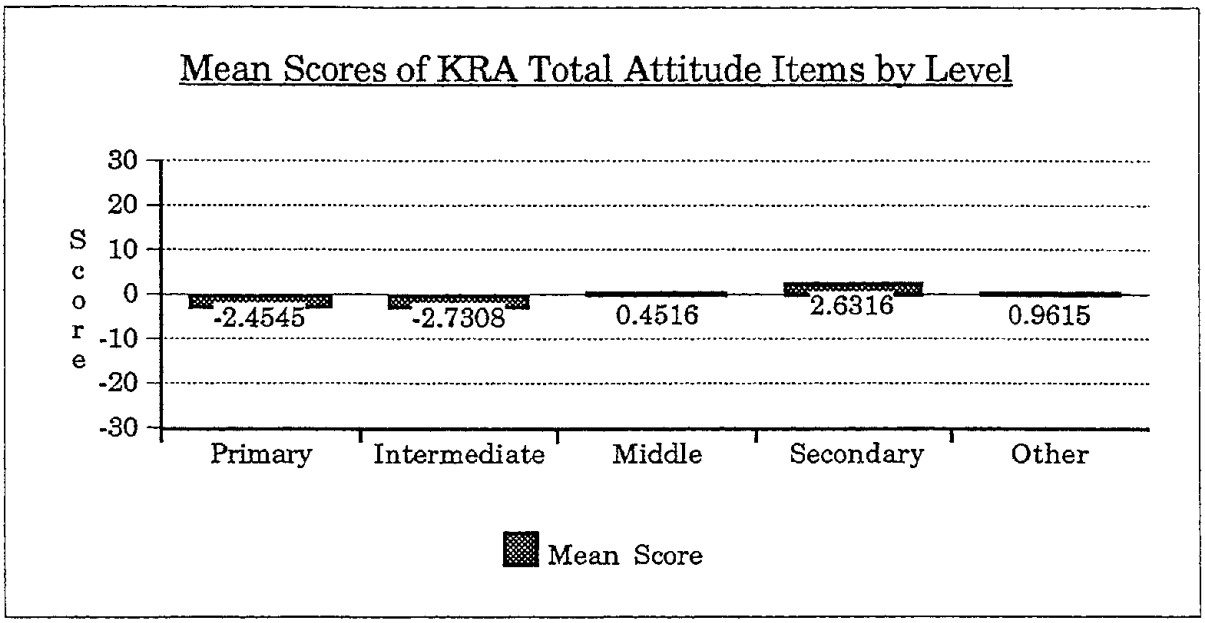


Analysis of total attitude score.

One-way analysis of variance was used to determine whether teachers at various teaching levels differed in their opinions about the Kansas Reading Assessment in general. Figure 38 shows the mean scores for the ten attitude items. Analysis indicated no differences in attitude about the Kansas Reading Assessment between primary, intermediate, middle, secondary, and 'other' level teachers.

Figure 38

Mean Scores of Kansas Reading Assessment (KRA) Total Attitude Items as a Function of the Teaching Levels of Respondents



Analysis of individual items.

One-way analysis of variance was used to examine the attitudes of teachers at primary, intermediate, middle, secondary, and 'other' levels about each individual item. When significant differences were discovered a post hoc analysis using the Tukey-B test was conducted to identify significant differences between levels.

Analysis of the individual items indicated differences between the groups for item i -- student concentration (F (4, 138) = 4.9596, p = .0009), item j -- student anxiety (F (1, 138) = 3.7102, p = .0067), and item l (F (1, 138) = 3.3671, p = .0116).

Figure 39 shows the mean attitude ratings of primary, intermediate, middle, secondary, and 'other' teachers for item i -- student concentration. Post hoc analysis using the Tukey-B test indicated significant differences ($p < .05$) between the mean scores of teachers at the primary and intermediate levels and the mean scores of teachers at

the middle, secondary, and 'other' levels regarding item i -- student concentration. The ratings of primary and intermediate teachers were negative while the ratings of middle, secondary, and 'other' teachers were at zero or slightly above resulting in slightly positive attitude scores.

Figure 39

Kansas Reading Assessment (KRA) Item i -- Student Concentration Mean Attitude Scores as a Function of the Teaching Levels of Respondents

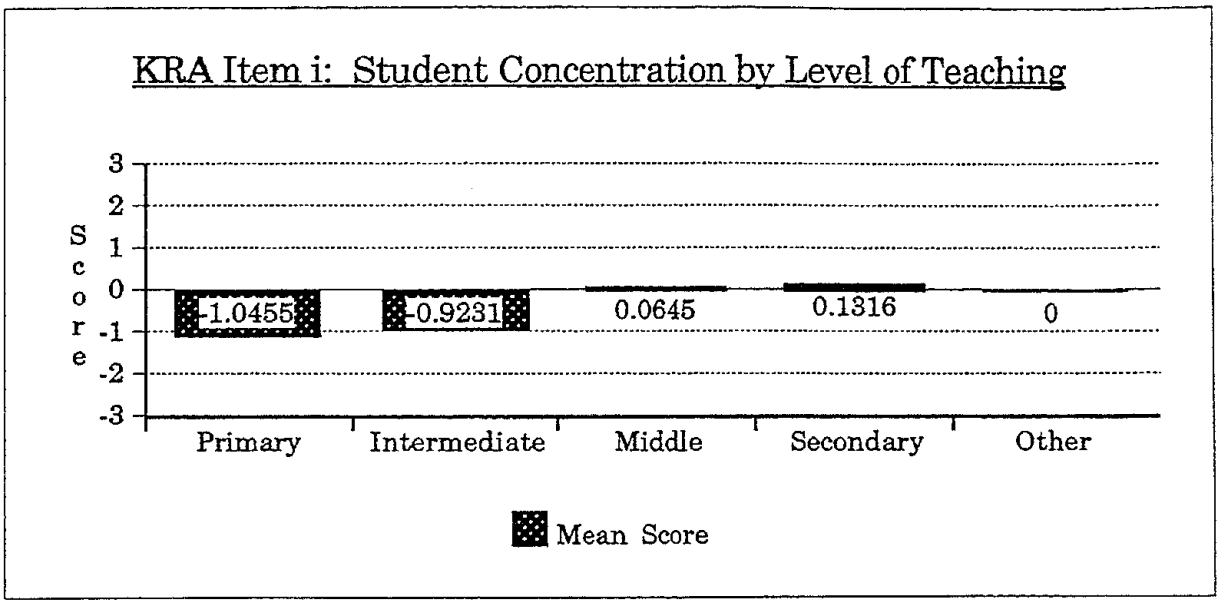


Figure 40 shows the mean attitude ratings of primary, intermediate, middle, secondary, and 'other' teachers for item j -- student anxiety. The mean scores indicate negative attitudes for primary, intermediate, middle, secondary and 'other' teachers who responded to the Kansas Reading Assessment section. The Tukey-B post hoc analysis indicates a significant difference ($p < .05$) between the mean scores of primary teachers and secondary teachers regarding student anxiety. Primary teachers' mean attitude score was significantly lower than the mean score of secondary teachers.

Figure 40

Kansas Reading Assessment (KRA) Item j -- Student Anxiety Mean Attitude Scores as a Function of the Teaching Levels of Respondents

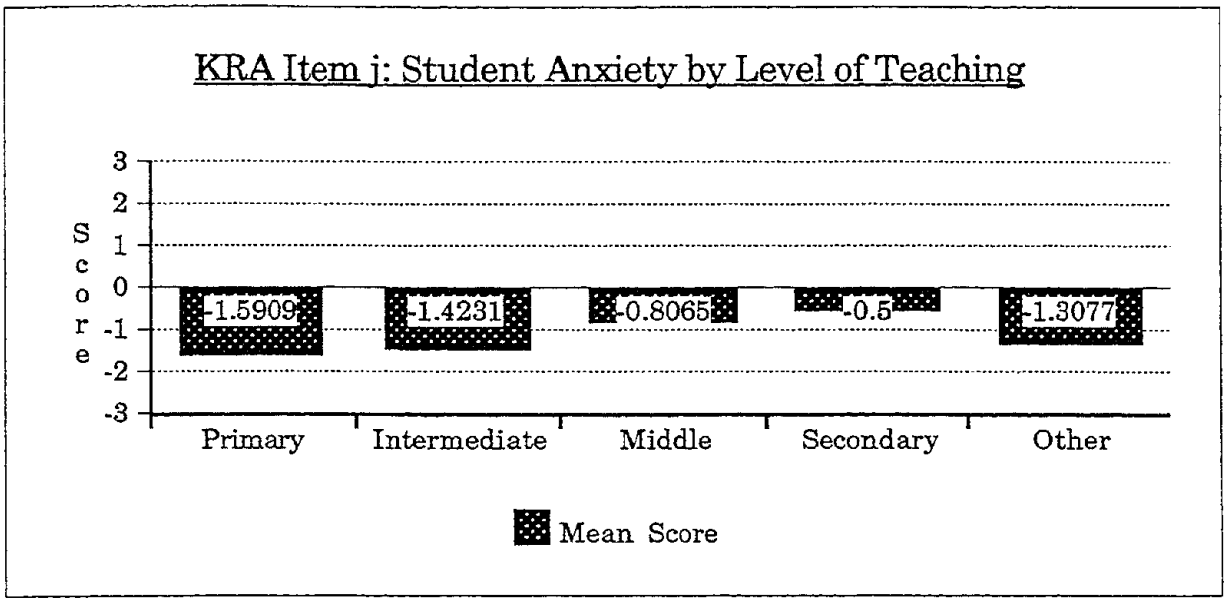
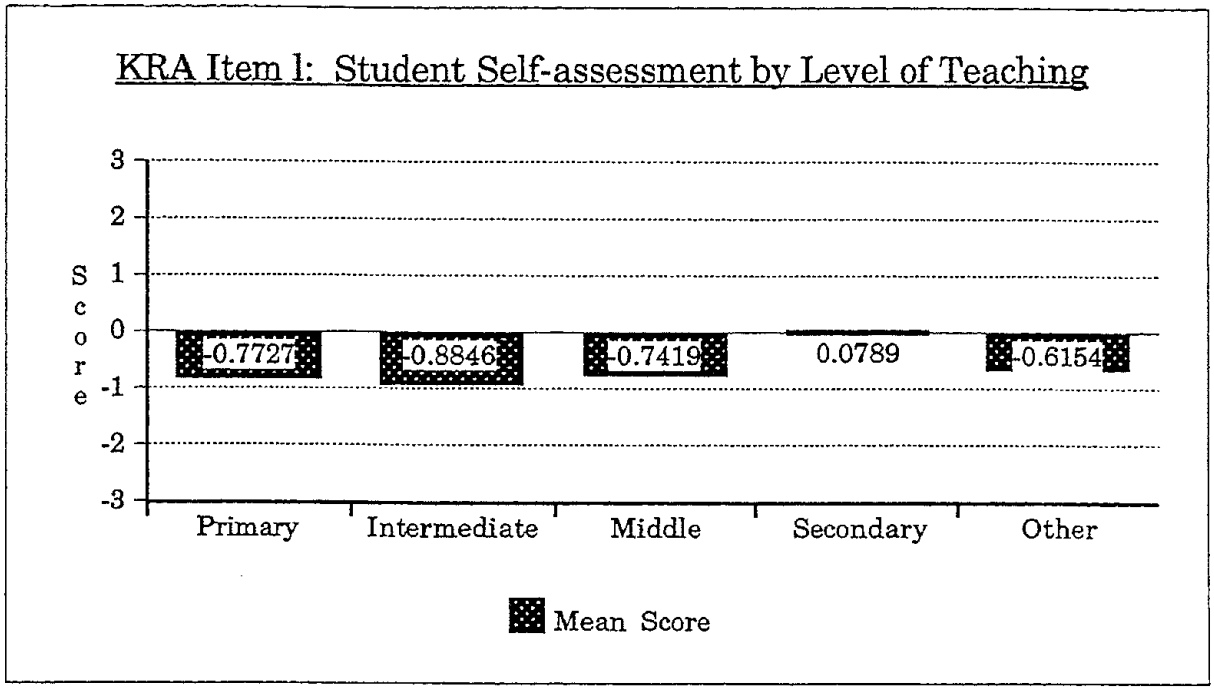


Figure 41 displays the mean scores for item l -- student self-assessment by primary, intermediate, middle, secondary, and 'other' level teachers responding to the Kansas Reading Assessment section. Post hoc analysis indicates that primary, intermediate, middle, and 'other' teachers form a homogeneous subset. However, the Tukey-B post hoc test shows that only the intermediate teachers' attitudes differ significantly ($p < .05$) from those of secondary teachers. Intermediate level teachers report a mean score lower than the mean score of secondary level teachers.

Figure 41

Kansas Reading Assessment Item 1 -- Student Self-assessment Mean Attitude Scores as a Function of the Teaching Level of Respondents



Statistical Analysis of the Kansas Reading Assessment Survey Data as a Function of Level of Decision Input

One-way analysis of variance was used to compare the attitudes of teachers who indicated they provided input into the decision to use the Kansas Reading Assessment as part of their school improvement plans with the attitudes of teachers who indicated they did not provide input into the decision. The independent variable in these comparisons is the level of decision input. The dependent variables are the respective attitude scores on particular items or sets of items.

Analysis of student-centered items.

One-way analysis of variance was used to determine whether teachers providing input into the decision and teachers not providing input into the decision to use the Kansas Reading Assessment differed in their

opinions about the effect of the Kansas Reading Assessment on students. The student-centered attitude score was based on four items: item f -- student involvement; item i -- student concentration; item j -- student anxiety; and item l -- student self-assessment. Figure 42 illustrates the mean scores of student-centered items for teachers who provided input and teachers who did not provide input. The student-centered mean for teachers providing input into the decision is slightly less negative than the mean for teachers not providing input but it is not significantly ($p < .05$) different.

Analysis of teacher-centered items.

One-way analysis of variance was used to determine whether teachers providing input into the decision and teachers not providing input into the decision to use the Kansas Reading Assessment differed in their attitudes about the effect of the Kansas Reading Assessment on teachers. The teacher-centered attitude score was based on four items: item d -- instructional method; item e -- improvement of scores; item g -- use of results to improve instruction; and item h -- curriculum decision. Figure 42 illustrates the mean scores of teacher-centered items for teachers who provided input and teachers who did not provide input. Results of the one-way analysis of variance indicate that there is a significant difference in the total mean scores of teacher-centered items ($F(1, 139) = 9.6831$, $p = .0023$). Teachers who indicated they provided input into the decision had a significantly more positive attitude about the teacher-centered items than teachers who did not provide input.

Analysis of total attitude score.

One-way analysis of variance was used to determine whether

teachers providing input into the decision and teachers not providing input into the decision to use the Kansas Reading Assessment differed in their opinions about the effect of the Kansas Reading Assessment in general. Figure 42 shows the mean scores for the ten attitude items of teachers who provided input and teachers who did not provide input. Analysis indicated differences in levels when the scores of the ten attitude items were examined (F (1, 139) = 6.2301, p = .0137). Teachers who indicated they provided input into the decision to use the Kansas Reading Assessment in their school improvement plans had a significantly more positive attitude than those teachers who indicated they did not provide input into the decision.

Analysis of individual items.

Using levels of input into the decision to use the Kansas Reading Assessment in the School Improvement Plan as the independent variable, one-way analysis of variance was used to examine teachers' attitudes about each individual Kansas Reading Assessment attitude item. Figure 43 shows the mean attitude scores for each item for teachers who indicated they provided input into the decision and for teachers who indicated they did not provide input into the decision to use the Kansas Reading Assessment. The items have been ordered according to the differences in mean attitude scores between teachers who provided input and those who did not provide input.

Teachers who acknowledged input into the decision exhibited a more positive attitude toward eight of the ten individual items. The differences between those teachers with input and those without were significant for item k -- meaningfulness (F (1, 139) = 11.4036, p = .0010), item d --

instructional method (F (1, 139) = 12.8599, p = .0005), and item h -- curriculum decisions (F (1, 139) = 6.3774, p = .0127). In all three instances, teachers providing input were significantly more positive than teachers not providing input.

Figure 42

Mean Scores of the Kansas Reading Assessment Student-centered, Teacher-centered, and Total Attitude Items as a Function of the Level of Decision Input by Respondents

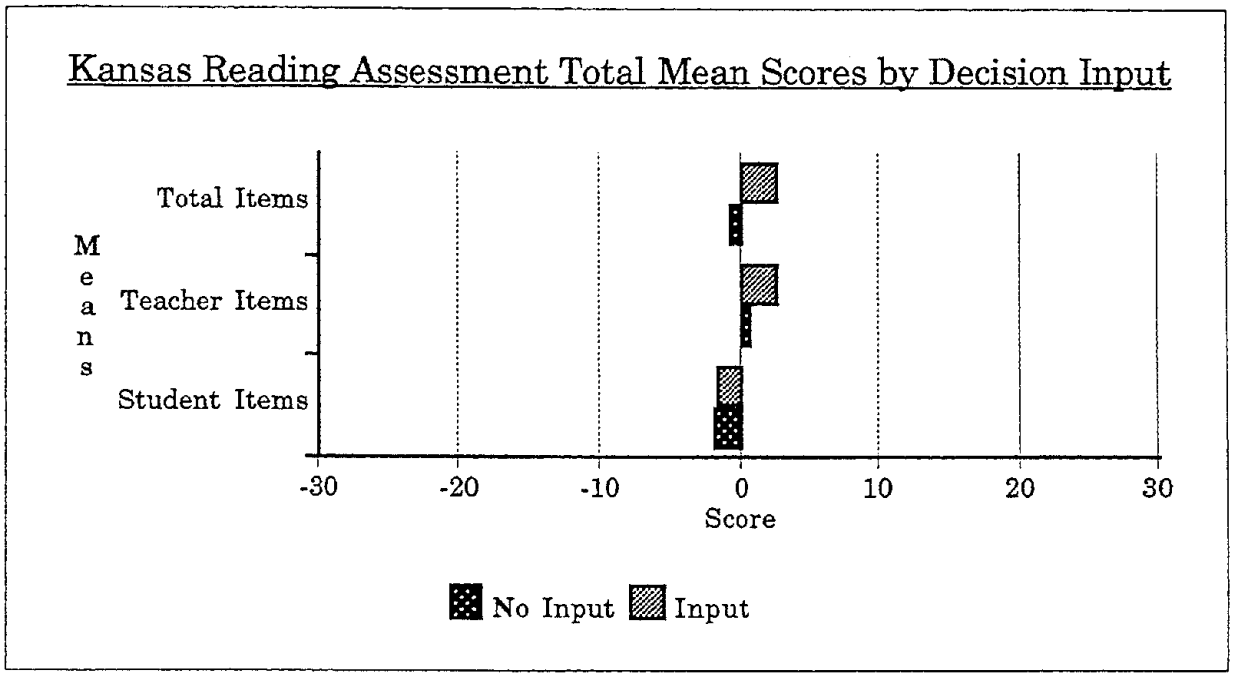
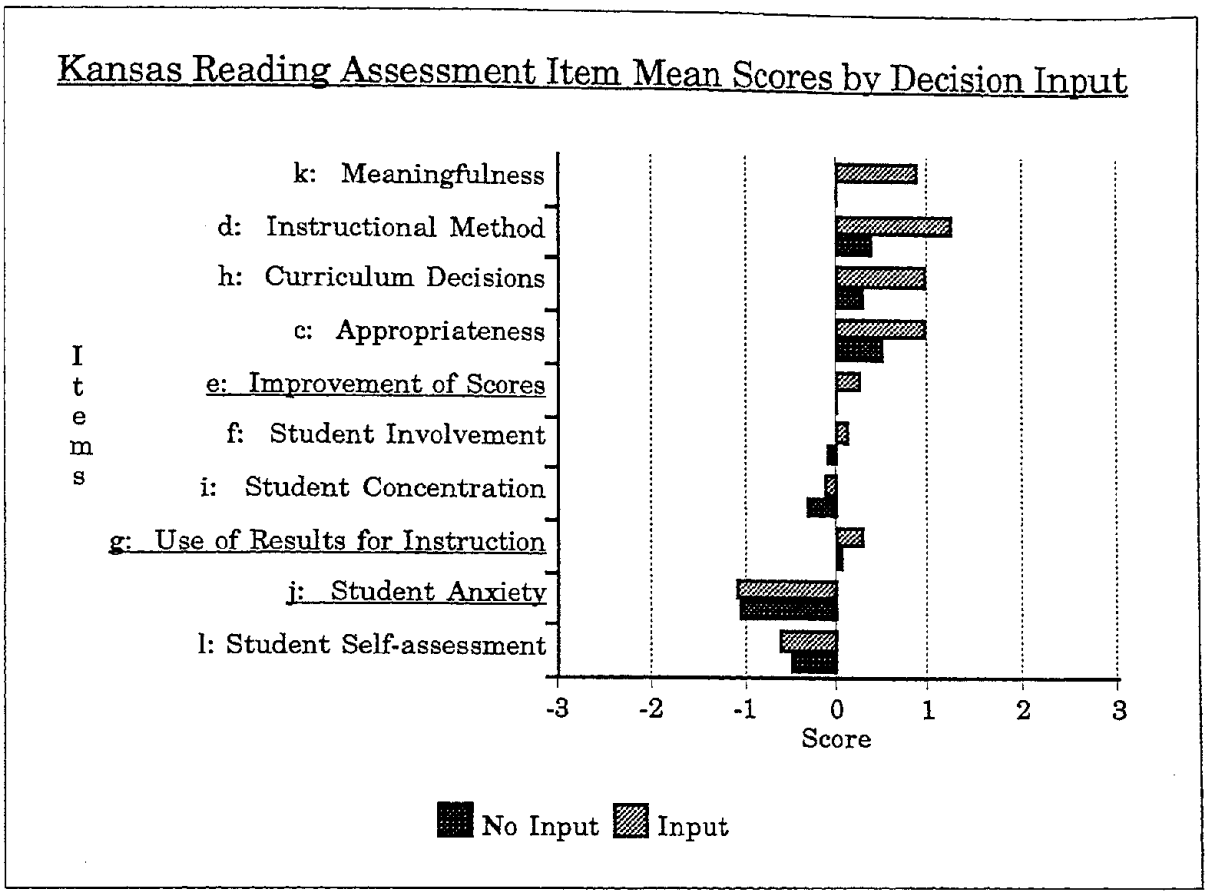


Figure 43

Mean Scores of the Kansas Reading Assessment Attitude Items as a Function of the Level of Decision Input by Respondents



Underlined items indicate negative attitude statements and were reversed scored to calculate the mean scores.

Portfolio Assessment

Description of Disqualified Surveys.

Of the 304 completed surveys, 109 yielded information about portfolio assessment. One hundred ninety-five surveys were disqualified for the following reasons: lack of demographic information, nine; nonuse or unsure of use, 104; no opinion, 15; no response, 67.

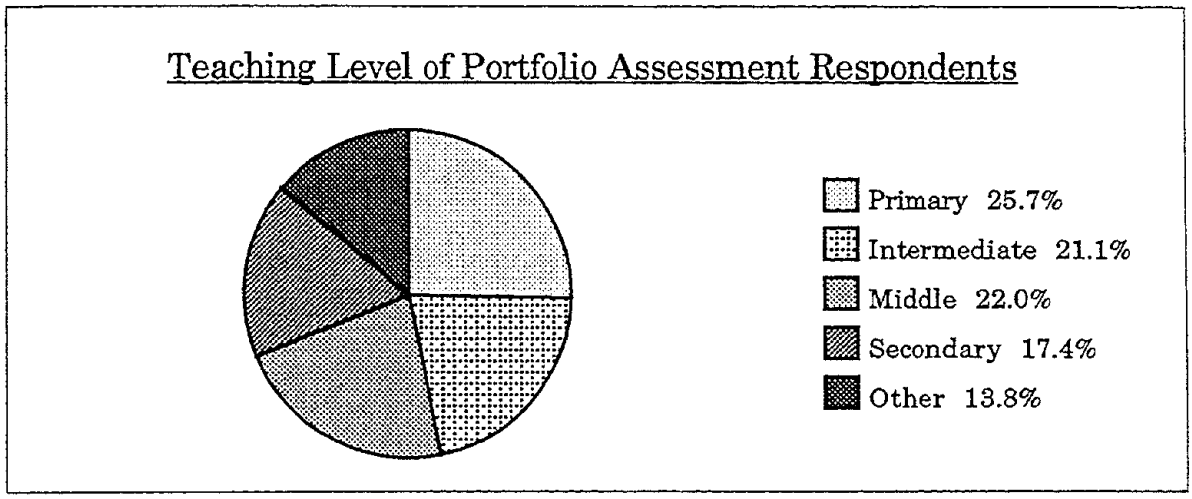
Demographics of Responding Teachers

Figure 44 shows the percentage of primary, intermediate, middle, secondary, and 'other' level teachers who responded to the portfolio

assessment survey section. The percentage of teachers responding to this section tends to decrease as the student level of teachers increases. Primary, intermediate, and middle level teachers comprise 25.7%, 21.1% and 22.0% of the total number of teachers, respectively. Of the total number of teachers, 17.4% are secondary level teachers and 13.8% identified themselves as 'other' level teachers.

Figure 44

Percentage of Primary, Intermediate, Middle, Secondary, and 'Other' Teachers Responding to Portfolio Assessment Survey Items



The percentage of teachers in each experience category who responded to attitude items regarding portfolio assessment is shown in Figure 45. The largest percentage of teachers, 30.3%, has been teaching at current levels for one to four years. The next category are those teachers with twenty or more years of experience at their current levels, 27.5% of the total sample. Teachers who have taught their current levels for ten to fourteen years and fifteen to nineteen years comprise the smallest groups, 12.8% and 11%, respectively, of the total number of responding teachers.

Figure 45

Percentage of Teachers Responding to the Portfolio Assessment Survey Section with 1-4 Years, 5-9 Years, 10-14 Years, 15-19 Years, and 20 or More Years of Experience at the Current Level

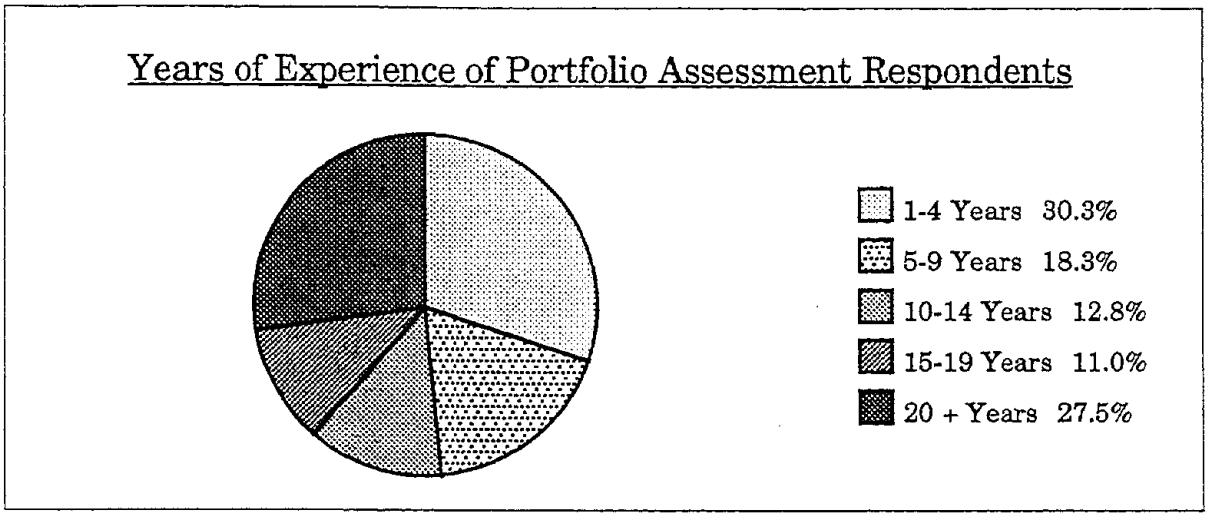
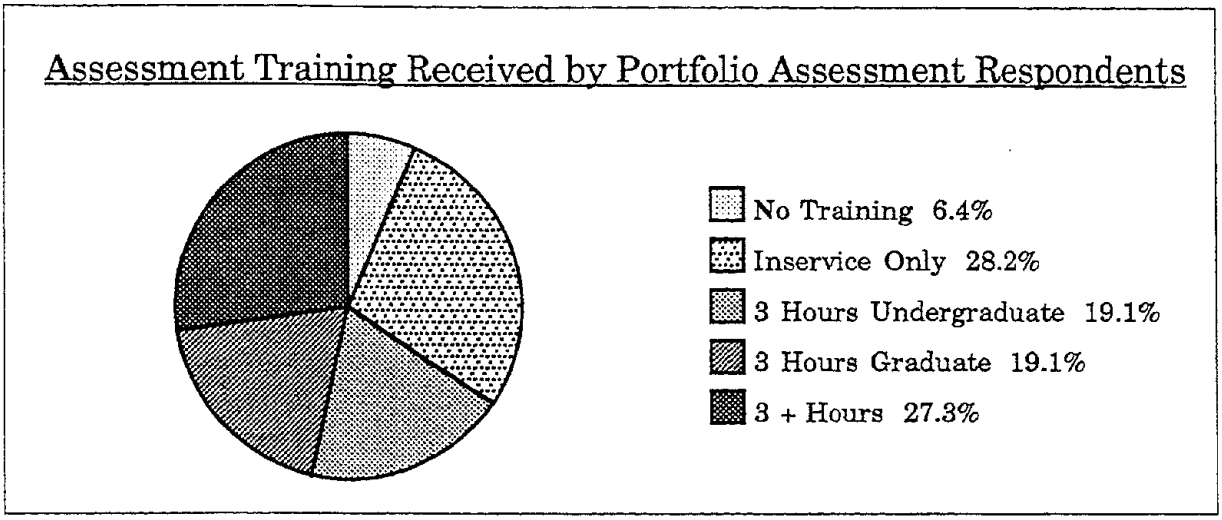


Figure 46 illustrates the percentage of respondents who have had no assessment training, inservice training only, three undergraduate hours, three graduate hours, or more than three undergraduate and/or graduate hours. Inservice has been the only training for 28.2% of the respondents. Slightly more than 6% have received no assessment training. Sixty-one percent of the responding teachers indicated they have some college credit, including 27.5% who have more than three credit hours.

Forty-six teachers indicated they served on their school improvement team while 50 teachers responded that they had input into the decision to use portfolio assessment in their school improvement plans. Of the 109 teachers responding 71 reported they used portfolio assessment with at least one class of students.

Figure 46

Percentage of Teachers Responding to the Portfolio Assessment Survey Section with No Assessment Training, Inservice Training Only, Three Undergraduate Hours, Three Graduate Hours, and More than Three Undergraduate and/or Graduate Hours.



Portfolio Assessment Survey Item Response Frequency

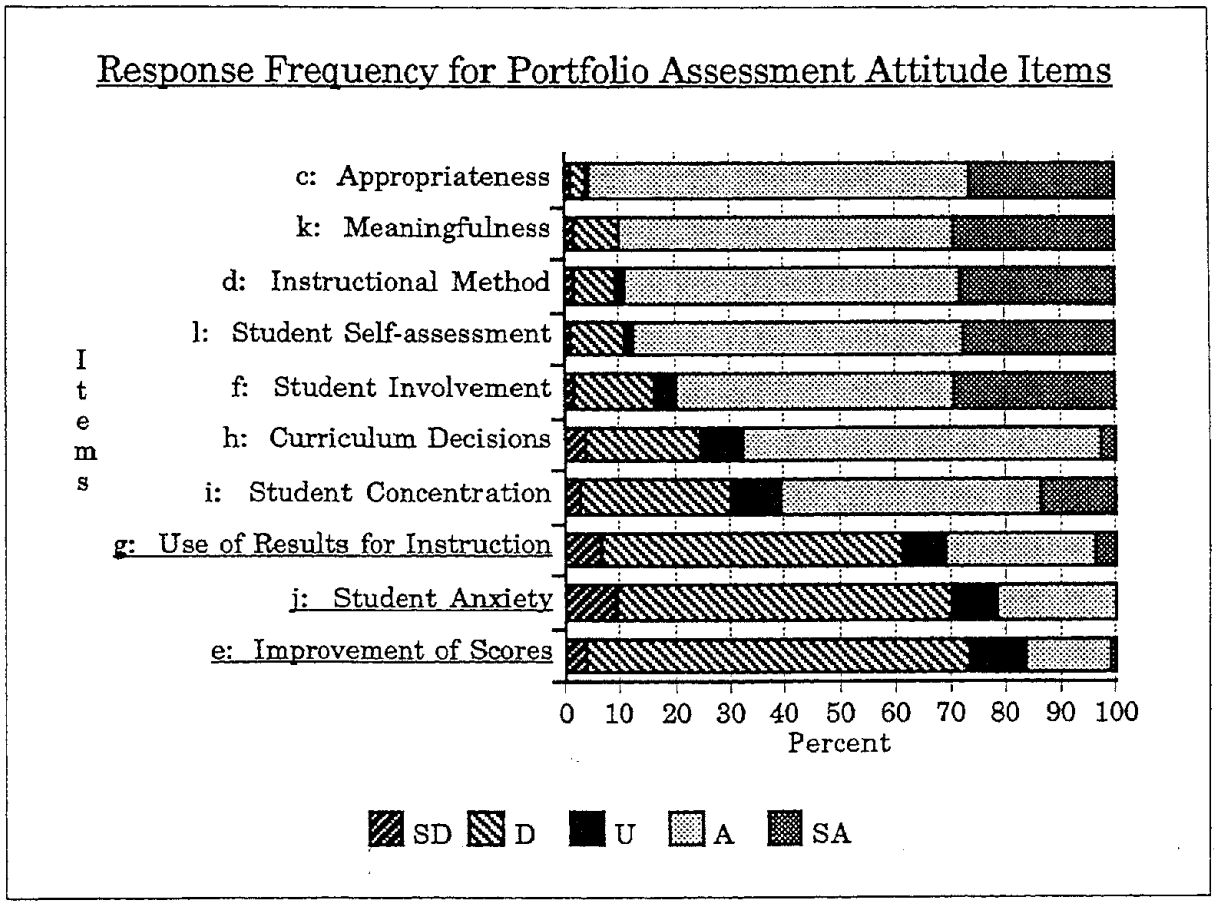
Figure 47 displays the proportion of strongly disagree (SD), disagree (D), unsure (U), agree (A), and strongly agree (SA) responses for each attitude item in the portfolio assessment survey section. The items have been ordered from most positive to least positive responses. Over 80% of the teachers responding agreed to some extent with five statements about portfolio assessment: item c -- appropriateness; item k -- meaningfulness; item d -- instructional method; item l -- student self-assessment; and item f -- student involvement. Between 25 and 30% of the teachers in agreement indicated they "strongly agreed" with the items. Over 70% disagreed with two negative statements, item e -- improvement of scores and item j -- student anxiety.

Figure 48 shows the mean response score for each portfolio assessment attitude item. The means have been ordered to reflect decreasingly positive attitudes. The mean scores for all ten attitude items

fell in the positive range. The means of five items, appropriateness, instructional method, student involvement, meaningfulness of the assessment, and student self-assessment, fell between 1.0 and 2.0. The means of two items, use of results and curriculum decisions, were less than 0.5.

Figure 47

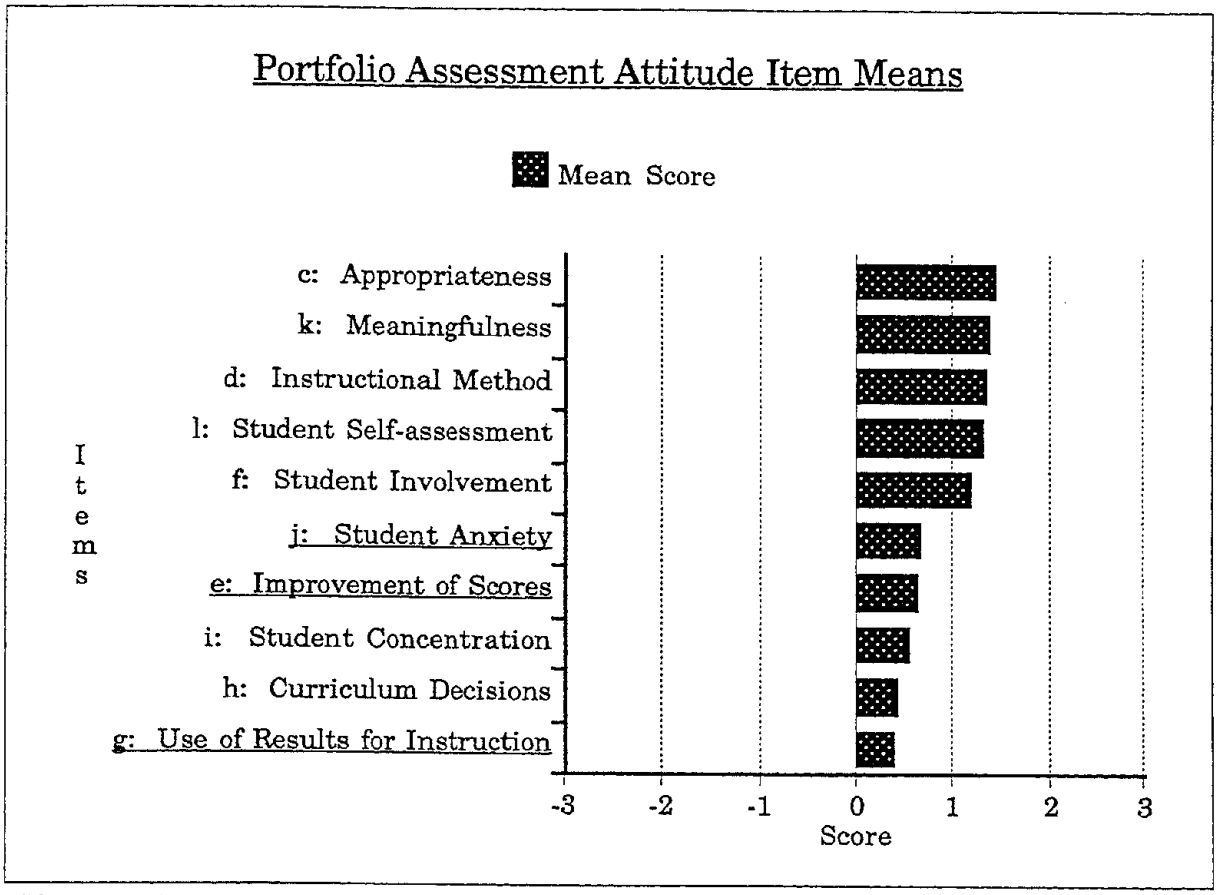
Percentage of Strongly Disagree (SD), Disagree (D), Unsure (U), Agree (A), Strongly Agree (SA) Responses to Portfolio Assessment Attitude Items by Respondents



Underlined items indicate negative attitude statements.

Figure 48

Mean Scores of Respondents for Portfolio Assessment Attitude Items



Underlined items indicate negative attitude statements and were reversed scored to calculate the mean scores.

Statistical Analysis of Portfolio Assessment Data as a Function of the Teaching Level of the Respondents

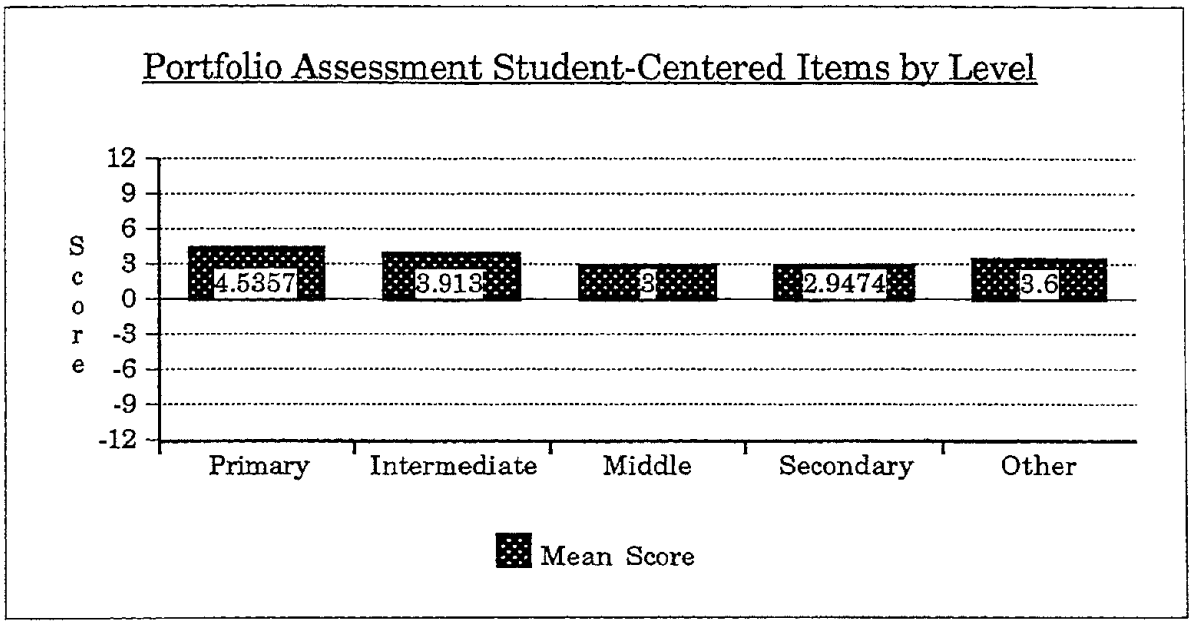
Analysis of student-centered items.

One-way analysis of variance was used to determine whether teachers at various teaching levels differed in their attitudes toward the effect of portfolio assessment on students. The student-centered attitude score was based on four items: item f -- student involvement; item i -- student concentration; item j -- student anxiety; and item l -- student self-assessment. Figure 49 presents the mean totals of student-centered

items. Using the student-centered attitude score, analysis indicated no significant differences ($p < .05$) in attitudes about student issues exist between levels. Teachers in each category tend to have a positive attitude about portfolio assessment student-centered items.

Figure 49

Mean Scores of Portfolio Assessment Student-centered Attitude Items as a Function of the Teaching Levels of Respondents



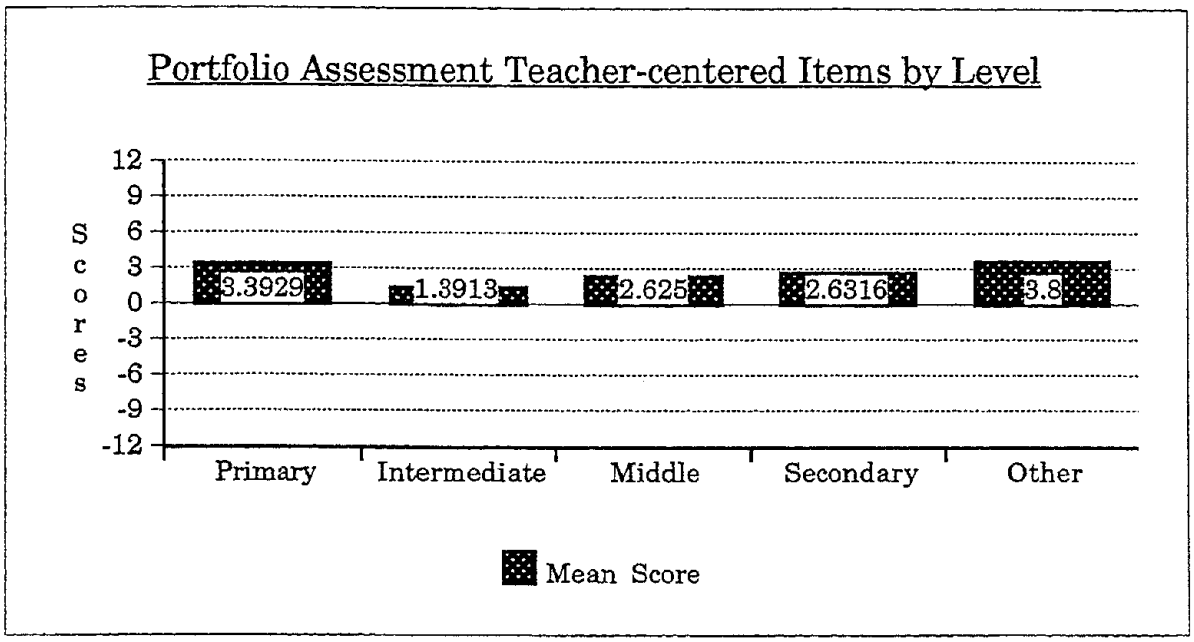
Analysis of teacher-centered items.

One-way analysis of variance was used to determine whether teachers at various teaching levels differed in their opinions about the effect of portfolio assessment on teachers. The total teacher-centered attitude score was based on four items: item d -- instructional method; item e -- improvement of scores; item g -- use of results to improve instruction; and item h -- curriculum decisions. Figure 50 presents the total mean of teacher-centered items for primary, intermediate, middle, secondary and 'other' teaching levels of respondents. Though the attitude means are generally positive for the teacher-centered items, no significant

differences ($p < .05$) in attitudes exist between levels.

Figure 50

Mean Scores of Portfolio Assessment Teacher-centered Attitude Items as a Function of the Teaching Levels of Respondents

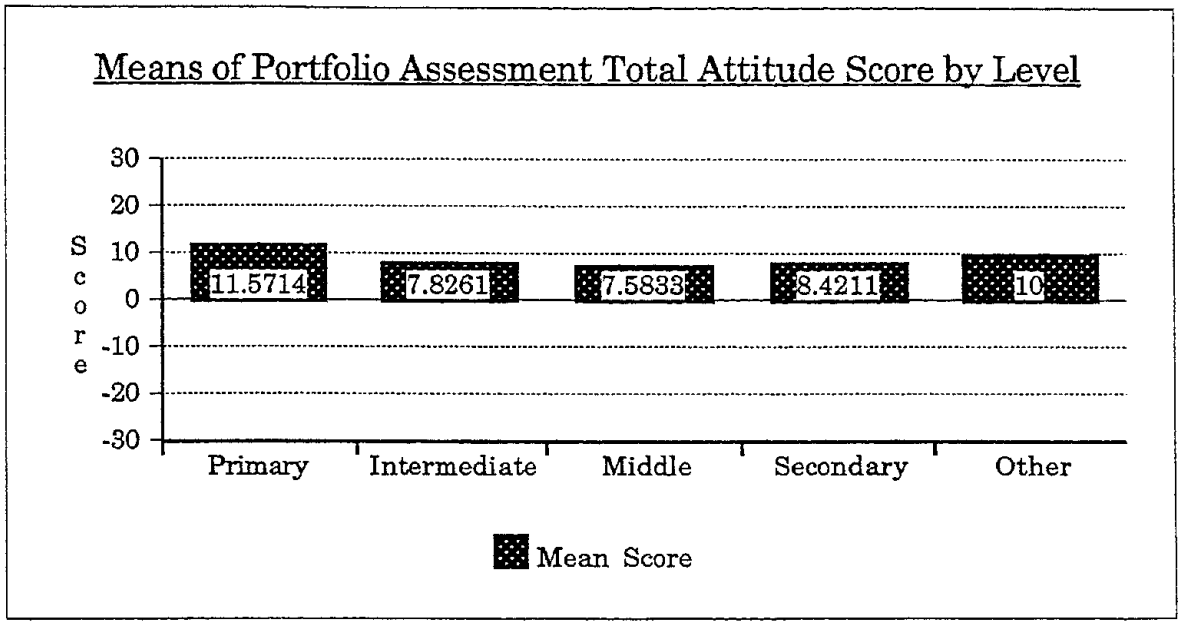


Analysis of total attitude score.

Figure 51 shows the mean total scores for all ten attitudinal items. One-way analysis of variance was used to determine whether teachers at various teaching levels differed in their opinions about portfolio assessment in general. Analysis indicated no significant differences ($p < .05$) in attitudes about portfolio assessment as a function of the teaching level of respondents. All levels of respondents indicated positive attitudes toward portfolio assessment. Primary level teachers' mean score was the most positive, followed by the mean scores of 'other' level teachers and secondary teachers.

Figure 51

Mean Scores of Portfolio Assessment Total Attitude Items as a Function of the Teaching Levels of Respondents



Statistical Analysis of Portfolio Assessment Data as a Function of Decision Input

One-way analysis of variance was used to determine whether teachers who had input into the decision to use portfolio assessments in their school improvement plans differed in their opinions about portfolio assessment from those who did not have input into the decision. The independent variable in these comparisons is level of decision input. The dependent variables are the respective attitude scores on particular items or sets of items. Figure 52 shows the mean student-centered, teacher-centered, and total attitude scores of teachers providing input and those who did not provide input.

Analysis of student-centered items.

One-way analysis of variance was used to determine whether teachers providing input into the decision and teachers not providing input

into the decision to use portfolio assessments differed in their opinions about the effect of portfolio assessment on students. The student-centered attitude score was based on four items: item f -- student involvement; item i: -- student concentration; item j -- student anxiety; and item l -- student self-assessment. Figure 52 illustrates the means of student-centered items for teachers who provided input and teachers who did not provide input. Results of the one-way analysis of variance indicate that there is a significant difference in the total mean scores of student-centered items (F (1, 108) = 7.1239, p = .0088) as a function of decision input. Though both attitudes are positive, teachers who indicated they provided input are significantly more positive than those who did not provide input.

Analysis of teacher-centered items.

One-way analysis of variance was used to determine whether teachers providing input into the decision and teachers not providing input into the decision to use portfolio assessments differed in their opinions about the effect of portfolio assessment on teachers. The teacher-centered attitude score was based on four items: item d -- instructional method; item e -- improvement of scores; item g -- use of results to improve instruction; and item h -- curriculum decisions. Figure 52 illustrates the means of teacher-centered items for teachers who provided input and teachers who did not provide input. Results of the one-way analysis of variance indicate that there is a significant difference in the total mean scores of teacher-centered items (F (1, 108, p = .0232) as a function of decision input. Though both attitudes are positive, teachers who indicated they provided input are significantly more positive than

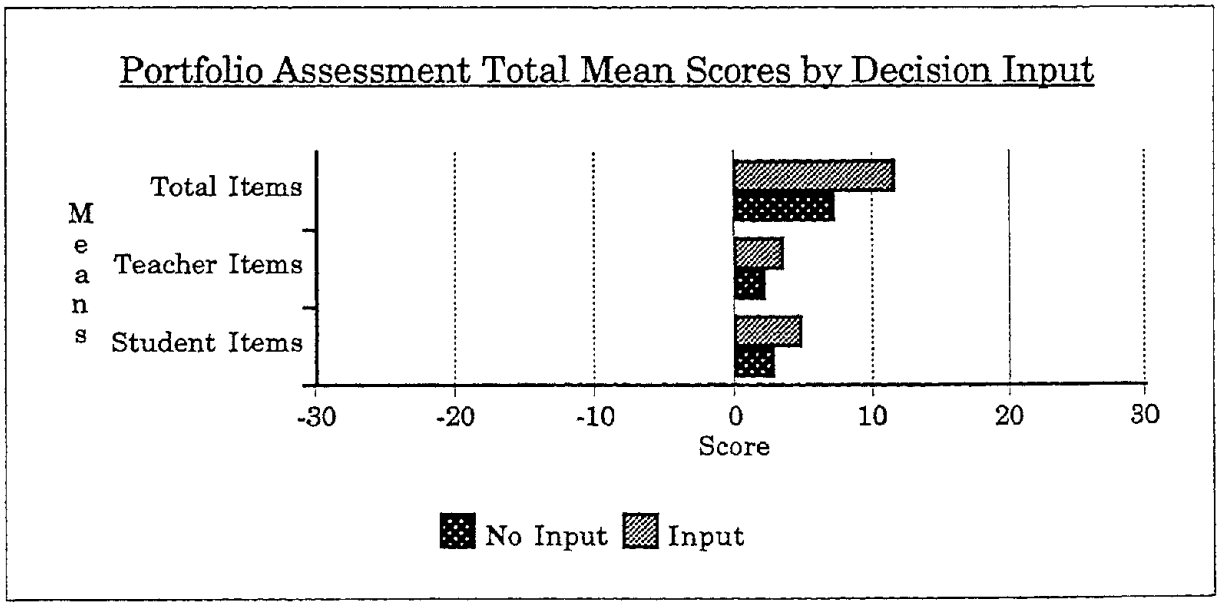
those who did not provide input.

Analysis of total attitude score.

One-way analysis of variance was used to determine whether teachers providing input into the decision and teachers not providing input into the decision to use portfolio assessment in their school improvement plans differed in their opinions about the effect of portfolio assessment in general. Figure 52 shows the mean scores for the ten attitude items for teachers who provided input and teachers who did not provide input. Analysis indicated differences in levels when the total scores of the ten attitudinal items were examined (F (1, 108) = 9.5501, p = .0025). Teachers who indicated they provided input into the decision to use portfolio assessments in their school improvement plans had a significantly more positive attitude than those teachers who indicated they did not provide input into the decision.

Figure 52

Mean Scores of Portfolio Assessment Student-centered, Teacher-centered, and Total Attitude Items as a Function of the Level of Decision Input by Respondents



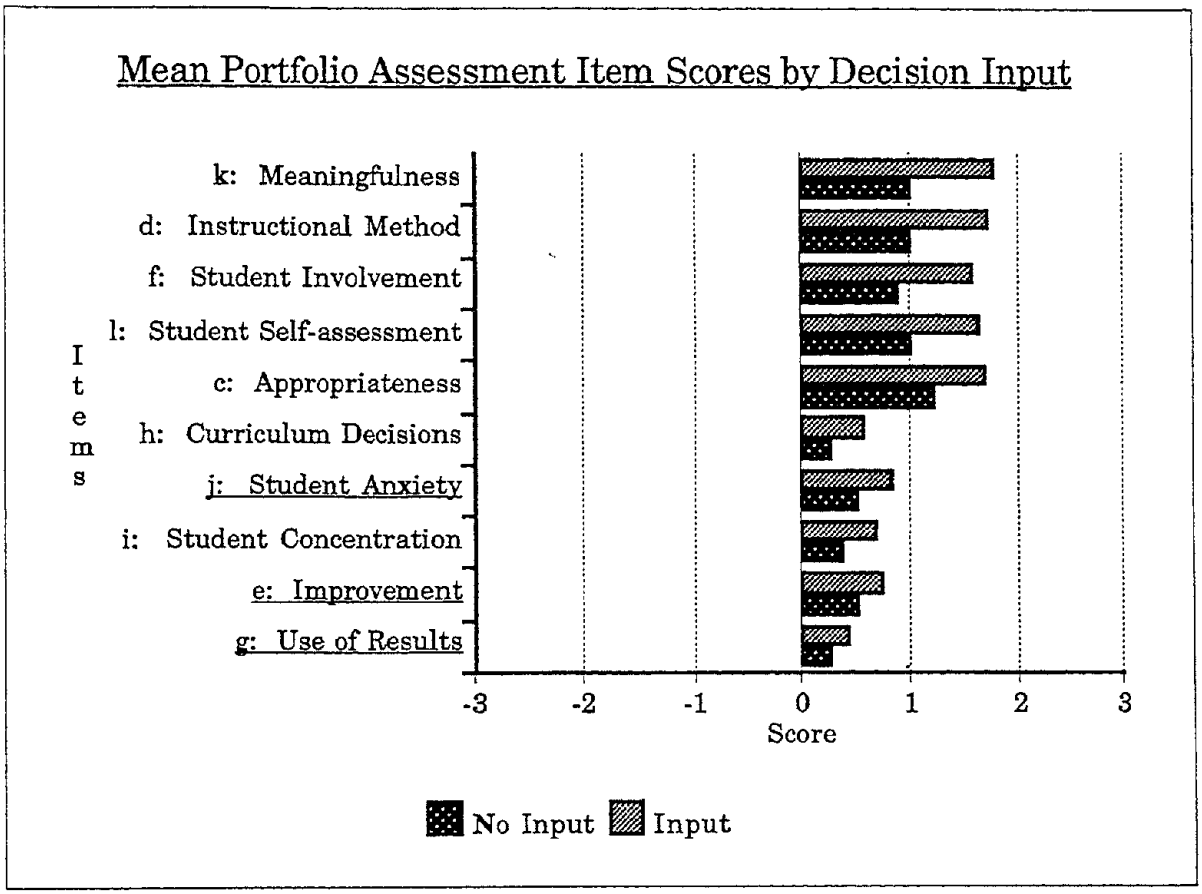
Analysis of individual items.

Using input into the decision to use a portfolio assessment in the school improvement plans as the independent variable, one-way analysis of variance was used to examine teachers' attitudes about each individual portfolio assessment attitude item. Figure 53 shows the mean attitude scores for each item for teachers who indicated they provided input into the decision and for teachers who indicated they did not provide input into the decision to use portfolio assessments. The items have been ordered according to the difference in mean attitude scores between teachers who provided input and those who did not provide input.

The attitudes of teachers who provided input into the decision were generally more positive than the attitudes of teachers who did not provide input. Attitudes about five of the items differed significantly: item k -- meaningfulness (F (1, 108) = 10.5693, p = .0015); item d -- (F (1, 108) = 8.6683, p = 0040); item f -- student involvement (F (1, 108) = 6.7024, p = .0010); item l -- student self-assessment (F (1, 108) = 6.9131, p = .0098); and item c -- appropriateness (F (1, 108) = 5.3108, p = .0231).

Figure 53

Mean Scores of Portfolio Assessment Attitude Items as a Function of the Level of Decision Input by Respondents



Underlined items indicate negative attitude statements. and were reversed scored to calculate the mean scores.

Kansas Writing Assessment

Description of Disqualified Surveys

Of the 304 completed surveys, 121 yielded information about the Kansas Writing Assessment. One hundred eighty-three surveys were disqualified for the following reasons: lack of demographic information, nine; nonuse or unsure of use, 45; no opinion, 59; no response, 70.

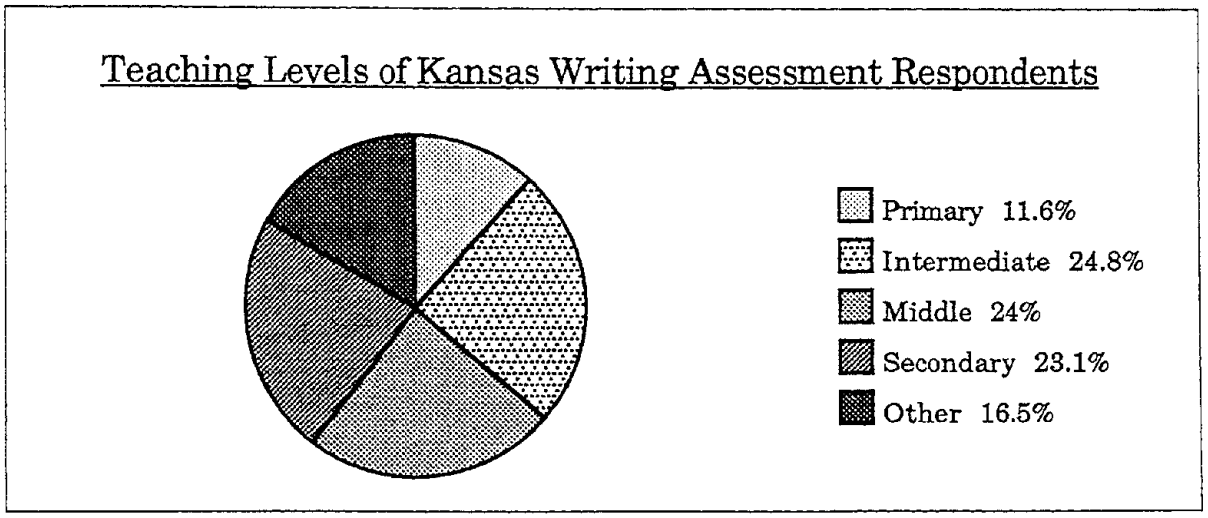
Demographics of Responding Teachers

Figure 54 shows the percentage of primary, intermediate, middle, secondary, and 'other' level teachers who responded to the Kansas Writing Assessment survey section. Intermediate, middle, and secondary level

teachers represent 24.8%, 24%, and 23.1% of the total, respectively, while the percentage of primary teachers is 11.6% . Teachers in the 'other' category account for 16.5% of the total sample.

Figure 54

Percentage of Primary, Intermediate, Middle, Secondary, and 'Other' Teachers Responding to the Kansas Writing Assessment (KWA) Survey Items



The percentage of responding teachers who have taught one to four years, five to nine years, ten to fourteen years, fifteen to nineteen years, and more than twenty years at their current levels is shown in Figure 55. The largest percentage category of teachers responding, 30%, includes teachers who have taught one to four years. The category composed of teachers who have taught for 20 or more years accounts for 25.8% while teachers in the smallest percentage category, 10.8%, taught from fifteen to nineteen years. The experience categories of five to nine years and ten to fourteen years each account for 16.7% of the total sample.

Figure 56 shows the percentage of teachers receiving no assessment training, inservice training only, three hours of undergraduate credit, three hours of graduate credit, and more than three hours of

undergraduate and/or graduate credit who responded to the Kansas Writing Assessment section. The largest percentage of teachers, 29.8%, received inservice training only with a slightly less percentage of teachers, 27.3%, receiving more than three hours of undergraduate and/or graduate credit in assessment training. The percentage of teachers with three hours of graduate training is nearly equal to teachers with three hours of undergraduate training. A total of 67% of the teachers responding to the Kansas Writing Assessment section have had some university training in assessment. Only 3.3% of the teachers reported no training in assessment issues.

Figure 55

Percentage of Teachers Responding to the Kansas Writing Assessment Survey Section with 1-4 Years, 5-9 Years, 10-14 Years, 15-19 Years, and 20 or More Years of Experience at their Current Levels

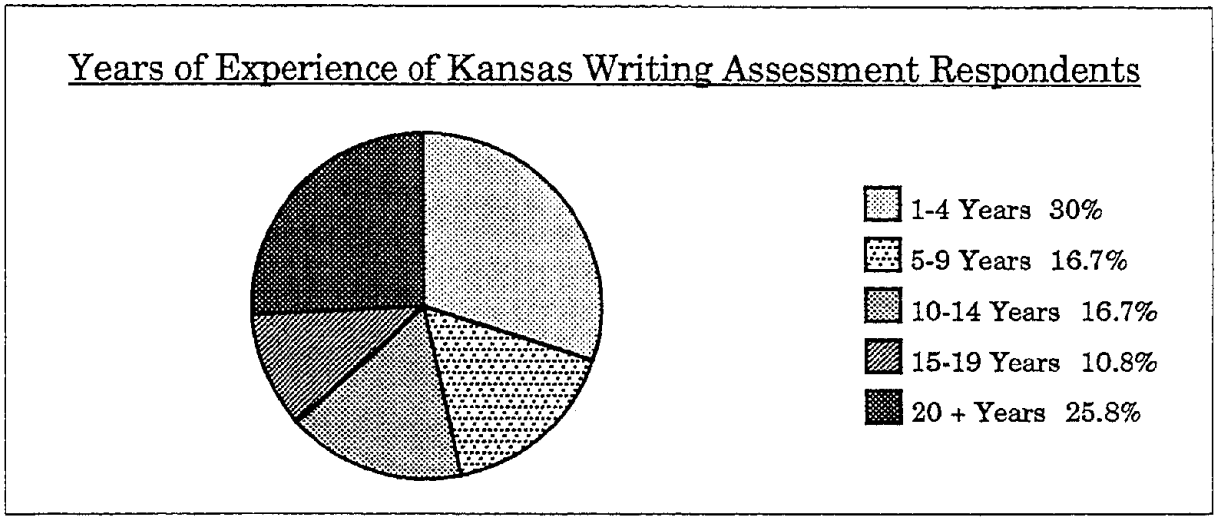
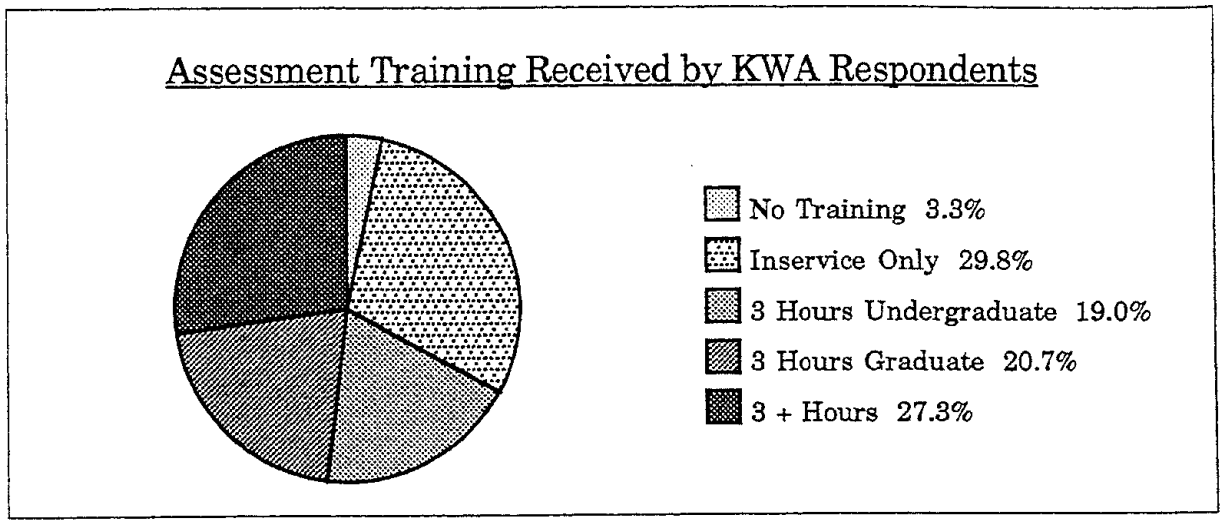


Figure 56

Percentage of Teachers Responding to the Kansas Writing Assessment (KWA) Survey Items with No Training, Inservice Training Only, Three Undergraduate Hours, Three Graduate Hours, and More than Three Undergraduate and/or Graduate Hours of Training in Assessment Issues



Fifty-three teachers indicated they served on their school improvement team while 34 teachers responded that they had input into the decision to use the Kansas Writing Assessment in their plan. Of the 121 teachers responding, 31 reported they administered the assessment to at least one class of students.

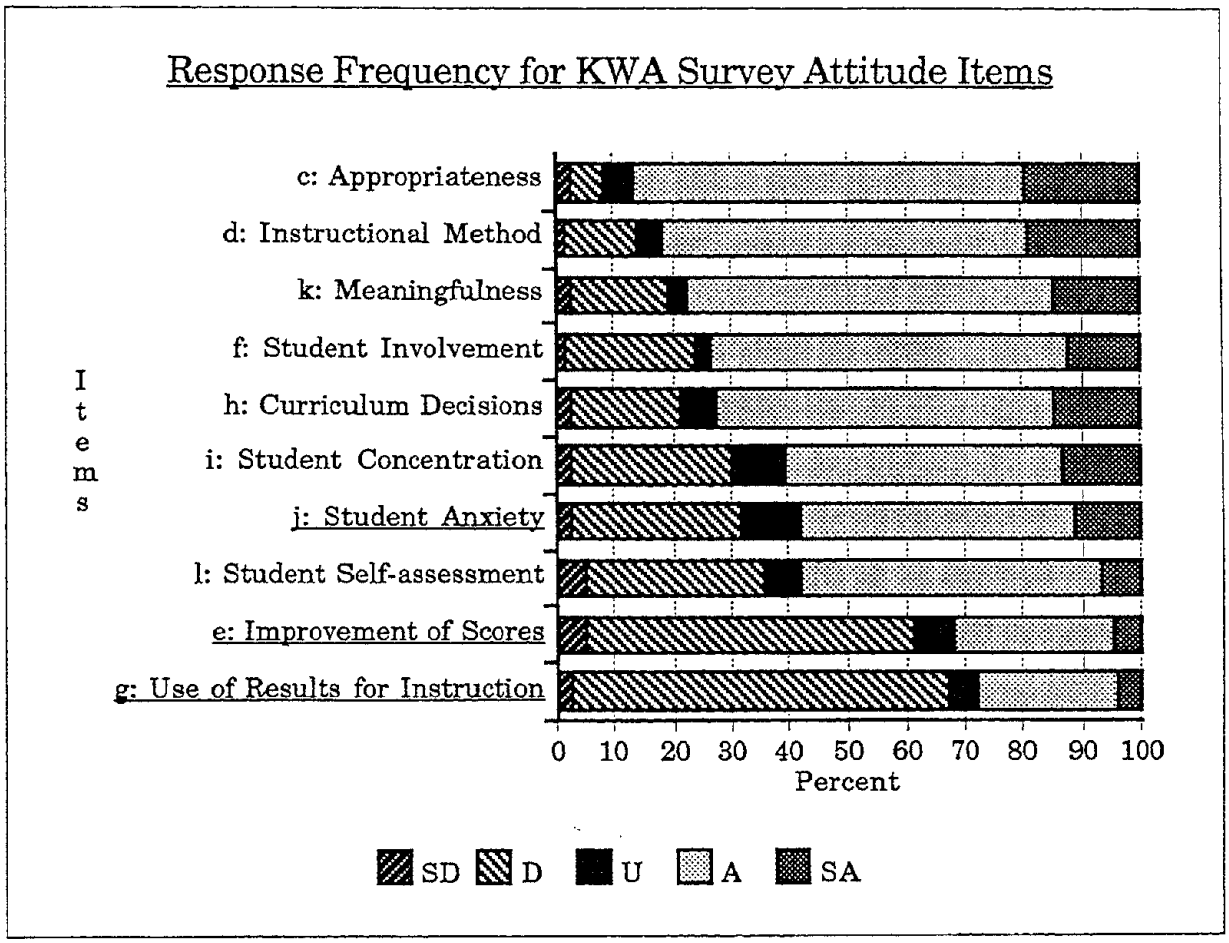
Kansas Writing Assessment Survey Item Response Frequency

Figure 57 displays the proportion of strongly disagree (SD), disagree (D), unsure (U), agree (A), strongly agree (SA) responses for each attitude item in the Kansas Writing Assessment survey section. The items have been ordered from the most positive responses to the least positive responses. Over 70% of the teachers responding to the Kansas Writing Assessment section agreed with items c -- appropriateness, d -- instructional method, f -- student involvement, h -- curriculum decisions, and k -- meaningfulness, including from 10 to 20% "strongly agree"

responses. Between 60 and 70% disagreed with two negative attitude items: e -- improvement of scores and g - use of results for instruction. Over 10% of the respondents were unsure about the effect of the Kansas Writing Assessment on student anxiety.

Figure 57

Percentage of Strongly Disagree (SD), Disagree (D), Unsure (U), Agree (A), and Strongly Agree (SA) Responses to Kansas Writing Assessment (KWA) Attitude Items by Respondents



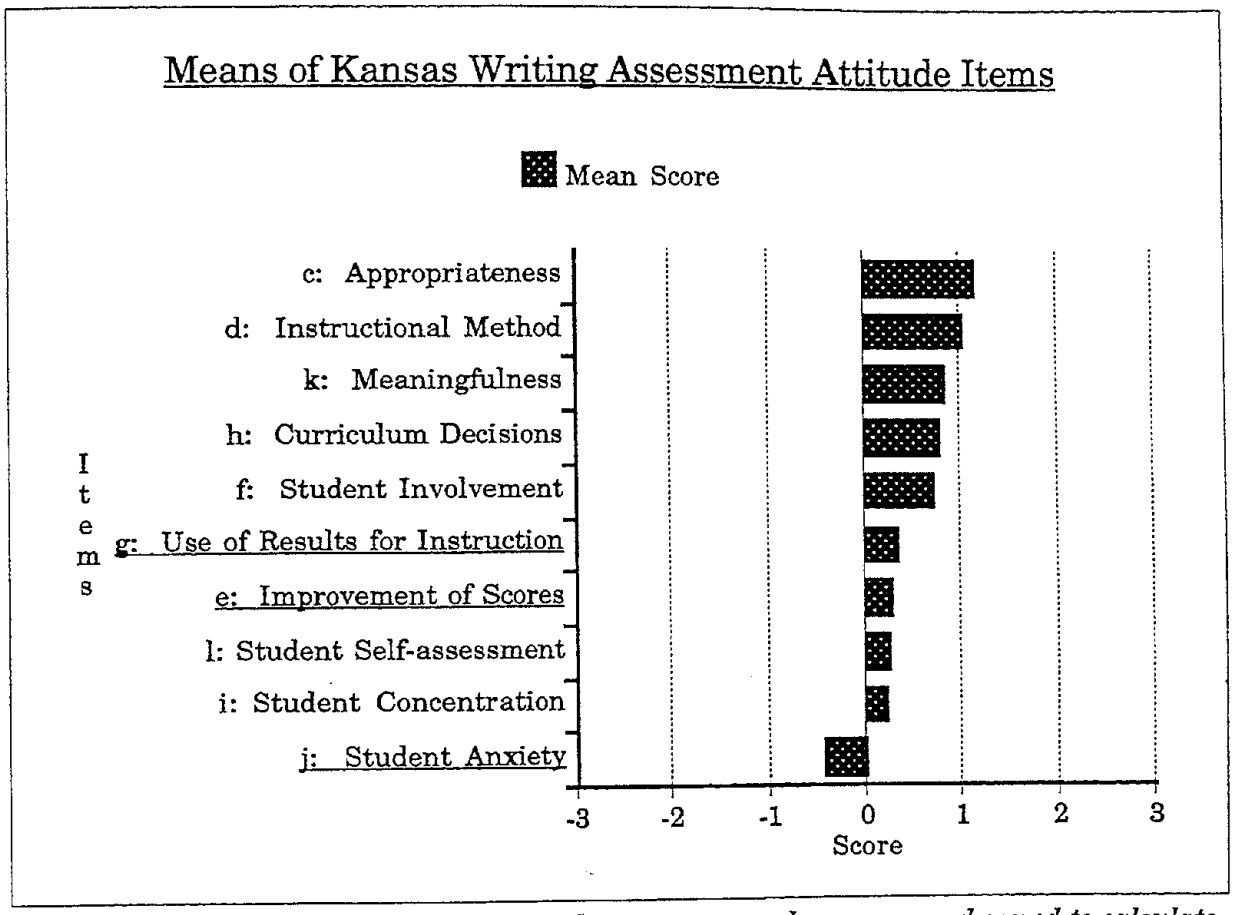
Underlined items indicate negative attitude statements.

Figure 58 shows the mean scores of respondents for each Kansas Writing Assessment attitude item. The means have been ordered to reflect decreasingly positive attitude ratings. The means of nine items were generally positive. Items c -- appropriateness (M = 1.132) and d -- instruction method (M = 1.025) received the most positive mean scores.

The mean for item j -- student anxiety fell in the negative attitude range (M = - 0.446). Four items have positive mean scores less than 0.5: e -- improvement of scores, g -- use of results for instruction, i -- student concentration, and l -- student self-assessment.

Figure 58

Mean Scores of Respondents for Kansas Writing Assessment (KWA) Survey Attitude Items



Underlined items indicate negative attitude statements and were reversed scored to calculate the mean scores.

Statistical Analysis of the Kansas Writing Assessment Attitude Data as a Function of the Teaching Level of Respondents

One-way analysis of variance was used to examine the attitudes of teachers at various teaching levels about the effect of the Kansas Writing Assessment. Using teaching level as the independent variable and the

scores on each item or sets of items as the dependent variable, no significant differences between the attitudes of teachers teaching at primary, intermediate, middle, secondary, and 'other' levels were found.

Statistical Analysis of the Kansas Writing Assessment Attitude Data by Level of Decision Input

One-way analysis of variance was used to compare the attitudes of teachers who indicated they provided input into the decision to use the Kansas Writing Assessment as part of their school improvement plans with the attitudes of teachers who indicated they did not provide input into the decision. Three comparisons were made using decision input as the independent variable. The dependent variables are the respective attitude scores on particular items or sets of items. Figure 59 shows the mean attitude scores of student-centered items, teacher-centered items, and the total items for teachers who indicated they provided input into the decision to use the Kansas Writing Assessment as part of their school improvement plans and those who indicated they did not provide input.

Analysis of student-centered items.

One-way analysis of variance was used to determine whether teachers providing input into the decision and teachers not providing input into the decision to use the Kansas Writing Assessment differed in their opinions about the effect of the Kansas Writing Assessment on students. The total student-centered attitude score was based on four items: f -- student involvement, i -- student concentration, j -- student anxiety, and l -- student self-assessment. Figure 59 illustrates the mean total of student-centered items for teachers who provided input and teachers who

did not provide input. Results of the one-way analysis of variance indicated a significant difference in attitudes about student issues between teachers who provided input into the decision and those who did not (F (1, 118) = 7.0588, p = .009). Teachers who provided input were significantly more positive in their ratings than those who did not provide input.

Analysis of teacher-centered items.

One-way analysis of variance was used to determine whether teachers providing input into the decision and teachers not providing input into the decision to use the Kansas Writing Assessment differed in their attitudes about the effect of the Kansas Writing Assessment on teachers. The total teacher-centered attitude score was based on four items: d -- instructional method, e -- improvement of scores, g -- use of results for instruction, and h -- curriculum decisions. Figure 59 illustrates the mean total of teacher-centered items for teachers who provided input and teachers who did not provide input. The analysis indicated significant differences in attitudes (F (1, 118) = 5.9165, p = .0165) about teacher issues between teachers who provided input into the decision and those who did not. Though both attitudes are positive, the attitude mean of teachers who reported they provided input was significantly more positive (M = 3.706) than the attitude mean of those who did not provide input (M = 1.847).

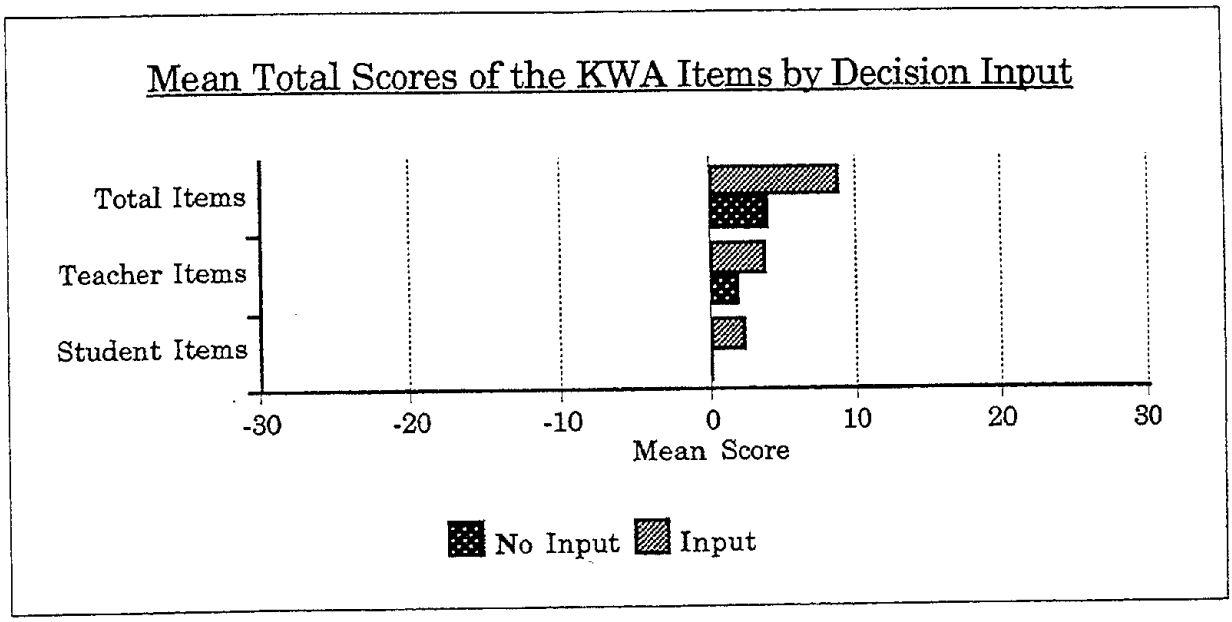
Analysis of total attitude score.

One-way analysis of variance was used to determine whether teachers providing input into the decision and teachers not providing input into the decision to use the Kansas Writing Assessment differed in their

attitudes about the effect of the Kansas Writing Assessment in general. Figure 59 shows the mean scores for the ten attitude items for teachers who provided input and teachers who did not provide input. A significant difference in attitudes toward the Kansas Writing Assessment between teachers who provided input into the decision and those who did not was identified (F (1, 118) = 7.9612, p = .0056). The mean of teachers who provided input (M = 8.765) was significantly more positive than the mean of teachers who did not provide input (M = 3.482).

Figure 59

Mean Scores of Kansas Writing Assessment Student-centered, Teacher-centered, and Total Attitude Items as a Function of the Level of Decision Input by Respondents



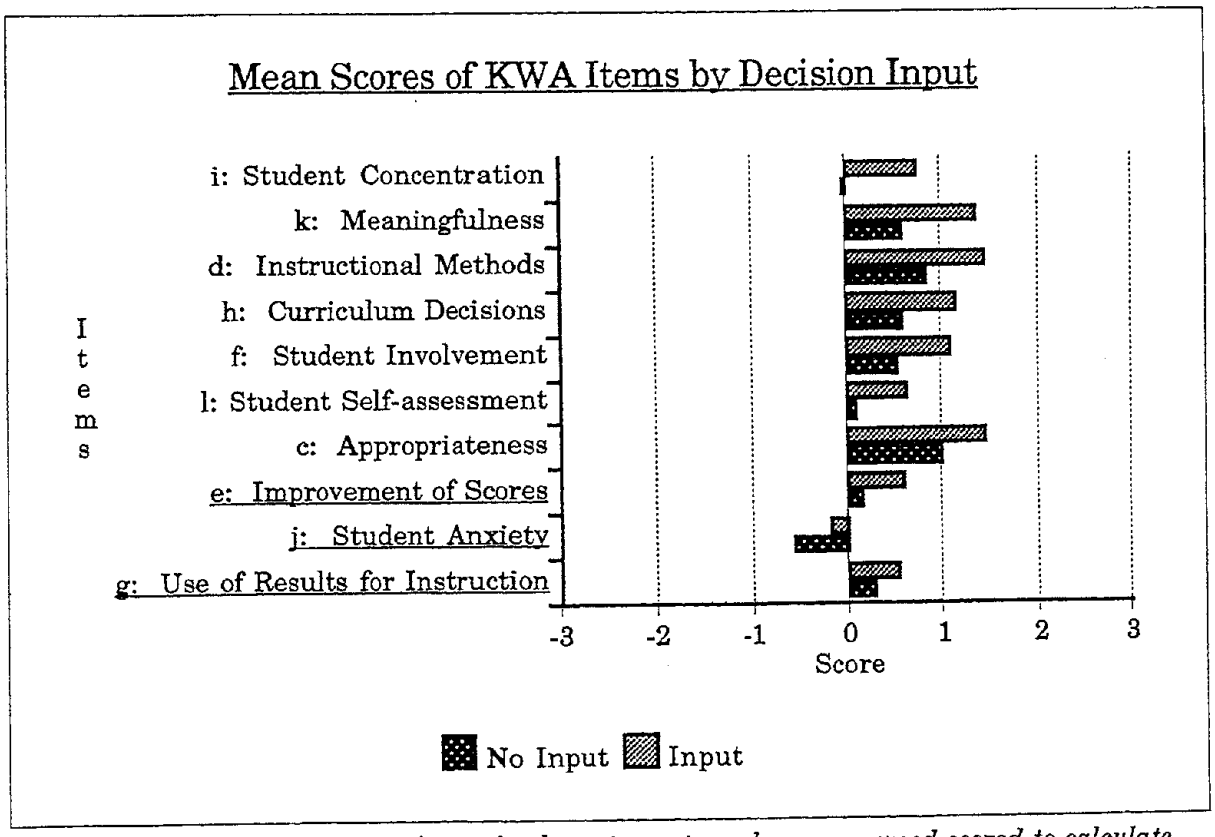
Analysis of individual items.

Figure 60 shows the attitude item mean scores for teachers who indicated they provided input into the decision to use the Kansas Writing Assessment in their School Improvement Plan and those teachers who indicated they provided no input into the decision. The mean pairs have been ordered by the amount of difference between the mean scores of

teachers who had input and the mean scores of teachers who did not have input. The attitudes of teachers who indicated they participated in the decision to use the Kansas Writing Assessment were more positive than those teachers who indicated they did not have input into the decision. In order to further study the effect of decision input on attitudes toward the Kansas Writing Assessment, one-way analysis of variance was conducted for each individual item. The differences were significant for items i -- student concentration ($F = 7.0446$, $p = .0091$), k -- meaningfulness (F (1, 117) = 8.8429, $p = .0036$), d -- instructional method (F (1, 117) = 5.9240, $p = .0164$), h -- curriculum decisions (F (1, 117) = 4.6483, $p = .0331$), and f -- student involvement (F (1, 117) = 4.9320, $p = .0283$).

Figure 60

Mean Scores of Kansas Writing Assessment (KWA) Attitude Items as a Function of the Level of Decision Input by Respondents



Underlined items indicate negative attitude statements and were reversed scored to calculate the mean scores.

Description of Disqualified Surveys

Of the 304 completed surveys, 88 yielded information about publishers' textbook tests. Two hundred sixteen surveys were disqualified for the following reasons: lack of demographic information, nine; nonuse or unsure of use, 115; no opinion, 11; no response, 81.

Demographics of Responding Teachers

Figure 61 shows the percentage of primary, intermediate, middle, secondary, and 'other' level teachers who responded to the publishers' textbook test survey section. The largest percentages of teachers responding teach the primary and intermediate levels, 29.5% and 35.2%, respectively. Secondary teachers account for 6.8% of the total number of teachers responding to items about publishers' textbook tests.

Figure 61

Percentage of Primary, Intermediate, Middle, Secondary, and 'Other' Teachers Responding to Publishers' Textbook Test Survey Items

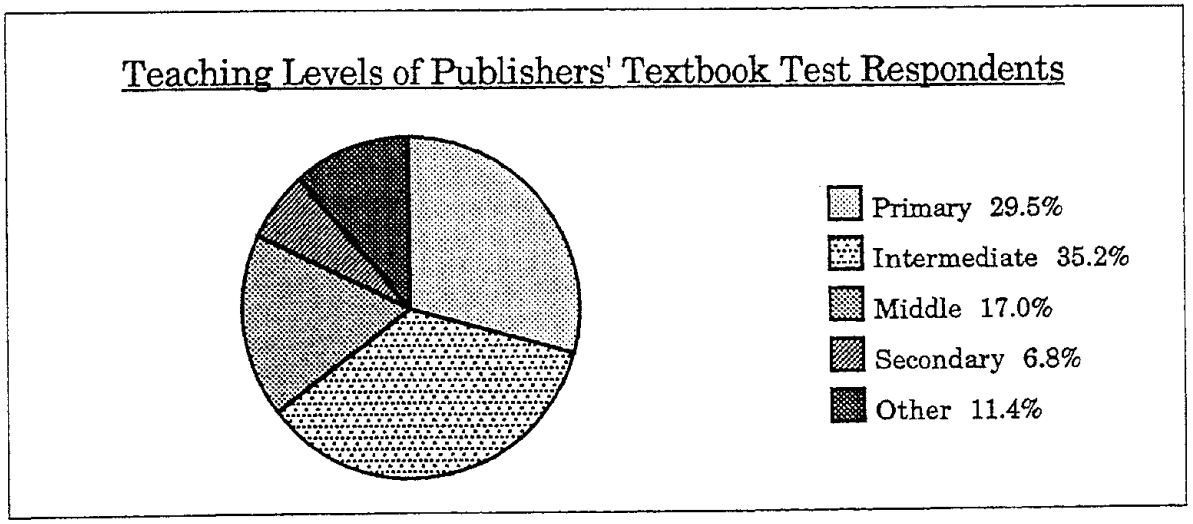


Figure 62 displays the percentages of teachers responding to publishers' textbook test items who have taught one to four years, five to nine years, ten to fourteen years, fifteen to nineteen years and more than

twenty years at their current levels. The largest percentage category, 35.2%, includes teachers who have taught one to four years followed by those who have taught at one level for 20 or more years, 23.9% of the total sample. The remaining categories, five to nine years, ten to fourteen years, and fifteen to nineteen years include 12.5%, 15.9%, and 12.5% of the total sample, respectively.

Figure 62

Percentage of Teachers Responding to the Publishers' Textbook Test Survey Section with 1-4 Years, 5-9 Years, 10-14 Years, 15-19 Years, and 20 or More Years of Experience at their Current Levels

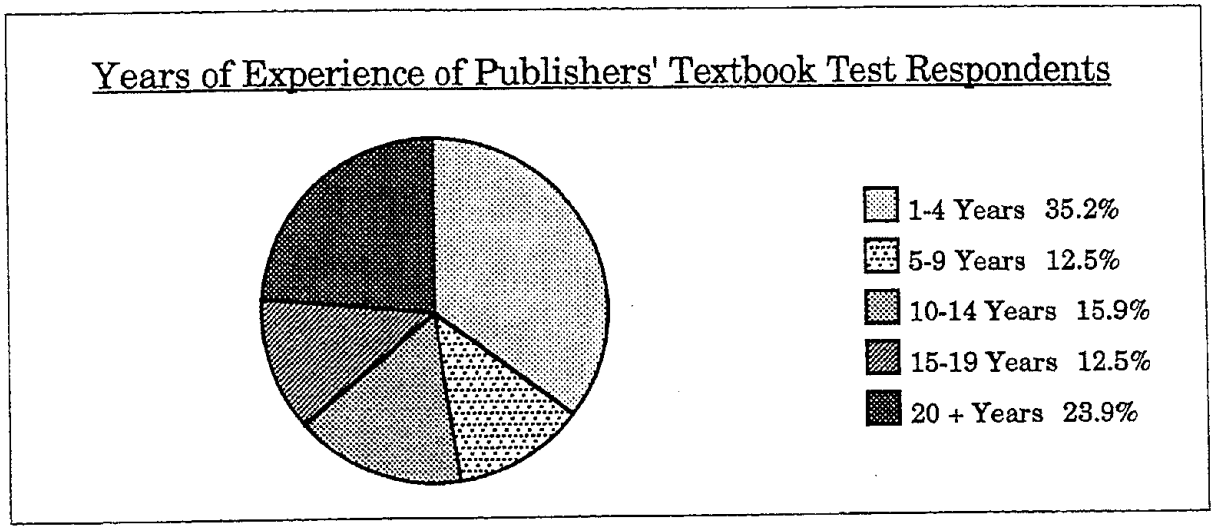
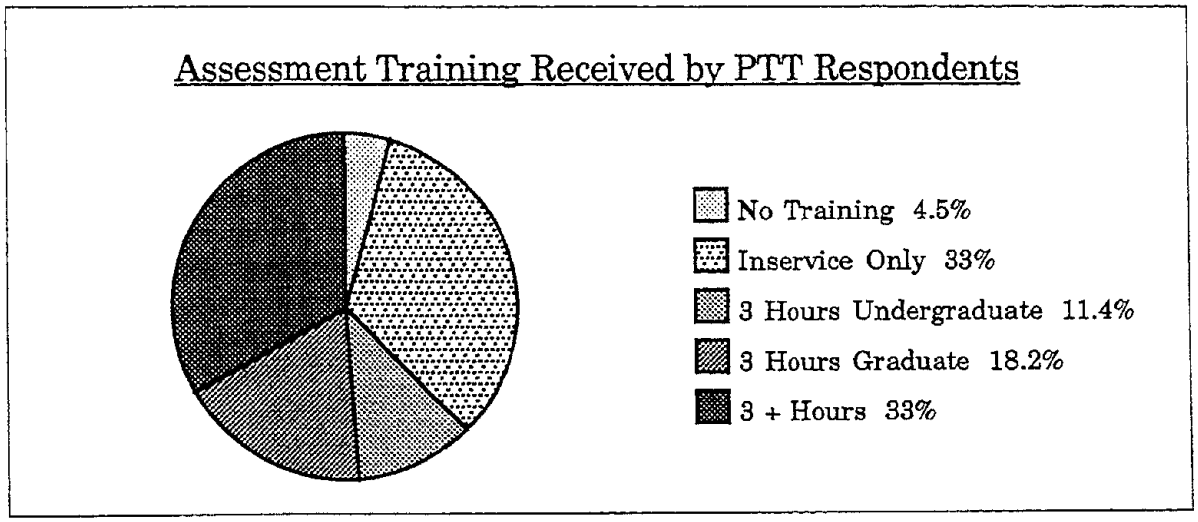


Figure 63 shows the percentage of teachers receiving no assessment training, inservice training only, three hours of undergraduate credit, three hours of graduate credit, and more than three hours of undergraduate and/or graduate credit who responded to the publishers' textbook test section. Thirty-three percent of responding teachers received inservice training only. Teachers receiving no training comprised 4.5% of the total number of respondents to publishers' textbook test survey section. Approximately 62% of the responding teachers indicated they have some university training in assessment issues, including 33%

who have more than three credit hours.

Figure 63

Percentage of Teachers Responding to the Publishers' Textbook Test (PTT) Survey Section with No Training, Inservice Training Only, Three Hours of Undergraduate Credit, Three Hours of Graduate Credit, or More than Three Hours of Undergraduate and/or Graduate Credit in Assessment Issues.



Forty-two teachers indicated they served on their school improvement team while 45 teachers responded that they had input into the decision to use the publishers' textbook tests in their school improvement plans. Of the 88 teachers responding, 65 reported they administered the tests to at least one class of students.

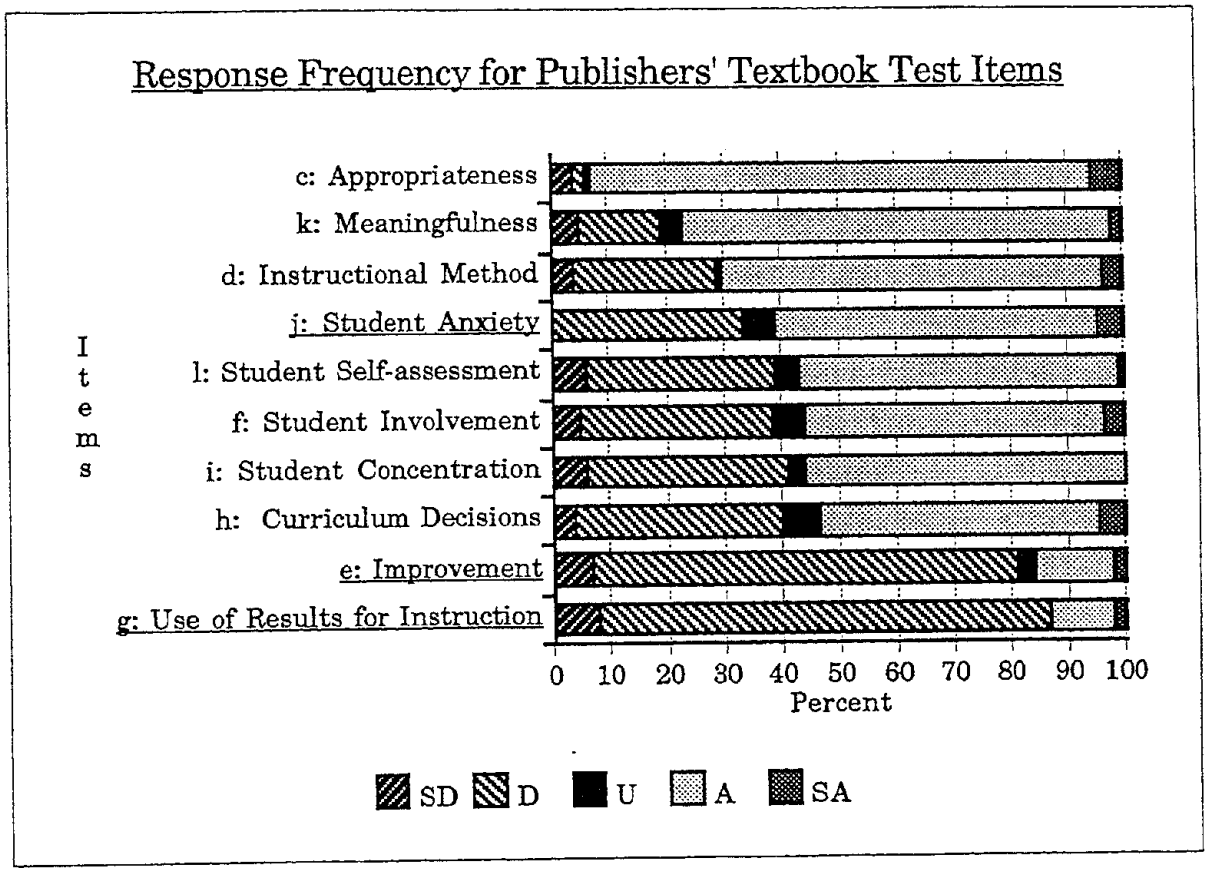
Publishers' Textbook Test Survey Item Response Frequency

Figure 64 shows the percentage of strongly disagree (SD), disagree (D), unsure (U), agree (A), and strongly agree (SA) teacher responses for each of the publishers' textbook test survey items. The items have been ordered from most positive to least positive responses. Over 90% of the teachers responding to this section agreed to some degree that publishers' textbook tests were appropriate for students, item c. Over 70% of the teachers believe these tests are meaningful measures of student learning,

item k, and that they parallel effective instruction methods, item d. Over 80% disagreed with two negative attitude statements. Teachers indicated they disagree with the statement that it is difficult to improve publishers' textbook test scores, item e, and with the statement that teachers generally do not use the results to change instruction, item g.

Figure 64

Percentage of Strongly Disagree (SD), Disagree (D), Unsure (U), Agree (A), and Strongly Agree (SA) Responses to Publishers' Textbook Test Attitude Items by Respondents



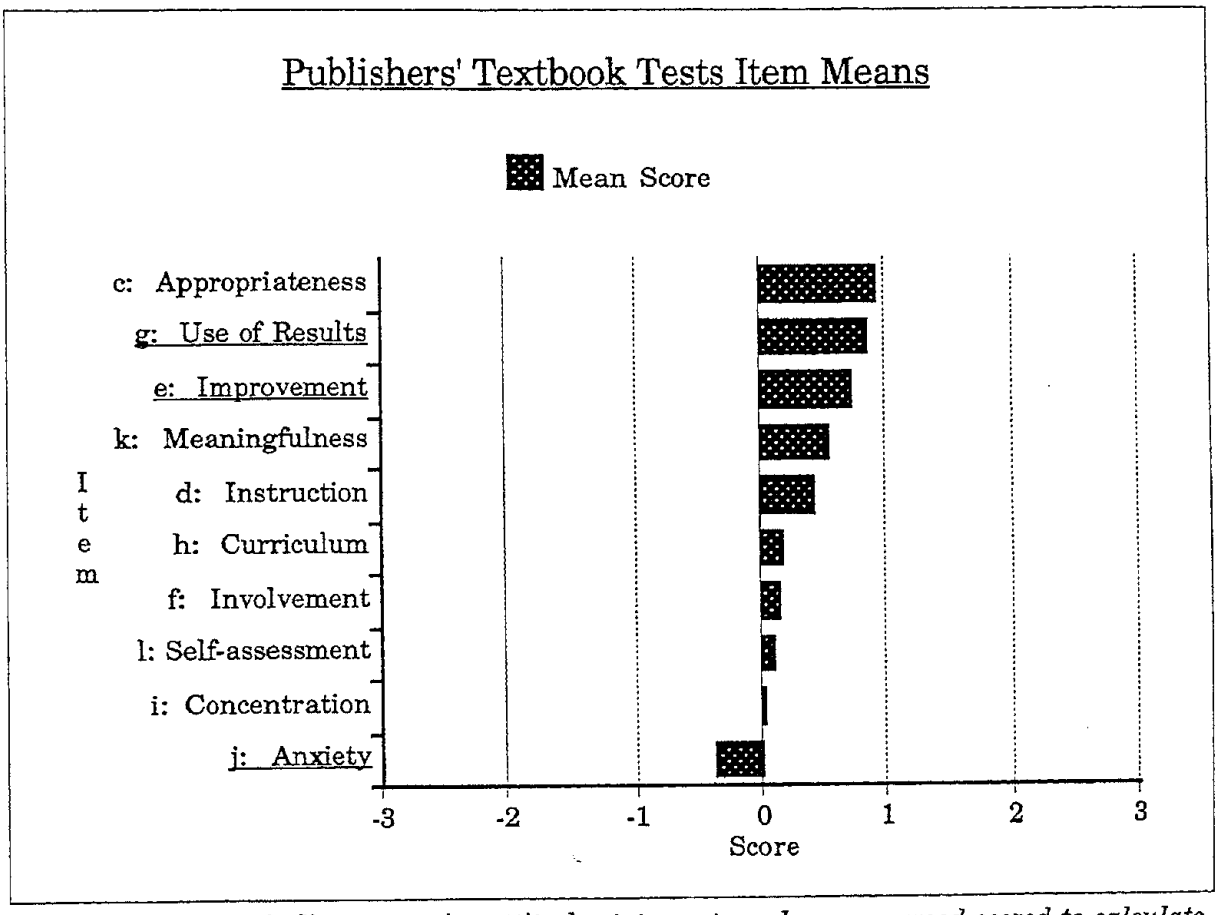
Underlined items indicate negative attitude statements.

Figure 65 shows the mean response scores for each of the publishers' textbook test attitude items. The means have been ordered to reflect decreasing positive attitudes. The mean scores of five items fall between -0.5 and 0.5: item f --student involvement, item h -- curriculum decisions, item i -- student concentration, item j -- student anxiety, and

item l -- student self-assessment. The mean for student anxiety falls in the negative range (M = - .375) The two most positive means were items c -- appropriateness (M = .920) and g -- use of results for instruction (M = .841).

Figure 65

Mean Scores of Respondents for Publishers' Textbook Tests Survey Attitude Items



Underlined items indicate negative attitude statements and were reversed scored to calculate the mean scores.

Statistical Analysis of Publishers' Textbook Tests Survey Data as a Function of Teaching Level of Respondents

One-way analysis of variance was used to examine the attitudes of teachers at various teaching levels about the effect of publishers' textbook tests. Using teaching level as the independent variable and the

scores on each item or set of items as the dependent variables, no significant differences ($p < .05$) were found.

Statistical Analysis of Publishers' Textbook Tests as a Function of Level of Decision Input

One-way analysis of variance was used to examine the attitudes of teachers who reported they provided input into the decision to use publishers' textbook tests in their school improvement plans and the attitudes of teachers who indicated they did not provide input into the decision. Comparisons were made using decision input as the independent variable. The independent variables are the respective attitude scores on particular items or sets of items. Figure 66 shows the mean student-centered attitude scores, the mean teacher-centered attitude scores, and the total attitude scores for teachers who indicated they provided input into the decision to use publishers' textbook tests as part of their school improvement plans and those who indicated they did not provide input.

Analysis of student-centered items.

One-way analysis of variance was used to determine whether teachers providing input into the decision and teachers not providing input into the decision to use publishers' textbook tests differed in their attitude about the effect of publishers' textbook tests on students. The total student-centered attitude scores was based on teacher responses to student-centered items f -- student involvement, i -- student concentration, j -- student anxiety, and l -- student self-assessment. The analysis indicated no significant differences in attitudes about student issues between teachers who provided input into the decision and those who did not.

Analysis of teacher-centered items.

One-way analysis of variance was used to determine whether teachers providing input into the decision to use publishers' textbook tests and teachers not providing input into the decision differed in their attitudes about the effect of publishers' textbook tests on teachers. The total teacher-centered attitude score was based on teacher responses to teacher-centered items d -- instructional method, e -- improvement of scores, g -- use of results for instruction, and h -- curriculum decisions. The analysis indicated significant differences in attitudes about teacher issues between teachers who provided input into the decision and those who did not (F (1, 86) = 4.2716, p = .0418). Teachers who provided input were significantly more positive in their attitude about teacher-centered items than teachers who did not provide input.

Analysis of total attitude score.

The third comparison involved the mean of all ten attitude items as the dependent variable. Results of the one-way analysis of variance indicated a significant difference in attitude toward publishers' textbook tests between teachers who provided input into the decision and those who did not (F (1, 86) = 4.6705, p = .0335). Teachers who provided input into the decision to use publishers' textbook tests reported a significantly more positive attitude than teachers who did not have input into the decision.

Analysis of individual items.

Using input into the decision to use publishers' textbook tests in school improvement plans as the independent variable, one-way analysis of variance was used to examine teachers' attitudes about each individual publishers' textbook test survey attitude item. Figure 67 shows the mean

attitude scores for each item for teachers who indicated they provided input into the decision and for teachers who indicated they did not provide input into the decision to use publishers' textbook tests. The items have been ordered according to the differences in mean attitude scores between teachers who provided input and those who did not provide input. Teachers who reported providing input into the decision responded more positively to eight attitude items than teachers who did not have input. Teachers providing input responded less positively than teachers not providing input on items j -- student anxiety and i -- student concentration. Significant differences between mean scores for teachers providing input and teachers not providing input ($p < .05$) were found for item k -- meaningfulness (F (1, 86) = 7.7034, p = .0068), item d -- instructional method (F (1, 86) = 5.9921, p = .0164), and item c -- appropriateness (F (1, 86) = 4.9663, p = .0285).

Figure 66

Mean Scores of Publishers' Textbook Tests (PTT) Student-centered, Teacher-centered, and Total Attitude Items as a Function of the Level of Decision Input by Respondents

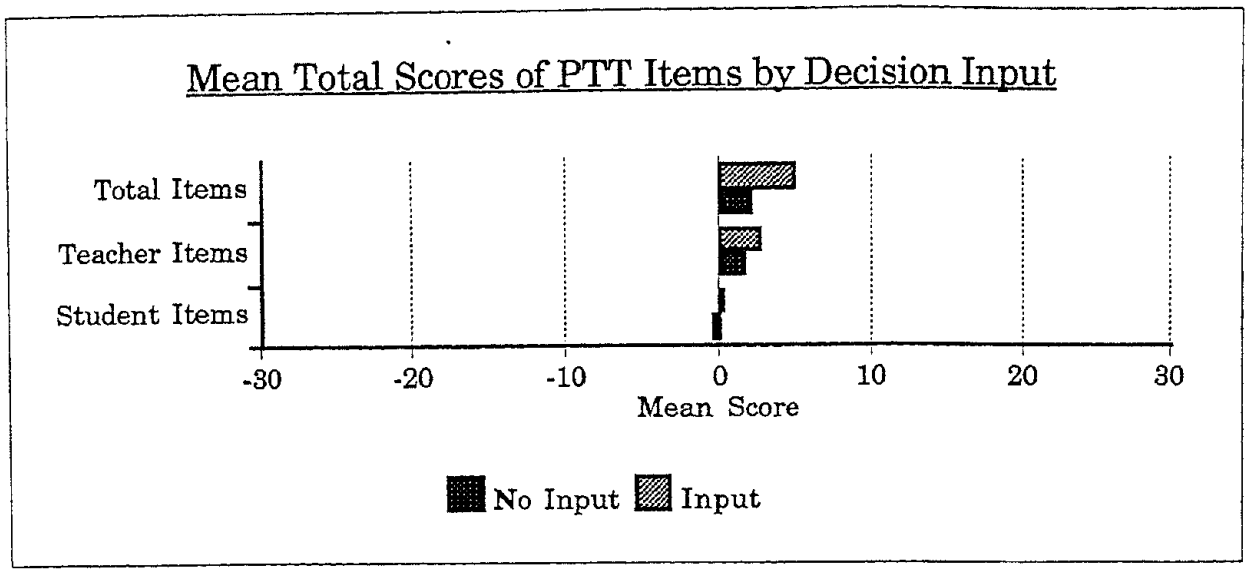
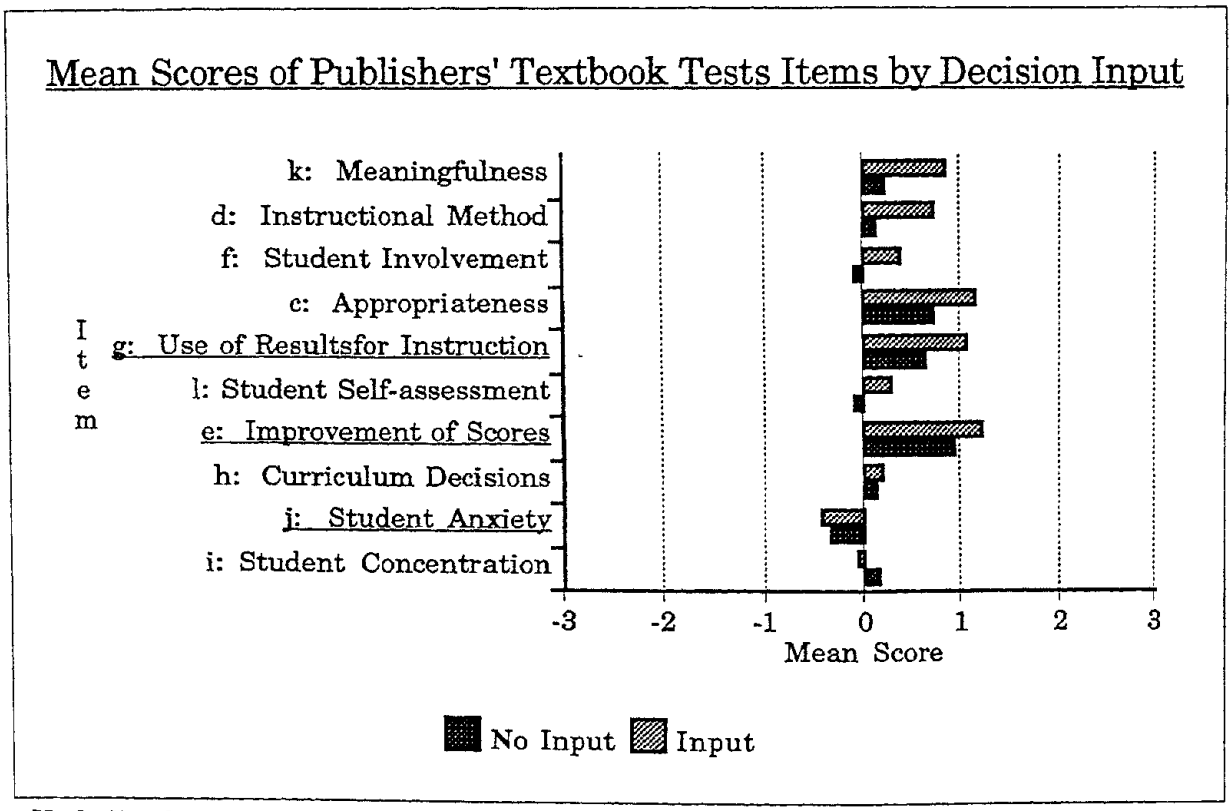


Figure 67

Mean Scores of Publishers' Textbook Tests Attitude Items as a Function of the Level of Decision Input by Respondents



Underlined items indicated negative attitude statements and were reversed scored to calculate the mean scores.

Description of Disqualified Surveys.

Of the 304 completed surveys, 117 yielded information about Accelerated Reader™ tests. One hundred eighty-seven surveys were disqualified for the following reasons: lack of demographic information, nine; nonuse or unsure of use, 142; no opinion, 17; no response, 19.

Demographics of Responding Teachers

Figure 68 shows the percentage of teachers teaching at the primary, intermediate, middle, secondary, and 'other' levels who responded to the Accelerated Reader™ tests survey section. The largest percentage categories include teachers of primary level, 32.5%, and teachers of intermediate levels, also 32.5%. The remaining categories of middle, secondary, and 'other' teachers comprise 11.1%, 10.3%, and 13.7% of the responding teachers, respectively.

Figure 68

Percentage of Primary, Intermediate, Middle, Secondary, and 'Other' Teachers Responding to Accelerated Reader™ Survey Items

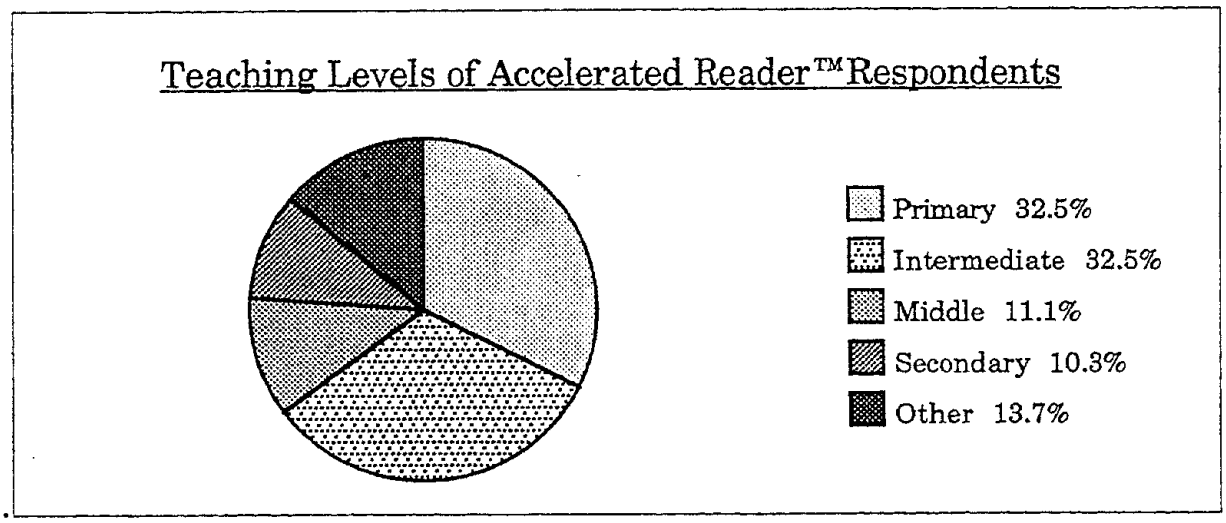


Figure 69 displays the percentages of teachers responding to the Accelerated Reader™ items who have taught one to four years, five to

nine years, ten to fourteen years, fifteen to nineteen years and twenty or more years at their current levels. The largest category of teachers responding, 29.9%, includes teachers who have taught at current levels one to four years. The smallest category, 11.1%, is the fifteen to nineteen years group. The remaining three categories, five to nine years, ten to fourteen years, and twenty years or more, compose 18.8%, 20.5% and 19.7% of the total respondents, respectively.

Figure 69

Percentage of Teachers Responding to the Accelerated Reader™ Survey Section with 1-4 Years, 5-9 Years, 10-14 Years, 15-19 Years, and 20 or More Years of Experience at their Current Levels

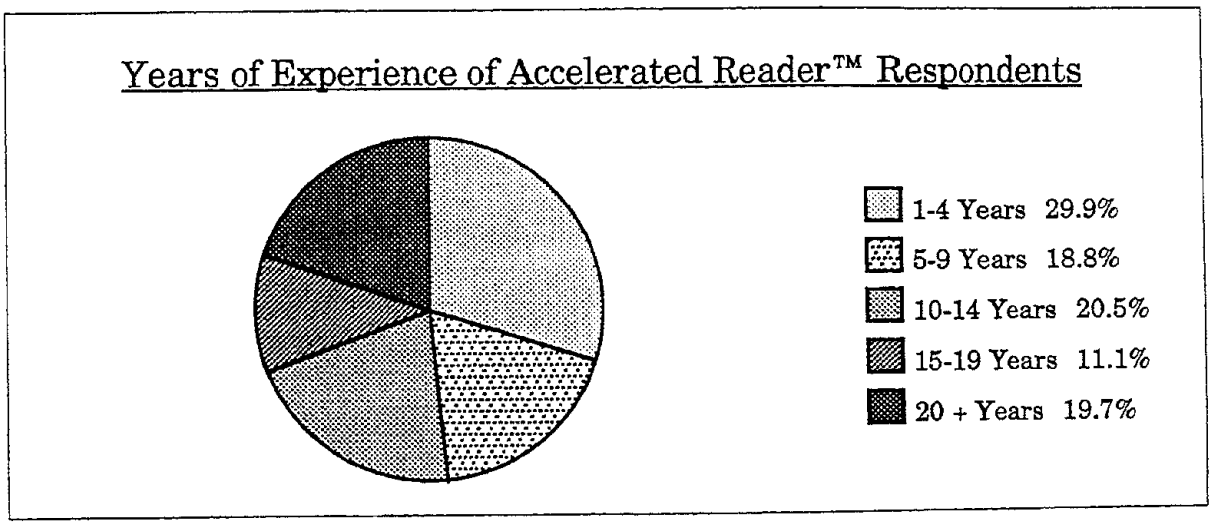
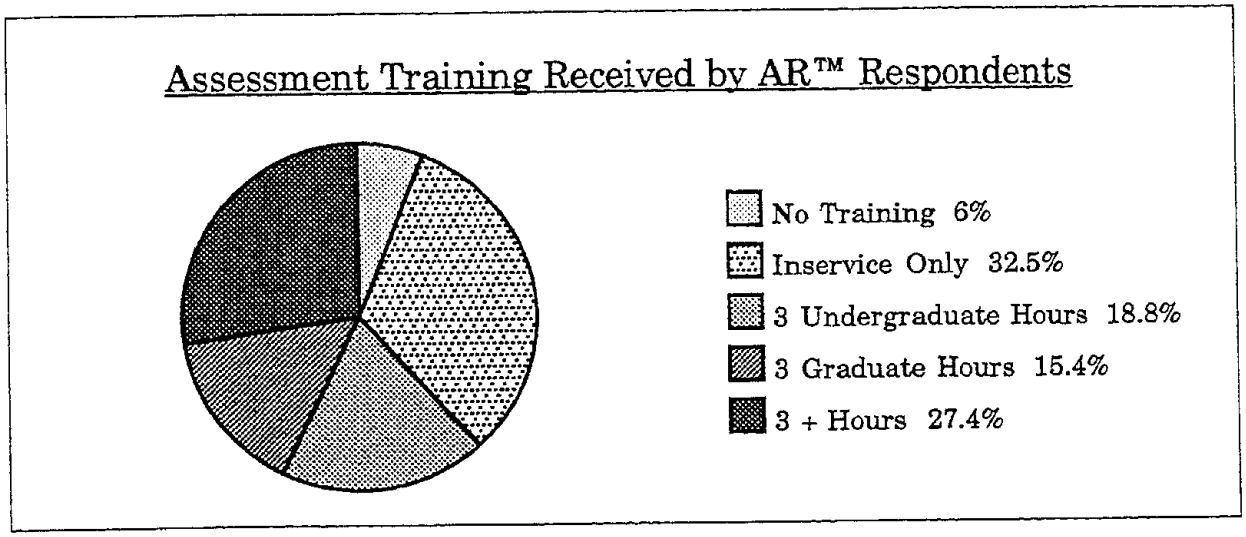


Figure 70 indicates the percentage of teachers with no assessment training, inservice training only, three undergraduate hours, three graduate hours, and more than three hours of undergraduate and/or graduate credit who responded to the Accelerated Reader™ section. Inservice training has been the only training for 32.5% of the respondents. Six percent have received no assessment training. Over 61% indicated they have some college credit, including 27.4% with more than three credit hours.

Figure 70

Percentage of Teachers Responding to the Accelerated Reader™ (AR) Test Survey Section with No Training, Inservice Training Only, Three Undergraduate Hours, Three Graduate Hours, and More than Three Hours of Undergraduate or Graduate Credit in Assessment Issues



Fifty-one teachers indicated they served on their school improvement team while 61 teachers responded that they had input into the decision to use the Accelerated Reader™ tests in their school improvement plans. Of the 117 teachers responding, 73 reported they administered the tests to at least one class of students.

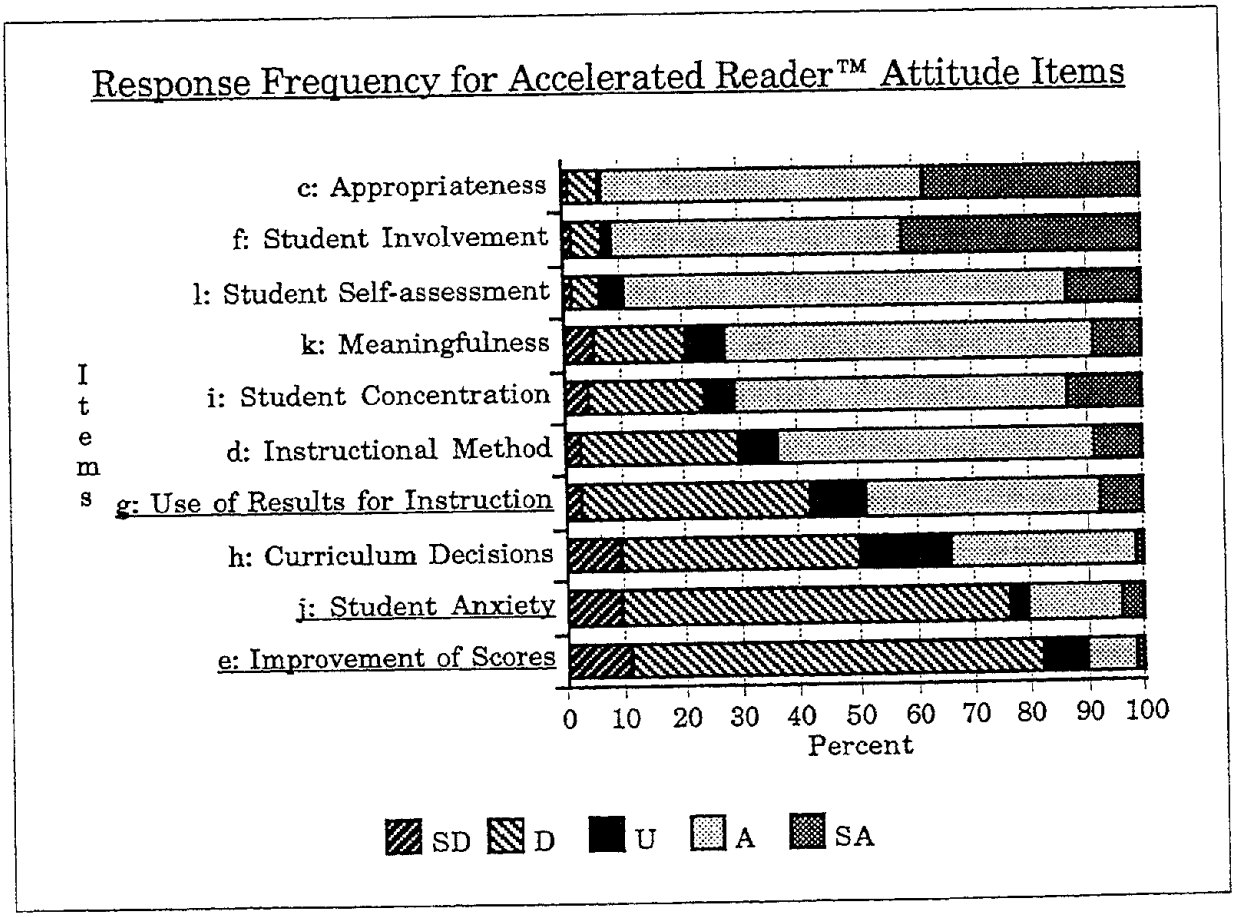
Accelerated Reader™ Survey Item Response Frequency

Figure 71 shows the proportion of strongly disagree (SD), disagree (D), unsure (U), agree (A), and strongly agree (SA) teacher responses for each of the Accelerated Reader™ items. The items have been ordered from the highest percentage of positive responses to the smallest percentage of positive responses. Nearly 90% of the teachers responding to this section agreed to some extent with items c -- appropriateness, f -- student involvement, and l -- student self-assessment. Between 35 and

45% of the respondents indicated they "strongly agreed" with statements c and f. Over 70% of the teachers indicated agreement with item i -- student concentration and item k -- meaningfulness of Accelerated Reader™ tests. Over 70% disagreed with two negative attitude statements, e and j. Teachers disagreed with the statement that it is difficult to improve Accelerated Reader™ scores, item e, and with the statement that students experience anxiety during Accelerated Reader™ tests, item j. Approximately 15% of the responding teachers indicated they were unsure about making curriculum changes on the basis of Accelerated Reader™ tests.

Figure 71

Percentage of Strongly Disagree (SD), Disagree (D), Unsure (U), Agree (A), and Strongly Agree (SA) Responses to Accelerated Reader™ Attitude Items by Respondents

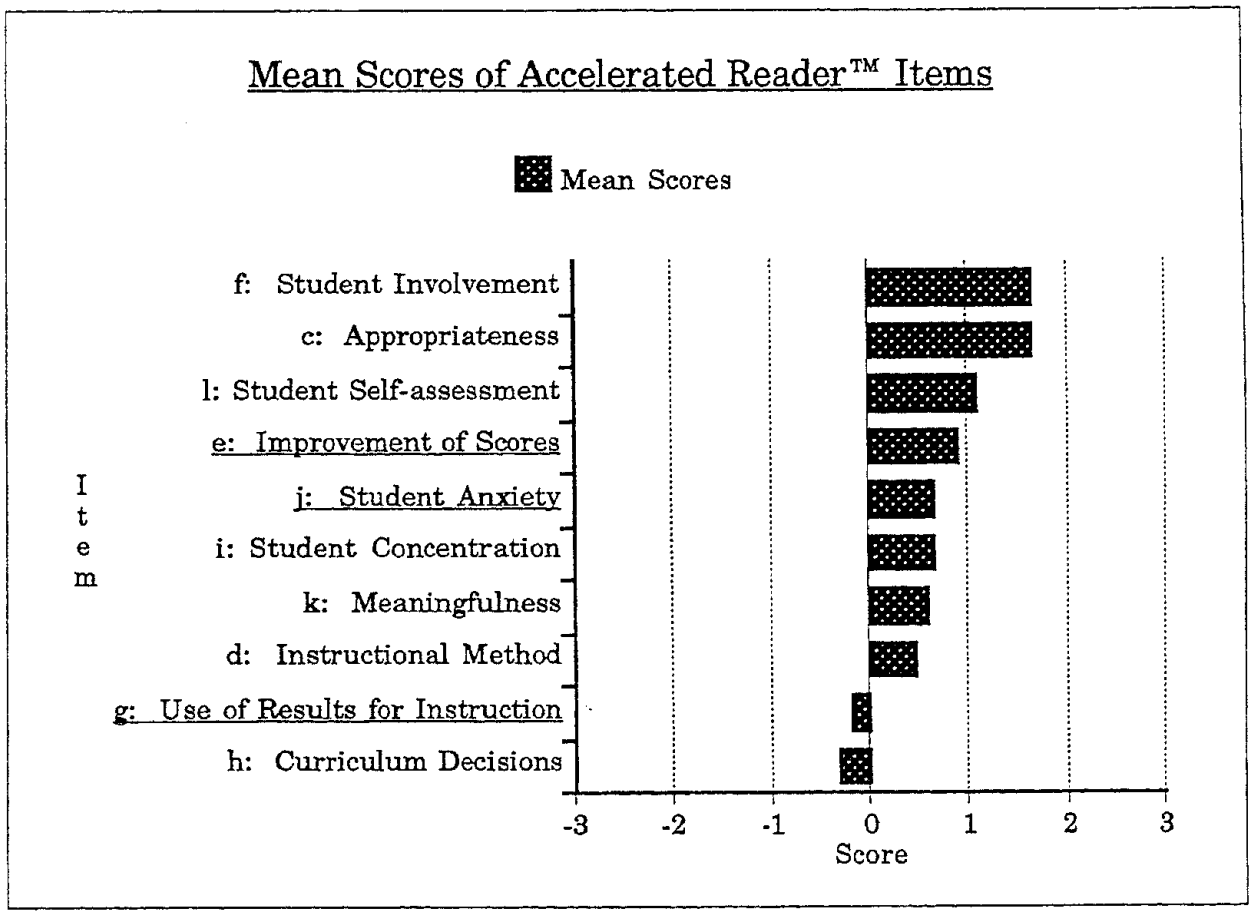


Underlined items indicate negative attitude statements.

Figure 72 shows the mean scores of respondents for each of the Accelerated Reader™ attitude items. Eight mean scores were positive while the means of two items were negative. The most positive attitude scores were for item c -- appropriateness (M = 1.624), item f -- student involvement (M = 1.65), and item l -- student self-assessment (M = 1.077). The two negative mean scores were item g -- use of results for instruction (M = - .171) and item h -- curriculum decisions (M = - .316).

Figure 72

Mean Scores of Respondents for Accelerated Reader™ Attitude Items



Underlined items indicate negative attitude statements and were reversed scored to calculate the mean score.

Statistical Analysis of Accelerated Reader™ Survey Data as a Function of Teaching Level

One-way analysis of variance was used to examine the attitudes of teachers toward Accelerated Reader™ tests. Using teaching level as the independent variable and the scores on each item or sets of items as the dependent variables, no significant differences ($p < .05$) between the attitudes of teachers teaching at primary, intermediate, middle, secondary, and 'other' levels were found.

Statistical Analysis of Accelerated Reader™ Survey Data as a Function of the Level of Decision Input

One-way analysis of variance was used to compare the attitudes of teachers who indicated they provided input into the decision to use Accelerated Reader™ tests as part of their school improvement plans with the attitudes of teachers who indicated they did not provide input into the decision. The independent variable in these comparisons is level of decision input. The dependent variables are the respective attitude scores on particular items or sets of items. Figure 73 shows the mean total scores of student-centered items, teacher-centered items, and total items. Attitudes of teachers who indicated they provided input were more positive regarding student-centered issues and total issues but slightly less positive regarding teacher-centered issues.

Analysis of student-centered items.

One-way analysis of variance was used to determine whether teachers providing input into the decision and teachers not providing input into the decision to use Accelerated Reader™ tests differed in their opinions about the effect of Accelerated Reader™ tests on students. The

total student-centered attitude score was based on four items: item f -- student involvement; item i -- student concentration; item j -- student anxiety; and item l -- student self-assessment. The analysis indicated significant differences in attitudes about student-centered issues between teachers who provided input into the decision and those who did not (F (1, 115) = 6.2287, p = .0140). Figure 73 illustrates the mean total of student-centered items for teachers who provided input was more positive than the student-centered mean total for teachers who did not provide input.

Analysis of teacher-centered items.

One-way analysis of variance was used to determine whether teachers providing input into the decision and teachers not providing input into the decision to use Accelerated Reader™ tests differed in their attitudes about the effect of Accelerated Reader™ tests on teachers. The total teacher-centered attitude score was based on four items: item d -- instructional method; item e -- improvement of scores; item g -- use of results to improve instruction; and item h -- curriculum decision. Figure 73 illustrates the mean totals of teacher-centered items for teachers who provided input and teachers who did not provide input. The analysis indicated no significant differences ($p < .05$) between the teachers who provided input and those who did not provide input.

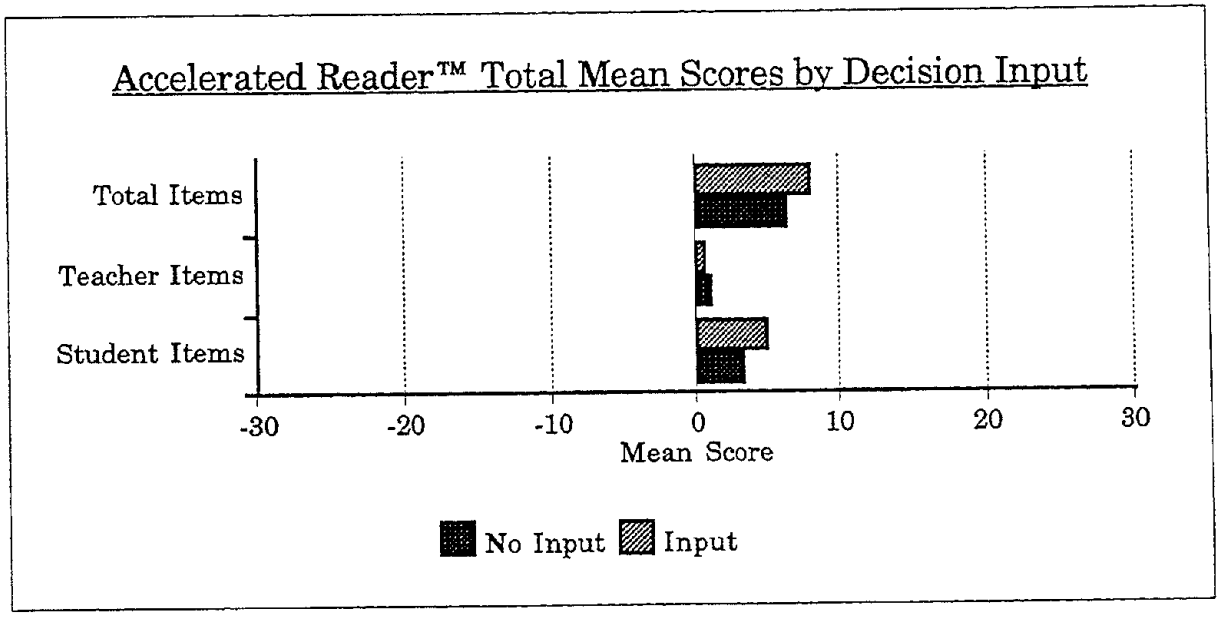
Analysis of total attitude score.

One-way analysis of variance was used to determine whether teachers providing input into the decision and teachers not providing input into the decision to use Accelerated Reader™ tests differed in their opinions toward the effect of the Accelerated Reader™ in general. Figure 73 shows the total mean scores for the ten attitude items for teachers

who provided input and teachers who did not provide input. The mean score of teachers indicating they provided input into the decision was more positive than the mean score of teachers who did not provide input but no significant differences ($p < .05$) were found.

Figure 73

Mean Scores of Accelerated Reader™ Student-centered, Teacher-centered, and Total Attitude Items as a Function of the Level of Decision Input by Respondents



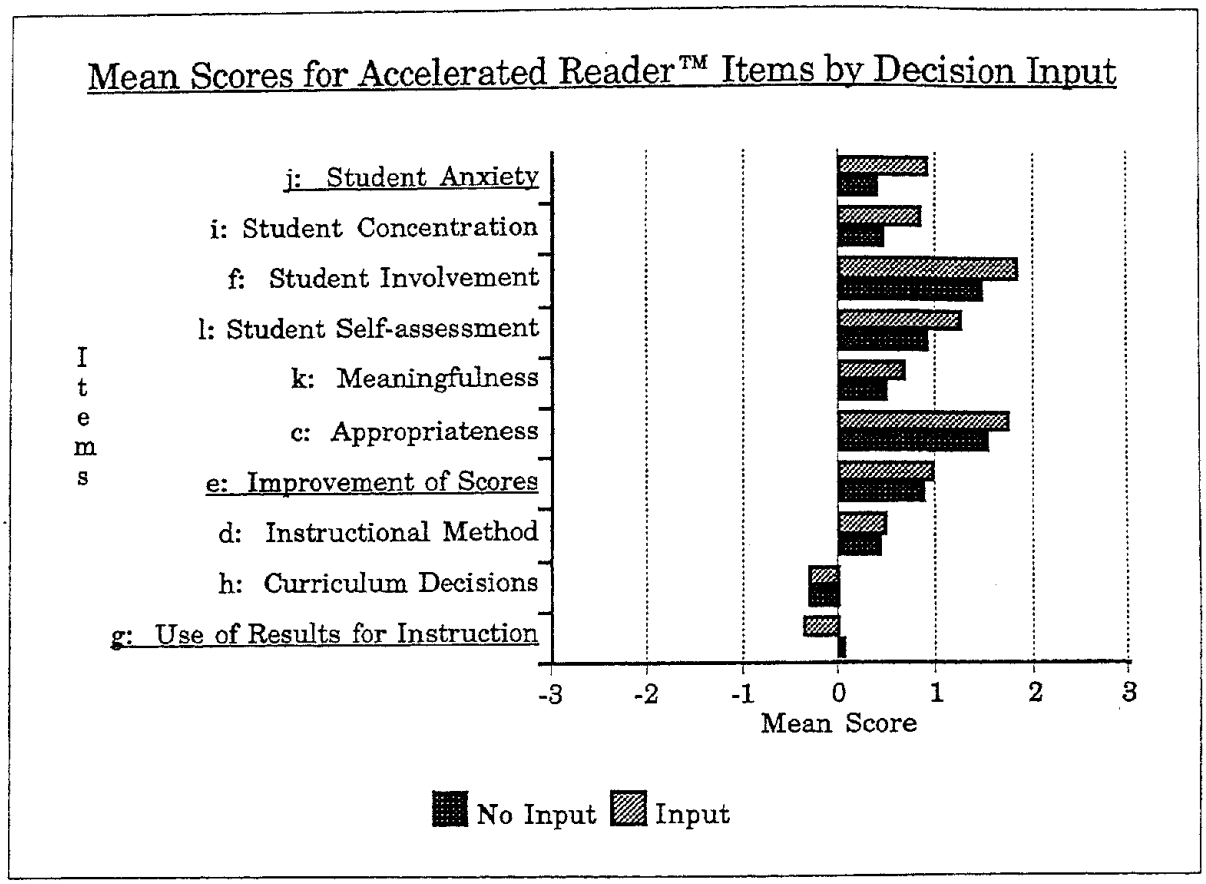
Analysis of individual items.

Figure 74 displays the mean item scores for teachers who reported they provided input into the decision to use Accelerated Reader™ and those who did not provide input. The pairs of mean scores have been ordered by differences between the scores of teachers who provided input and teachers who did not provide input. The mean response scores for teachers who provided input were more positive than the mean response scores for teachers who did not provide input for all items except g -- use of results for instruction. One-way analysis of variance was used to examine

the item mean differences between teachers who provided input and those who did not provide input. A significant difference was found between groups for item j -- student anxiety (F (1, 115) = 4.7555, p = .0312).

Figure 74

Mean Scores of Accelerated Reader™ Attitude Items as a Function of the Level of Decision Input by Respondents



Underlined items indicate negative attitude statements and were reversed scored to calculate the mean score.

Summaries of Data Collected

All teachers in Franklin County, Kansas, were invited to participate in this study by voluntarily completing the Teacher Attitude Survey, an instrument designed and written by the researcher for the purpose of collecting attitudinal data about assessments chosen for school improvement plans. Three hundred four teachers completed the self-

administered survey in a supervised setting. Usable data were collected from 295 of the completed and returned surveys. Each participating teacher was directed to complete only the survey assessment sections which related to his/her school improvement plans.

Ten attitude statements or items were included in each assessment section. Two items can be characterized as generic statements and related to appropriateness and meaningfulness. Four items are associated with student-centered issues: student involvement in the assessment, ability of students to concentrate on the assessment, amount of anxiety felt by students, and the opportunity for students to self-assess their own learning. Four items are associated with teacher-centered issues: matching instructional method to assessment, ease of ability to improve scores, using results to change instruction, and making curriculum decisions based on assessment results.

The study examined the attitudes of teachers related to two independent variables, level of teaching and level of decision input. Table 1 summarizes significant and nonsignificant findings regarding student-centered issues, teacher-centered issues, and total effect for each of the seven assessments studied in the survey.

Standardized Norm-referenced Tests

Data related to attitudes about standardized norm-referenced tests were collected from 267 surveys representing teachers from primary, intermediate, middle, secondary, and 'other' teaching levels. Attitudes were negative for eight of the ten individual attitude items. Results indicated a significant difference in attitudes toward student-centered issues between levels. Though all groups expressed negative attitudes

toward standardized norm-referenced test student-centered items, primary teachers were significantly more negative in attitude than intermediate, middle, and secondary level teachers. Attitudes of teachers in the 'other' category also differed significantly from the attitudes of secondary teachers. Attitudes toward teacher-centered issues were negative for each level category but there were no significant differences. When the total attitude score was studied, primary teachers had a significantly more negative attitude than either middle or secondary level teachers.

Teachers reported their personal involvement in the decision to include standardized norm-referenced tests as an assessment in their school improvement plans. The data revealed no significant differences in attitudes toward standardized norm-referenced tests between teachers who reported input into the decision and those who reported no input into the decision.

Criterion-referenced Tests

Data related to attitudes about criterion-referenced tests were collected from 117 surveys representing teachers from primary, intermediate, middle, secondary, and 'other' teaching levels. Attitudes were positive for six of the ten individual attitude items. Results indicated a significant difference in attitudes toward student-centered issues between levels. Though all groups expressed negative attitudes toward criterion-referenced test student-centered items, primary teachers were significantly more negative in attitude than secondary level teachers. Teacher-centered attitudes were positive for each level category with no significant differences. When the total attitude score was studied, all

scores were slightly positive with no significant differences between levels.

Teachers reported their personal involvement in the decision to include criterion-referenced tests as an assessment in their school improvement plans. The data revealed significant differences in attitudes toward criterion-referenced test between teachers who reported input into the decision and those who reported no input into the decision. All teachers held a negative attitude toward criterion-referenced tests when considering student-centered issues but expressed a positive attitude when judging teacher-centered issues. Teachers who participated in the decision to use criterion-referenced tests held a significantly more positive attitude than teachers who did not participate in the decision for all three comparisons: student-centered scores, teacher-centered scores, and total scores.

Kansas Reading Assessment

Data related to attitudes about the Kansas Reading Assessment were collected from 143 surveys representing teachers from primary, intermediate, middle, secondary, and 'other' teaching levels. Attitudes were positive for six of the ten individual attitude items. Results indicated significant differences in attitudes toward student-centered issues between levels. Though all groups expressed negative attitudes toward the Kansas Reading Assessment student-centered items, primary and intermediate teachers were significantly more negative in attitude than secondary level teachers. Teacher-centered attitudes were slightly positive for each level category but there were no significant differences. When the total attitude score was studied, the differences in attitudes between levels were not significant.

Teachers reported their personal involvement in the decision to include the Kansas Reading Assessment as an assessment in their school improvement plans. The data revealed no significant differences in attitudes about student-centered issues toward the Kansas Reading Assessment between teachers who reported input into the decision and those who reported no input into the decision. Both groups revealed negative attitudes toward the Kansas Reading Assessment as it relates to student issues. When the data for teacher-centered items and the total set were analyzed, significant differences between the categories were found. Teachers who provided input into the decision were significantly more positive in their attitudes than teachers who did not provide input.

Portfolio Assessment

Data related to attitudes about portfolio assessment were collected from 109 surveys representing teachers from primary, intermediate, middle, secondary, and 'other' teaching levels. Attitudes were positive for all ten individual attitude items. All groups expressed positive attitudes toward portfolio assessment student-centered items, teacher-centered items, and the total ten item set. Results indicated no significant differences in attitudes toward portfolio assessment between levels.

Teachers reported their personal involvement in the decision to include portfolio assessment as a part of their school improvement plans. Positive attitudes were reported by teachers who provided input into the decision and teachers who did not provide input. Teachers who provided input were significantly more positive about portfolio assessment student-centered issues, teacher-centered issues, and total effect than teachers who did not provide input.

Kansas Writing Assessment

Data related to attitudes about the Kansas Writing Assessment were collected from 121 surveys representing teachers from primary, intermediate, middle, secondary, and 'other' teaching levels. Attitudes were positive for nine of the ten individual Kansas Writing Assessment attitude items. Results indicated no significant differences in attitudes toward student-centered issues, teacher-centered issues, and total effect between levels.

Teachers reported their personal involvement in the decision to include the Kansas Writing Assessment as an assessment in their school improvement plans. The data revealed significant differences in attitudes toward the Kansas Writing Assessment between teachers who reported input into the decision and those who reported no input into the decision. For each set of items, student-centered, teacher-centered, and total effect, teachers who indicated they provided input into the decision were significantly more positive toward the Kansas Writing Assessment than teachers who reported no input into the decision.

Publishers' Textbook Tests

Data related to attitudes about publishers' textbook tests were collected from 88 surveys representing teachers from primary, intermediate, middle, secondary, and 'other' teaching levels. Teachers from the elementary setting, both primary and intermediate teachers, constituted 64.7% of the total teachers responding to the publishers' textbook test survey section. Attitudes were positive for nine of the ten individual attitude items. Attitudes were generally more positive for teacher-centered items than for student-centered items. However, the

results did not indicate a significant difference between levels in attitudes toward student-centered issues, teacher-centered issues, or total effect.

Teachers reported their personal involvement in the decision to include publishers' textbook tests as an assessment in their school improvement plans. Teachers who provided input into the decision reported more positive attitudes toward student-centered items, teacher-centered items and the total effect than teachers who did not provide input. Significant differences were noted regarding teacher-centered items and the total score; however, the difference between groups regarding student-centered items was not significant.

Accelerated Reader™ Tests

Data related to attitudes about Accelerated Reader™ tests were collected from 117 surveys representing teachers from primary, intermediate, middle, secondary, and 'other' teaching levels. Attitudes were positive for eight of the ten individual attitude items All groups expressed positive attitudes toward Accelerated Reader™ test student-centered items, teacher-centered items and total effect. Attitudes of all levels toward student-centered issues were more positive than their respective attitudes toward teacher-centered issues. Results indicated no significant differences in attitudes toward student-centered issues, teacher-centered issues, and total effect between levels.

Teachers reported their personal involvement in the decision to include Accelerated Reader™ tests as an assessment in their school improvement plans. The data revealed significant differences in attitudes toward Accelerated Reader™ tests student-centered issues between teachers who reported input into the decision and those who reported no

input into the decision. There were no significant differences regarding teacher-centered issues and total effect.

Table 1

Summary of Significant (S) or Nonsignificant (N) Differences between Attitudes toward Standardized Norm-referenced Tests (SNRT), Criterion-referenced Tests (CRT), the Kansas Reading Assessment (KRA), Portfolio Assessment, the Kansas Writing Assessment (KWA), Publishers' Textbook Tests (PTT), and Accelerated Reader™ (AR) Tests Related to the Independent Variables of Level of Teaching and Level of Decision Input Regarding Student-centered Issues, Teacher-centered Issues, and Total

	Level of Teaching:		
Assessment:	Student-centered Issues	Teacher-centered Issues	Total:
SNRT	S	N	S
CRT	S	N	N
KRA	S	N	N
Portfolio	N	N	N
KWA	N	N	N
PTT	N	N	N
AR	N	N	N

	Level of Decision Input:		
Assessment:	Student-centered Issues	Teacher-centered Issues	Total:
SNRT	N	N	N
CRT	S	S	S
KRA	N	S	S
Portfolio	S	S	S
KWA	S	S	S
PTT	N	S	S
AR	S	N	N

Teacher Attitudes Toward School Improvement Assessments

This section will answer Question 3: Do the attitudes of teachers differ toward particular types of tests? The first part will discuss the attitudes of the total respondent sample toward each of the seven assessments. Total attitude scores, scores for teacher-centered items, and scores for student-centered items will be reported. The second part will describe the statistical analysis conducted to determine significant differences in teacher attitudes toward the assessments.

Attitudes of the Total Respondent Sample

Total attitude items.

Each section of the survey consisted of ten items designed to measure the attitudes of teachers toward the particular assessments included in their school improvement plans. Figure 75 depicts the total sample mean attitude scores for each assessment. Teachers expressed the most positive attitude toward portfolio assessment ($M = 9.1091$) and the least positive attitude toward standardized norm-referenced tests ($M = -4.4774$). The negative mean score for standardized norm-referenced tests indicates that teachers have a negative attitude toward standardized tests. All other mean scores were positive, albeit the Kansas Reading Assessment mean score was only slightly positive.

Teacher-centered attitude items.

The total sample mean scores for teacher-centered items were calculated from responses to teacher-centered items (i.e. d -- instructional method, e -- improvement of scores, g -- use of results for instruction, and h -- curriculum decision). Figure 76 shows the total sample mean scores for teacher-centered items. The assessments have been ordered from

most positive to least positive: portfolio assessment, the Kansas Writing Assessment, criterion-referenced tests, publishers' textbook tests, the Kansas Reading Assessment, Accelerated Reader™ Tests, and standardized norm-referenced tests. The most positive attitude toward teacher-centered items was expressed for portfolio assessment (M = 2.7091) while the least positive attitude was expressed for standardized norm-referenced tests (M = - 0.7820). All other teacher-centered means were in the positive range, indicating a positive attitude toward the assessments. The mean scores for the four most positive assessments varied from M = 2.1591 to M = 2.7091, a difference of slightly over one-half a point. The Accelerated Reader™ test received the lowest positive attitude score (M = 0.8803).

Student-centered attitude items.

The total sample mean scores for student-centered items were calculated using responses to student-centered items (i.e. f -- student involvement, i -- student concentration, j -- student anxiety, and l -- student self-assessment). Figure 77 shows the total sample mean attitude scores for student-centered items. The assessments have been ordered from most positive to least positive: Accelerated Reader™ tests, portfolio assessment, the Kansas Writing Assessment, publishers' textbook tests, criterion-referenced tests, the Kansas Reading Assessment, and standardized norm-referenced tests. The most positive attitude was expressed toward Accelerated Reader™ tests (M = 4.0427) while the least positive attitude was expressed toward standardized norm-referenced tests (M = -4.0414). Four assessments received negative mean attitude scores: publishers' textbook tests, criterion-referenced

tests, the Kansas Reading Assessment, and standardized norm-referenced tests. The scores indicate a negative attitude by teachers toward the value of these assessments for students. All other student-centered means were in the positive range, indicating a positive attitude toward the assessments.

Figure 75

Total Sample Mean Scores for Complete Attitude Survey Items for Standardized Norm-referenced Tests, Criterion-referenced Tests, Kansas Reading Assessment, Portfolio Assessment, Kansas Writing Assessment, Publishers' Textbook Tests, and Accelerated Reader™

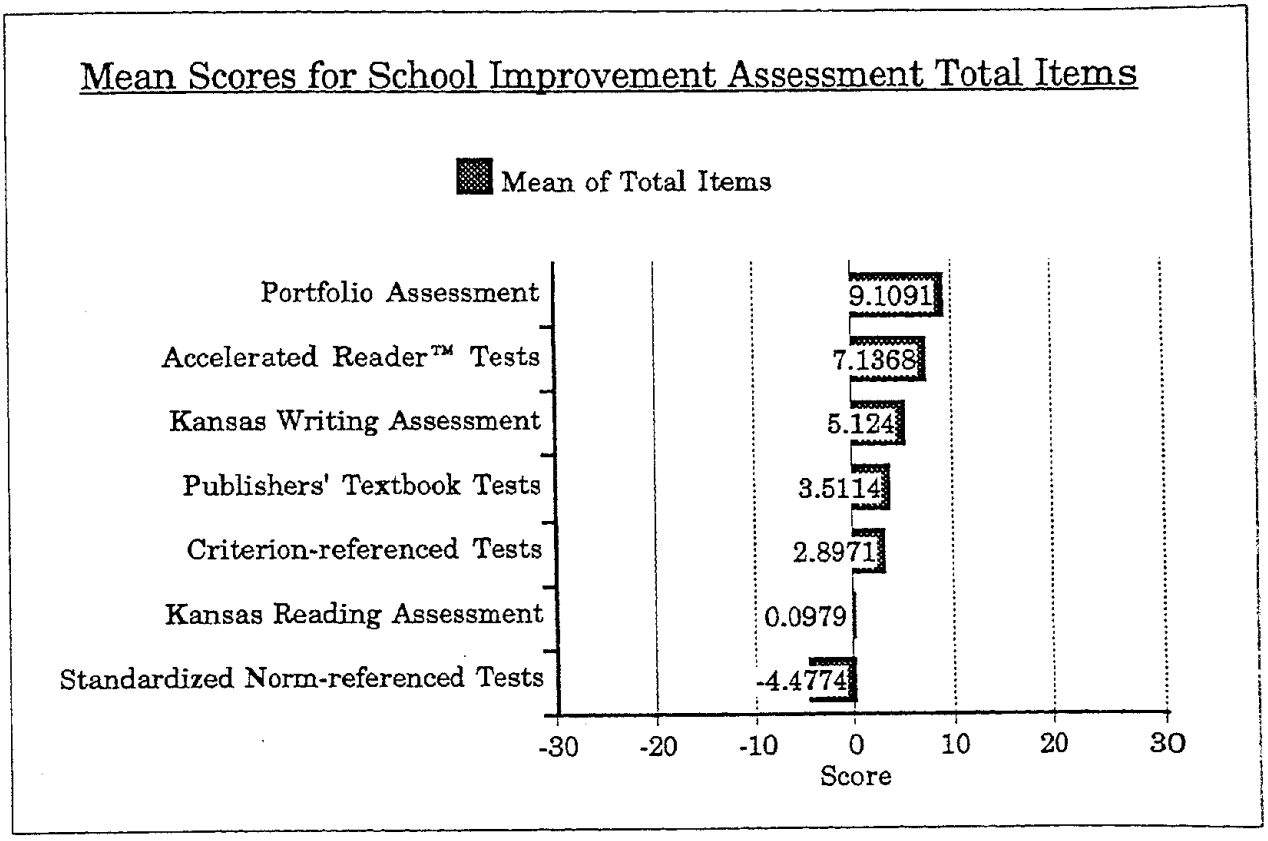


Figure 76

Total Sample Mean Scores for Teacher-centered Survey Items for Standardized Norm-referenced Tests, Criterion-referenced Tests, Kansas Reading Assessment, Portfolio Assessment, Kansas Writing Assessment, Publishers' Textbook Tests, and Accelerated Reader™

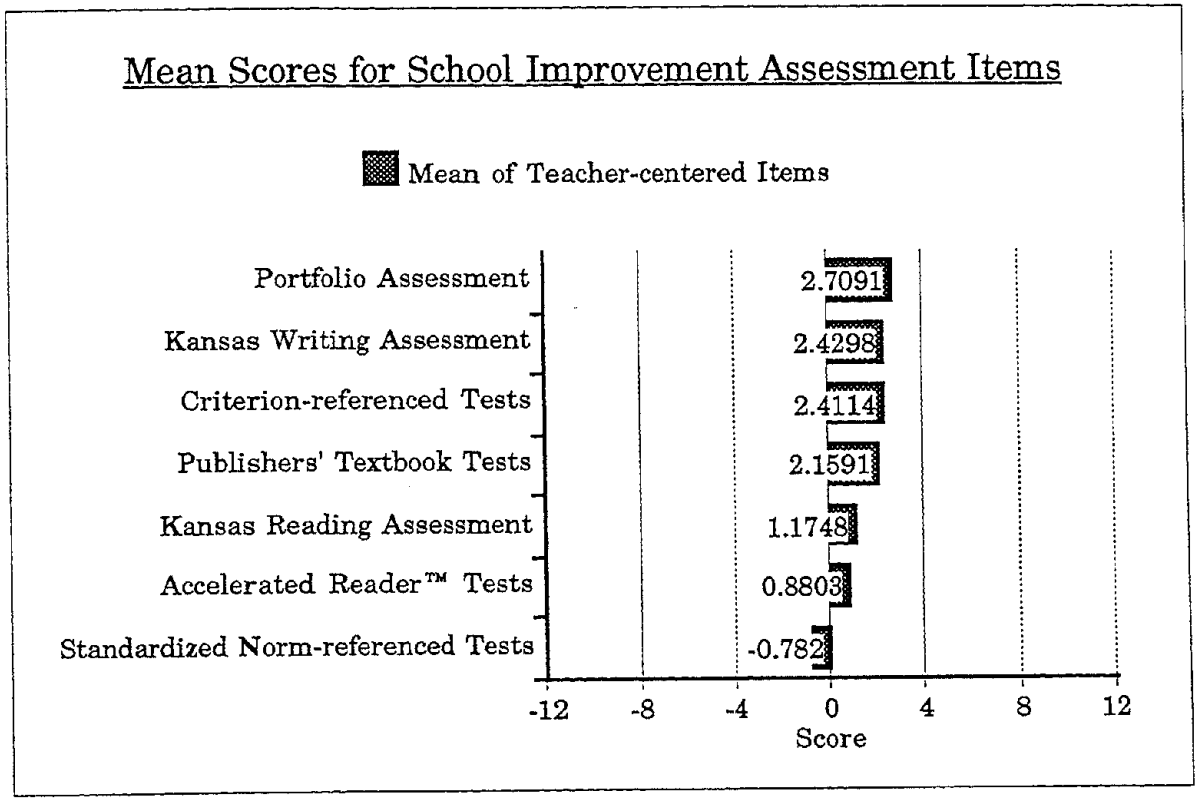
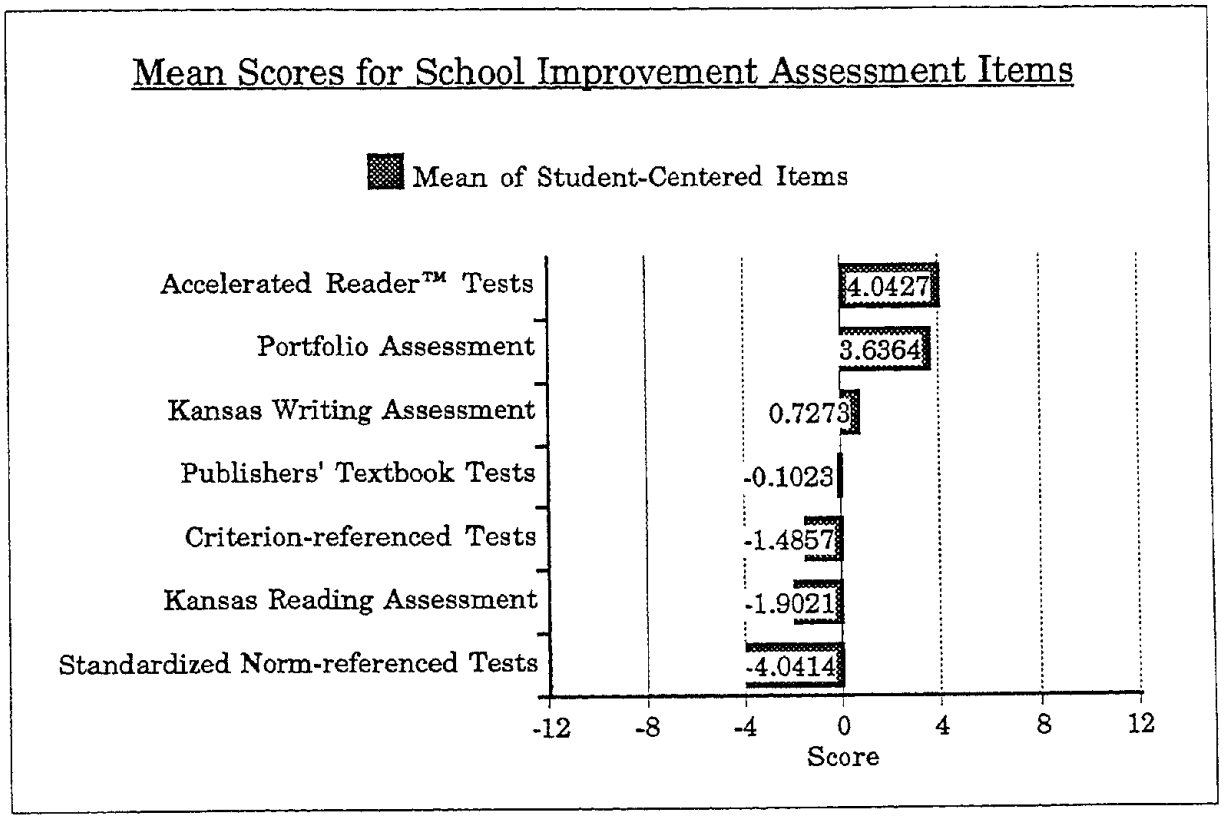


Figure 77

Total Sample Mean Scores for Student-centered Survey Items for Standardized Norm-referenced Tests, Criterion-referenced Tests, Kansas Reading Assessment, Portfolio Assessment, Kansas Writing Assessment, Publishers' Textbook Tests, and Accelerated Reader™



Comparative Statistical Analysis of Teacher Attitudes

In order to statistically compare the attitude means of teachers, subsets of the total sample were compiled. The set of all teachers responding to assessment x was joined with the set of all teachers responding to assessment y. The scores of teachers responding to only one of the two assessments were eliminated, leaving the scores of teachers who responded to both assessment x and assessment y. Paired-sample t-tests were conducted to examine differences between teachers' attitudes about assessment x and assessment y using the subset of teachers who responded to both assessment x and y.

Comparisons of assessment attitudes.

Table 2 summarizes the comparisons of teachers' attitudes between a particular assessment and the remaining six assessments. Attitudes which were significantly less positive are shown by a minus sign (-). Attitudes which were significantly more positive are shown by a plus sign (+). Attitudes which were not significantly different are marked with a small circle (o). By choosing an assessment in the left column and following along its row, one can learn whether teachers have a significantly more positive or negative attitude toward that assessment when compared to other individual assessments.

Teachers' attitudes about standardized norm-referenced tests (SNRT) are significantly less positive that their attitudes about criterion-referenced tests (CRT), the Kansas Reading Assessment (KRA), portfolio assessment, the Kansas Writing Assessment (KWA), publishers' textbook tests, and Accelerated Reader™ (AR) tests.

The attitudes of teachers toward criterion-referenced tests were more positive than their attitudes toward standardized norm-referenced tests and the Kansas Reading Assessment. Teachers expressed no significant difference in their attitudes toward criterion-referenced tests and publishers' textbook tests. They held more negative attitudes about criterion-referenced tests than portfolio assessment, the Kansas Writing Assessment, and Accelerated Reader™ tests.

The attitudes of teachers toward the Kansas Reading Assessment (KRA) were significantly more positive than attitudes toward standardized norm-referenced tests but less positive than attitudes toward criterion-referenced tests, portfolio assessment, the Kansas

Writing Assessment, and Accelerated Reader™ tests. There was no significant difference in attitudes toward the Kansas Reading Assessment and attitudes toward publishers' textbook tests.

Attitudes toward portfolio assessment were significantly more positive when compared to standardized norm-referenced tests, criterion-referenced tests, the Kansas Reading Assessment, the Kansas Writing Assessment, and publishers' textbook tests. There was no significant difference in teachers' attitudes toward portfolio assessment and Accelerated Reader™ tests.

The Kansas Writing Assessment (KWA) received significantly more positive attitude ratings when compared to standardized norm-referenced tests, criterion-referenced tests, and the Kansas Reading Assessment. There were no significant differences in attitudes toward the Kansas Writing Assessment and attitudes toward either publishers' textbook tests or Accelerated Reader™ tests. Only portfolio assessment received a significantly higher attitude score than the Kansas Writing Assessment.

Teachers' attitudes toward publishers' textbook tests were significantly more positive than attitudes toward standardized norm-referenced tests. When comparing publishers' textbook tests with criterion-referenced tests, the Kansas Reading Assessment, or the Kansas Writing Assessment, teachers expressed no significant differences in attitudes. Attitudes toward textbook tests were significantly less positive than attitudes toward portfolio assessment and Accelerated Reader™ tests.

Teachers' attitudes toward Accelerated Reader™ (AR) tests were

significantly more positive than their attitudes toward standardized norm-referenced tests, criterion-referenced tests, the Kansas Reading Assessment, and publishers' textbook bests. There were no significant differences in teachers' attitudes toward Accelerated Reader™ tests and portfolio assessment or the Kansas Writing Assessment.

Table 2

Summary of the Analysis of the Positive (+), Negative (-), and No Difference (○) Comparisons between Attitudes toward Standardized Norm-referenced Tests (SNRT), Criterion-referenced Tests (CRT), the Kansas Reading Assessment (KRA), Portfolio Assessment, the Kansas Writing Assessment (KWA), Publishers' Textbook Tests, and Accelerated Reader™ (AR) Tests

	Comparison Instruments:						
Assessment Instrument:	SNRT	CRT	KRA	Port-folio	KWA	Text-book	AR
SNRT	X	-	-	-	-	-	-
CRT	+	X	+	-	-	○	-
KRA	+	-	X	-	-	○	-
Portfolio	+	+	+	X	+	+	○
KWA	+	+	+	-	X	○	○
Textbook	+	○	○	-	○	X	-
AR	+	+	+	○	○	+	X

Comparisons of assessment attitudes regarding teacher-centered issues.

Table 3 summarizes the comparisons of teachers' attitudes toward a particular assessment and the remaining six assessments regarding

teacher-centered items (i.e. d -- instructional method, e -- improvement of scores, g -- use of results for instruction, and h -- curriculum decision). Attitudes which were significantly less positive are shown by a minus sign (-). Attitudes which were significantly more positive are shown by a plus sign (+). Attitudes which were not significantly different are marked with a small circle (o). By choosing an assessment in the left column and following along its row, one can learn whether teachers have a significantly more positive or negative attitude toward that assessment when compared to other individual assessments regarding teacher-centered issues.

The attitudes of teachers toward standardized norm-referenced tests (SNRT) were significantly less positive than their attitudes toward criterion-referenced tests, the Kansas Reading Assessment, portfolio assessment, the Kansas Writing Assessment, publishers' textbook tests, and Accelerated Reader™ tests.

Attitudes of teachers toward the Kansas Reading Assessment (KRA) were significantly more positive than their attitudes toward standardized norm-referenced tests. Attitudes of teachers were not significantly different between the Kansas Reading Assessment and publishers' textbook tests or Accelerated Reader™ tests regarding teacher-centered items. The Kansas Reading Assessment attitude scores were significantly less positive than the attitude scores of the criterion-referenced tests, portfolio assessment, and the Kansas Writing Assessment.

The Accelerated Reader™ section attitude scores were significantly more positive than standardized norm-referenced attitude

scores but significantly less positive than attitude scores of criterion-referenced tests, portfolios assessment, the Kansas Writing Assessment, and publisher's textbook tests.

With one exception, the comparisons between criterion-referenced tests, portfolio assessments, the Kansas Writing Assessment, and publisher's textbook tests revealed no significant differences in teachers' attitude scores. Teachers who responded to both the publishers' textbook tests section and the criterion-referenced test section were significantly more positive about criterion-referenced tests when considering teacher-centered items.

Table 3

Summary of the Analysis of the Positive (+), Negative (-), and No Difference (o) Comparisons between Attitudes toward Standardized Norm-referenced Tests (SNRT), Criterion-referenced Tests (CRT), the Kansas Reading Assessment (KRA), Portfolio Assessment, the Kansas Writing Assessment (KWA), Publishers' Textbook Tests, and Accelerated Reader™ (AR) Tests on Teacher-Centered Items

	Comparison Instruments:						
Assessment Instrument:	SNRT	CRT	KRA	Port-folio	KWA	Text-book	AR
SNRT	X	-	-	-	-	-	-
CRT	+	X	+	o	o	+	+
KRA	+	-	X	-	-	o	o
Portfolio	+	o	+	X	o	o	+
KWA	+	o	+	o	X	o	+
Textbook	+	-	o	o	o	X	+
AR	+	-	o	-	-	-	X

Comparisons of assessment attitudes regarding student-centered issues.

Table 4 summarizes the comparisons of teachers' attitudes toward a particular assessment and the remaining six assessments regarding student-centered items (i.e. f -- student involvement, i -- student concentration, j -- student anxiety, and l -- student self-assessment). Attitudes which were significantly less positive are shown by a minus sign (-). Attitudes which were significantly more positive are shown by a plus sign (+). Attitudes which were not significantly different are marked with a small circle (o).

By following standardized norm-referenced tests (SNRT) across the row, it becomes clear that standardized norm-referenced tests compare negatively with all other tests regarding student-centered issues. The minus signs indicate that teachers' attitudes toward standardized norm-referenced tests were significantly more negative that the comparison assessments.

Comparisons involving both the criterion-referenced tests (CRT) and the Kansas Reading Assessment (KRA) reported significantly more negative scores when compared to portfolio assessment, the Kansas Writing Assessment, publishers' textbook tests, and Accelerated Reader™ tests. Both assessments received significantly higher attitude scores than standardized norm-referenced tests. Criterion-referenced tests were judged significantly more positive than the Kansas Reading Assessment by the respondents.

Respondents' attitudes toward both portfolio assessment and Accelerated Reader™ tests were positive and not significantly different

from each other. They were significantly more positive than standardized norm-referenced tests, criterion-referenced tests, the Kansas Reading Assessment, the Kansas Writing Assessment, and publisher's textbook tests.

Attitudes toward the Kansas Writing Assessment student-centered items were not significantly different than attitudes toward publisher's textbook tests. Attitudes toward the Kansas Writing Assessment and publishers' textbook tests were significantly more positive than attitudes toward standardized norm-referenced tests, criterion-referenced tests, and the Kansas Reading Assessment.

Table 4

Summary of the Analysis of the Positive (+), Negative (-), and No Difference (o) Comparisons between Attitudes toward Standardized Norm-referenced Tests (SNRT), Criterion-referenced Tests (CRT), the Kansas Reading Assessment (KRA), Portfolio Assessment, the Kansas Writing Assessment (KWA), Publishers' Textbook Tests, and Accelerated Reader™ (AR) Tests on Student-Centered Items

	Comparison Instruments:						
Assessment Instrument:	SNRT	CRT	KRA	Port-folio	KWA	Text-book	AR
SNRT	X	-	-	-	-	-	-
CRT	+	X	+	-	-	-	-
KRA	+	-	X	-	-	-	-
Portfolio	+	+	+	X	+	+	o
KWA	+	+	+	-	X	o	-
Textbook	+	+	+	-	o	X	-
AR	+	+	+	o	+	+	X

When responding to student-centered items, teacher respondents held the most positive attitudes toward portfolio assessment and Accelerated Reader™ tests, followed by the Kansas Writing Assessment and publishers' textbook tests. Criterion-referenced tests, the Kansas Reading Assessment, and standardized norm-referenced tests were judged less positive, with attitudes toward student-centered issues regarding standardized norm-referenced tests being significantly negative.

Summary of Teacher Attitude Comparisons

Survey responses indicate that teachers have a significantly more negative opinion about standardized norm-referenced tests than any of the other six comparison assessments. This negative attitude toward standardized norm-referenced tests is true for both teacher-centered issues and student-centered issues. Teachers expressed positive attitudes about portfolio assessments in general, as well as for the student-centered and teacher-centered items regarding portfolio assessment. Teachers' attitudes toward Accelerated Reader™ tests were varied depending on the items. Accelerated Reader™ tests ranked first in order of scores for student-centered items, though not significantly different from portfolio assessment, and sixth in order of scores for teacher-centered items. In general teachers have positive attitudes about portfolio assessments, Accelerated Reader™ tests, and the Kansas Writing Assessment. Teachers' attitudes vary from positive to negative regarding publisher's textbook tests, criterion-referenced tests, and the Kansas Reading Assessment. Teachers generally hold negative attitudes toward standardized norm-referenced tests.

CHAPTER V: CONCLUSIONS

> A lady from the principal's office came to the first grade. She had a big pile of papers with little boxes all over them. She smiled at the first grade. "We have some tests for you," she said.
>
> Their teacher told first grade how to do the test. She said, "Read the questions carefully. Then take your pencil and fill in the box next to the right answer. You must work quickly. But do not worry--you can do it. Ready! Begin!"
>
> George looked at the test. It said:
>
> Rabbits eat
> ☐ lettuce ☐ dog food ☐ sandwiches
>
> He raised his hand. "Rabbits have to eat carrots, or their teeth will get too long and stick into them," he said. The teacher nodded and smiled, but she put her finger to her lips. George carefully drew in a carrot so the test people would know.
>
> Miriam Cohen, First Grade Takes a Test

Teachers in the state of Kansas have been mandated to develop data-based school improvement plans. An integral part of each plan is the identification of indicators to be used for determining gains in student achievement. These indicators generally take the form of various types of assessments that are given to students periodically to document improvement in learning.

Consequently, entire faculties of teachers have participated in developing school improvement plans which include a variety of assessments. This study was designed to investigate the attitudes of teachers in one county in Kansas toward the assessments they are using to measure student learning as described in their respective school improvement plans.

Three questions guided this study:

Question 1: Do the attitudes of primary, intermediate, middle and secondary-school teachers differ regarding particular assessments chosen for their school improvement plans?

Question 2: Do the attitudes of teachers who were involved in the decision-making process differ from the attitudes of teachers who were not involved in the process?

Question 3: Do the attitudes of teachers differ toward particular types of tests?

Summaries of Data Collected

All teachers in Franklin County, Kansas, were invited to participate in this study by voluntarily completing the Teacher Attitude Survey, an instrument designed and written by the researcher for the purpose of collecting attitudinal data about assessments used in school improvement plans. Three hundred four teachers completed the self-administered survey in a supervised setting. Usable data was collected from 295 of the completed and returned surveys. Each participating teacher was directed to complete only the survey assessment sections which related to his/her school improvement plan.

Ten attitude statements or items were included in each assessment section. Two items can be characterized as generic statements and related to appropriateness and meaningfulness. Four items are associated with student-centered issues: student involvement in the assessment, ability of students to concentrate on the assessment, amount of anxiety felt by students, and the opportunity for students to

self-assess their own learning. Four items are associated with teacher-centered issues: matching instructional method to assessment, ease of ability to improve scores, using results to change instruction, and making curriculum decisions based on assessment results.

Standardized Norm-referenced Tests

Data related to attitudes about standardized norm-referenced tests were collected from 267 surveys representing teachers from primary, intermediate, middle, secondary, and 'other' teaching levels. Attitudes were negative for eight of the ten individual attitude items. Results indicated a significant difference in attitudes toward student-centered issues between levels. Though all groups expressed negative attitudes toward standardized norm-referenced test student-centered items, primary teachers were significantly more negative in attitude than intermediate, middle, and secondary level teachers. Attitudes of teachers in the 'other' category also differed significantly from the attitudes of secondary teachers. Attitudes toward teacher-centered issues were negative for each level category but there were no significant differences. When the total attitude score was studied, primary teachers had a significantly more negative attitude than either middle or secondary level teachers.

Teachers reported their personal involvement in the decision to include standardized norm-referenced tests as an assessment in their school improvement plans. The data revealed no significant differences in attitudes toward standardized norm-referenced tests between teachers who reported input into the decision and those who reported no input into the decision.

Criterion-referenced Tests

Data related to attitudes about criterion-referenced tests were collected from 117 surveys representing teachers from primary, intermediate, middle, secondary, and 'other' teaching levels. Attitudes were positive for six of the ten individual attitude items. Results indicated a significant difference in attitudes toward student-centered issues between levels. Though all groups expressed negative attitudes toward criterion-referenced test student-centered items, primary teachers were significantly more negative in attitude than secondary level teachers. Teacher-centered attitudes were positive for each level category with no significant differences. When the total attitude score was studied, all scores were slightly positive with no significant differences between levels.

Teachers reported their personal involvement in the decision to include criterion-referenced tests as an assessment in their school improvement plans. The data revealed significant differences in attitudes toward criterion-referenced test between teachers who reported input into the decision and those who reported no input into the decision. All teachers held a negative attitude toward criterion-referenced tests when considering student-centered issues but expressed a positive attitude when judging teacher-centered issues. Teachers who participated in the decision to use criterion-referenced tests held a significantly more positive attitude than teachers who did not participate in the decision for all three comparisons: student-centered scores, teacher-centered scores, and total scores.

Kansas Reading Assessment

Data related to attitudes about the Kansas Reading Assessment

were collected from 143 surveys representing teachers from primary, intermediate, middle, secondary, and 'other' teaching levels. Attitudes were positive for six of the ten individual attitude items. Results indicated significant differences in attitudes toward student-centered issues between levels. Though all groups expressed negative attitudes toward the Kansas Reading Assessment student-centered items, primary and intermediate teachers were significantly more negative in attitude than secondary level teachers. Teacher-centered attitudes were slightly positive for each level category but there were no significant differences. When the total attitude score was studied, the differences in attitudes between levels were not significant.

Teachers reported their personal involvement in the decision to include the Kansas Reading Assessment as an assessment in their school improvement plans. The data revealed no significant differences in attitudes about student-centered issues toward the Kansas Reading Assessment between teachers who reported input into the decision and those who reported no input into the decision. Both groups revealed negative attitudes toward the Kansas Reading Assessment as it relates to student issues. When the data for teacher-centered items and the total set were analyzed, significant differences between the categories were found. Teachers who provided input into the decision were significantly more positive in their attitudes than teachers who did not provide input.

Portfolio Assessment

Data related to attitudes about portfolio assessment were collected from 109 surveys representing teachers from primary, intermediate, middle, secondary, and 'other' teaching levels. Attitudes were positive for

all ten individual attitude items. All groups expressed positive attitudes toward portfolio assessment student-centered items, teacher-centered items, and the total ten item set. Results indicated no significant differences in attitudes toward portfolio assessment between levels.

Teachers reported their personal involvement in the decision to include portfolio assessment as a part of their school improvement plans. Positive attitudes were reported by teachers who provided input into the decision and teachers who did not provide input. Teachers who provided input were significantly more positive about portfolio assessment student-centered issues, teacher-centered issues, and total effect than teachers who did not provide input.

Kansas Writing Assessment

Data related to attitudes about the Kansas Writing Assessment were collected from 121 surveys representing teachers from primary, intermediate, middle, secondary, and 'other' teaching levels. Attitudes were positive for nine of the ten individual Kansas Writing Assessment attitude items. Results indicated no significant differences in attitudes toward student-centered issues, teacher-centered issues, and total effect between levels.

Teachers reported their personal involvement in the decision to include the Kansas Writing Assessment as an assessment in their school improvement plans. The data revealed significant differences in attitudes toward the Kansas Writing Assessment between teachers who reported input into the decision and those who reported no input into the decision. For each set of items, student-centered, teacher-centered, and total effect, teachers who indicated they provided input into the decision were

significantly more positive toward the Kansas Writing Assessment than teachers who reported no input into the decision.

Publishers' Textbook Tests

Data related to attitudes about publishers' textbook tests were collected from 88 surveys representing teachers from primary, intermediate, middle, secondary, and 'other' teaching levels. Teachers from the elementary setting, both primary and intermediate teachers, constituted 64.7% of the total teachers responding to the publishers' textbook test survey section. Attitudes were positive for nine of the ten individual attitude items. Attitudes were generally more positive for teacher-centered items than for student-centered items. However, the results did not indicate a significant difference between levels in attitudes toward student-centered issues, teacher-centered issues, or total effect.

Teachers reported their personal involvement in the decision to include publishers' textbook tests as an assessment in their school improvement plans. Although teachers who provided input into the decision reported more positive attitudes toward student-centered items, teacher-centered items and the total effect than teachers who did not provide input, significant differences were noted regarding teacher-centered items and the total score. The difference between groups regarding student-centered items was not significant.

Accelerated Reader™ Tests

Data related to attitudes about Accelerated Reader™ tests were collected from 117 surveys representing teachers from primary, intermediate, middle, secondary, and 'other' teaching levels. Attitudes were positive for eight of the ten individual attitude items. Results

indicated no significant differences in attitudes toward student-centered issues, teacher-centered issues, and total effect between levels. All groups expressed positive attitudes toward Accelerated Reader™ test student-centered items, teacher-centered items and total effect. Attitudes of teachers of all levels toward student-centered issues were more positive than their respective attitudes toward teacher-centered issues.

Teachers reported their personal involvement in the decision to include Accelerated Reader™ tests as an assessment in their school improvement plans. The data revealed significant differences in attitudes toward Accelerated Reader™ tests student-centered issues between teachers who reported input into the decision and those who reported no input into the decision. There were no significant differences regarding teacher-centered issues and total effect.

Conclusions

Level of Students

> Jim whispered it to himself. "Dummy!"
> "Listen to me!" They had never heard their teacher sound like that. "The test doesn't tell everything. It doesn't tell all the things you can do! You can build things! You can read books! You can make pictures! You have good ideas! And another thing. The test doesn't tell you if you are a kind person who helps your friend. Those are important things."
>
> Miriam Cohen, First Grade Takes a Test

Primary teachers expressed significantly more negative attitudes than secondary teachers toward student-centered issues for standardized norm-referenced tests, criterion-referenced tests, and the Kansas Reading Assessment. In addition, primary teachers expressed more negative

attitudes toward standardized norm-referenced tests in general than secondary teachers.

Two plausible explanations come to mind. The first is the high-stakes nature of these assessments, especially standardized norm-referenced tests and the Kansas Reading Assessment. When the public viewing of test results is common, or the threat of publication is present, tests become high-stakes. Primary teachers generally share their students only with librarians, music, physical education, and art teachers. When the first grade class results are published, everyone knows which teacher is responsible. On the other hand, when the sophomore class results are published, no single teacher can take credit or blame.

The second explanation is more fundamental and aims at the heart of many primary level teachers. In recent years, primary education has focused on developmentally appropriate practices. Young children, five to seven years old, vary in their developmental progress. One need only visit a kindergarten or first grade and observe for a short time to see the range of developmental stages in one classroom. As a result, many primary teachers employ more developmentally appropriate practices than their counterparts in higher grades. Popham (Kirst, 1991a) explains that not only are early childhood educators focusing on instruction that is age-appropriate but they are also looking for instruction that is individually appropriate. The student receives the attention, rather than the subject. Developmentally appropriate practice lends itself to individualization as teachers attempt to get children to become more positive about themselves and about learning. Developmentally appropriate practices are generally founded on the constructivist learning theory that students

construct knowledge based on their prior knowledge, skills, values, and beliefs. Teaching based on the constructivist theory must be highly adaptive and allow for many starting points and pathways. Teachers are no longer merely "deliverers of instruction" but rather cognitive coaches (Darling-Hammond, 1994; McDonald, 1996). Young students need opportunities for active learning: manipulatives, opportunities for talk and conversation with each other and with adults, and interactions with their environment, either through actual experience or through literature or expository material. Shepard (Kirst, 1991b) believes that good teaching does not sort young children into readers and nonreaders, allowing only the readers to do comprehension work. For example, good instruction would focus on listening comprehension and aim at thinking and construction of meaning regardless of the decoding abilities of the students. She believes that good assessment supports good teaching and the focus should be on thinking rather than eliminating wrong answers. Primary teachers who believe in this philosophy will have difficulty supporting assessment that stresses single correct answers, completed in a 'sterilized' environment, punctuated by a timer signaling the end of the test.

Level of Decision Input

With one exception, teachers who reported that they provided input into the decision to use certain assessments as part of their school's improvement plan held a significantly more positive attitude toward at least one issue regarding those assessments than teachers who reported they did not have input into the decision. Only standardized norm-referenced tests yielded no significant differences on any issue between teachers' attitudes based on level of decision input.

Standardized norm-referenced tests are one of the assessments of choice in almost every building surveyed. One could ask why teachers chose norm-referenced tests but still carry the same negative attitudes toward them as teachers who did not have input? The answer may lie in expectations -- expectations of the public, the board of education, parents, even teachers. After decades of reporting standardized norm-referenced test percentiles, stanines, grade equivalents, etc., faculties may simply not be able to imagine replacing the unpopular standardized norm-referenced test with a different assessment (Wraga, 1994). Perhaps the administration explained that the district's choice of standardized norm-referenced test and the appropriate state assessment would be used and that the faculty would be allowed to choose the third. Why this single assessment did not show significant differences according to level of input can only be surmised.

The remaining six assessments demonstrate the power of site-based decision-making when dealing with important issues affecting schools. Three of the assessments, criterion-referenced tests, portfolio assessment, the Kansas Writing Assessment were favored in all three areas, student-centered issues, and teacher-centered issues and total effect, by teachers who provided input. Teachers with input registered significantly more positive attitudes about teacher-centered issues and total effect regarding publishers' textbook tests and the Kansas Reading Assessment than teachers without input. Teachers with input were significantly more positive about Accelerated Reader™ student-centered issues than teachers without input.

This issue is not about liking one assessment better than another.

Some of the mean scores were negative as well as positive -- rather it is about the power to make the decision. School improvement efforts and high-quality classroom practice are linked with teachers' motivation and sense of professional effectiveness. McLaughlin (1986) explains that the intrinsic rewards associated with teaching are tied to teachers' sense of efficacy. Without a sense of efficacy, teachers lose motivation and the loss of professional effectiveness results in dampened school improvement efforts. McDonald (1986) reminds educators that when teachers are treated as merely the curriculum delivery vehicles, the targets of policymaking and in-servicing, teachers have been disempowered. He provides the analogy: "one cannot make a better orchestra without the violinists' active participation" (p. 156). When talk of reform comes from the White House, the statehouse, or the board room, and leaves out the school house, potential energy and enthusiasm for effective change is lost.

Assessment Comparisons

Teachers hold the most positive overall attitudes toward portfolio assessment. Teachers find the strength of portfolio assessment in the student issues. Teachers generally reported students able to use portfolios to self-assess their own learning and to become actively involved in the process. Teachers also reported that students are generally not anxious about their performance when measured by portfolio assessment. Teachers agreed that an exhibition of work collected over time parallels effective instructional methods. These sentiments are echoed in a qualitative study by Roe and Vukelich (1997) which examined changes in attitudes experienced by teachers as they developed and implemented a portfolio assessment system over a period of years. The principle themes

detailed by Roe and Vukelich included streamlining the process, encouraging increased student involvement in the evaluation of their learning, and selecting appropriate instructional responses to student abilities.

Accelerated Reader™ earned the second highest mean attitude score. Paradoxically, the mean score was highest of the seven assessment types for student-centered issues but sixth, or next to last, for teacher-centered issues. Teachers recognized that the results from Accelerated Reader™ tests will most likely not impact curriculum decisions nor influence instruction. While Accelerated Reader™ tests are essentially single correct answer, multiple-choice tests, their appeal lies in the method of delivery -- the computer. Advantage!, a bimonthly publication of Advantage Learning Systems, the parent company for Accelerated Reader™, explains that the instant feedback students receive lets them know the progress they've made and turns reading into a game. Teachers responding to the Accelerated Reader™ survey section concur. The respondents expressed extremely positive attitudes regarding the items dealing with student involvement and student self-assessment.

The Kansas Writing Assessment followed Accelerated Reader™ in order of total mean score. Teachers were generally more positive regarding teacher-centered issues than student-centered issues. Respondents agreed that a direct writing assessment parallels effective instructional methods and that it should influence curriculum decisions. They also agreed that students become involved in the writing but expressed a negative attitude when considering student anxiety. Quellmalz (1986) reports that teachers are dissatisfied when holistic

scores are used to score student writing. He suggests that students advance when they are taught how to combine components into a competent performance. The Kansas Writing Assessment features multiple, or analytic scores, which are based on criteria that students are taught in regular classroom instruction. The assessment has been designed to be embedded in ongoing process writing instruction. No specific prompts are offered and no exact time limit is stipulated. Opportunities to revise exist since teachers are free to use the assessment as another episode of classroom writing instruction. These allowances counter some identified problems of many large-scale writing assessments, namely the inability of the assessment to tailor writing topics to students' background knowledge and the lack of time to fully develop a topic (Quellmalz, 1986). Depending on the expertise of the teacher, the Kansas Writing Assessment offers students oportunities to seek and use feedback, part of the writing process that is often left out of large-scale assessments (Wiggins, 1994).

Teachers' attitudes were very similar toward criterion-referenced tests and publishers' textbook tests. Both tests are generally single-answer multiple-choice or short answer tests. Neither are often mentioned as high-stakes tests. Both are designed to measure mastery of specific skills in identified content areas. Gullo (1994) explains that criterion-referenced tests are often used to determine the effects of instruction, a belief consistent with the respondents' more positive attitude toward teacher-centered issues for criterion-referenced tests. Teachers agreed with items related to curriculum decisions and using results to change instruction. They were less likely to agree that the

method of assessment, multiple-choice items with one correct answer, parallels effective instructional methods. Respondents expressed a negative attitude toward all four student issues, with student anxiety during criterion-referenced tests receiving the most negative mean score. Wiggins (1989) believes criterion-referenced tests are inadequate because the problems are contrived and the cues artificial. The lack of opportunities to demonstrate intellectual competence may contribute the the respondents' negative attitude regarding student involvement, self-assessment, and concentration involving criterion-referenced tests. Criterion-referenced tests received a higher mean attitude score than standardized norm-referenced tests. Many teachers prefer to provide feedback to students against an established criterion, rather than against the performance of other test-takers (Educational Testing Service, 1990).

Teachers responding to both criterion-referenced and publishers' textbook tests expressed a significantly more positive attitude toward criterion-referenced tests concerning teacher-centered items and a significantly more positive attitude toward publishers' textbook tests concerning student-centered items. On the whole, teachers responding to criterion-referenced assessment items and/or publisher's textbook test items were generally positive about all teacher-centered issues. Publisher's textbook tests are commonly found accompanying every textbook series adopted in all areas. Schools can use textbook tests for home economics, chemistry, second grade math, and drivers' education. Every teacher who uses a textbook can choose to use an accompanying chapter or unit test. The availability may be one factor that accounts for the positive attitudes of teachers. Generally, the scores are available as

soon as the teacher has time to check the test. The ability to use the results in a timely manner and the ease of improving scores may account for the positive attitudes toward publishers' textbook tests teacher-centered issues. The comparison between item means for criterion-referenced tests and publishers' textbook tests student-centered items shows that the items are ranked in the same order at the lower end. The most negative score for each test is for student anxiety. In all four student-centered items, the means for the publisher's textbook test items are significantly more positive than criterion-referenced test item means. The familiarity of teachers and students with publishers' textbook tests may account for the more positive scores of publishers' textbook tests.

The Kansas Reading Assessment ranked sixth with a slightly positive total attitude score. It was significantly more positive than standardized norm-referenced tests. The Kansas Reading Assessment presents a unique dilemma. The Kansas Reading Assessment has two distinct types of assessment strategies embedded in one test. Part of the test consists of multiple-choice, multiple answer items. Students are directed to mark all responses that are correct for each individual item. This item format is usually unfamiliar to many students who have learned, through their previous experience with multiple-choice items, to find one correct answer. When teachers responded negatively to student-centered issues regarding the Kansas Reading Assessment, it may have been this portion of the test which caused them to form that opinion. The second type of assessment in the Kansas Reading Assessment is the essay item. Students were required to write a short essay answering a question related to each reading selection. These essays were locally

scored using a rubric which may or may not have been taught to the students. Because teachers responded positively to the Kansas Writing Assessment, it is not implausible to believe that teachers would also be more positive to the performance assessment section of the Kansas Reading Assessment. Based on these survey results, it is not possible to conclude which of these assessment types, multi-answer multiple-choice items or essay, informed the attitude scores of respondents. It is interesting to note, however, that 88 surveys were disqualified because the respondents held no opinion. Another factor which may have impacted the low attitude score is the high-stakes nature of the test. Not only were results published in local newspapers, but in regional newspapers with state-wide distribution as well.

The seventh and last assessment in ranked order is the standardized norm-referenced test. Teachers who responded to both the standardized norm-referenced section and any other assessment section, were significantly more negative about the standardized norm-referenced test. This statement is true for student-centered issues and teacher-centered issues, as well as the total score. More teachers responded to this section than any other section. Only five surveys were disqualified because the respondent had no opinion.

The negative attitudes of teachers toward standardized norm-referenced tests have been well documented (Corbett & Wilson, 1991; Monsaas & Engelhard, 1994; Stiggins & Bridgeford, 1984). When considering teacher-centered items, teachers expressed disagreement with the statement that single-answer multiple-choice items parallel effective instructional methods. Mitchell (1992) emphatically denounces multiple-

choice tests. She relates six deficiencies concerning their use. Briefly, the reasons for her criticisms of multiple-choice tests include the student's passive selection of a response, the false impression that all questions and problems have right or wrong answers, over-reliance on memorization and recall, and the selection of what is easily tested. Mitchell further explains that multiple-choice tests do not accurately portray what students know and can do and such tests "trivialize teaching and learning" (p. 16). Lipson (1987) reports that "knowledge of how we are to be tested alters how we subconsciously process information and organize knowledge in our minds" (p. 29). He cites the results of a study where students expecting a multiple-choice test scored lower than students expecting a constructed response test, even on the multiple-choice test.

Teachers in this survey also cited the student-centered issue of anxiety as a factor contributing to negative attitudes toward standardized norm-referenced tests. Hill and Wigfield (1984) attribute negative motivation and debilitating effects on school performance directly to test anxiety. To counteract the effects of anxiety on test performance, several programs designed to teach test-wiseness have been developed. A study by Callenbach (as cited in Brown, 1982) found that "training in test-wiseness increased standardized reading test scores" (p. 181). If training in test-wiseness causes standardized reading test scores to increase, then perhaps the test more accurately measures test-taking abilities than reading.

The inability of students to self-assess learning also contributed to the negative attitudes of teachers toward standardized norm-referenced tests. In fact, the inability of teachers to assess student learning using

the standardized norm-referenced tests may also contribute to teachers' negative attitudes. Sternio (1981) believes the "shield of secrecy" surrounding norm-referenced tests keeps outsiders from understanding the inner workings of the tests. Because students generally never see the items again unless they retake the test at some point in the future, they have no reference point for judging performance aside from reading the computer-generated report which arrives weeks later. Even then, results are offered in such a way as to inhibit students, especially young students, from understanding their achievement.

Implications of the Study

Because teachers are more positive about policies they helped form, teachers should be invited to participate in conversation and decisions about accountability issues. The occasional 'former teacher' elected to the school board or legislature is not enough. Teachers should be an active and capable force in accountability and reform movements.

In order to make good decisions and impact school reform decisions, teachers need to be knowledgeable about the issues. One of the areas where teachers need more training is in assessment. Over 100 teachers in Franklin County have not had university training in assessment. Most teachers have had some inservice training and, while inservice can be excellent, it generally fails to provide the opportunity for sufficient study to understand and appreciate the nuances and implications of various assessment techniques. This is not to say that college training is always superior to high-quality staff development. College measurement classes have traditionally been devoted to the psychological testing that is currently established in schools. Extensive discussion about standardized

norm-referenced testing generally takes precedence over other assessment alternatives causing pre-service and inservice teachers to miss opportunities to learn about alternative forms of assessment.

A third implication of this study is the consideration of the impact of assessment choice on other research. It has been the contention of this researcher that programs which promote student learning may be declared as ineffective because the judgment is based on inappropriate assessment choices. Judging the impact of early childhood programs or reduced class size using a standardized norm-referenced test in primary grades may result in wrong decisions. On the other hand, alternative assessment choices need to be more thoroughly and carefully developed so they can withstand the close scrutiny of policy makers and stake-holders.

Limitations

This study was based on the responses of teachers in one county in Kansas to the Teacher Attitude Survey. Although the four participating districts are fairly typical of a majority of districts in Kansas, they are dissimilar to others, namely large, urban districts. While the results of this study may be generalized to similar counties in Kansas, they are not generalizable to other locations with dissimilar circumstances. Kansas schools have been given the opportunity to choose assessments for documenting student learning. This opportunity impacted the study in ways which may not be applicable to other localities.

Teachers were directed to respond only to the assessments chosen for their school improvement plans. This study provided no check to ensure teachers responded to the correct survey sections. Teachers

responding to sections about which they had strong feelings may have impacted the results of this study.

The problematic nature of the two sections of the Kansas Reading Assessment may have influenced teacher attitudes. Teachers may have considered the implications of one section more than the other, causing the attitude score to be biased in one direction.

Recommendations for Further Study

In the February 18, 1998, issue of Education Week, several headlines call attention to current concerns of the education establishment and link these concerns directly to assessment. In the article "Small Classes: Popular, But Still Unproven," Viadero reviews some of the latest research on class size. The success and benefits of reducing class size generally rely on test-score gains for primary children. Bradley's article, "Ed. Schools Getting Heat on Reading: Critics Say Teachers Inadequately Trained," seeks to establish that teachers do not know how to teach reading and "what works best" because of "4th graders' dismal showing on the 1994 NAEP" (p. 16). Archer reviews research in his article, "Students' Fortunes Rest With Assigned Teacher," which asserts the importance of measuring "teachers' effects on the ability of kids to perform on assessments....Teachers whose students made the greatest gains on the assessments--which included the Iowa Tests of Basic Skills and state tests--were deemed most effective" (p. 3). In the "News in Brief" section (p. 4) is a small article, "Ky. Principal Barred," which details the sanctions against a Kentucky principal who apparently encouraged some of her teachers to engage in "inappropriate test

practices."

Small class sizes may not show the expected benefits when the learning of young children is measured with an assessment that will not accurately identify the growth that has occurred. "What works best" in the teaching of reading may not be measured best with our traditional paper and pencil, multiple-choice reading assessments. Can we make definitive statements when our data is based on assessments which do not measure our desired outcome? Do high test scores necessarily reflect effective teaching, especially of young students? Where do we draw the line between appropriate and "inappropriate test practices?"

More research is needed in reading assessment for several reasons. When important decisions are being made about schools and teaching, it is imperative we use the best information we can obtain. We must identify assessments which have the potential to increase learning and improve instruction, as well as provide beneficial information.

Classroom teachers engage in a variety of practices to measure the reading growth and development of their students. This study identified attitudes toward some assessments but it did not encompass all the types of assessments teachers use. Some of these assessments, both formal and informal, yield more usable information than others. A study identifying the scope and degree various assessments are used for teaching and measuring growth could yield valuable information about the state of reading and writing assessment as it actually exists in classrooms.

Some measures of reading achievement are more authentic than traditional paper-and-pencil tests. Measures of reading fluency, retelling,

portfolios, and certain phonemic awareness observations are examples of assessments teachers use as alternatives to paper and pencil tests. Additional research of authentic types of reading measures could yield valuable information in the quest for improved student learning.

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Appendix A

West Franklin USD 287

Appanoose Elementary School

Grade levels: ..... K - 8
Number of students 227
Number of certified staff 18
Free/Reduced Lunches 33%

Assessments chosen for the Appanoose School Improvement Plan:

- State Writing Assessment
- Student writing samples, 6-trait scores [Portfolios]

Pomona Elementary School

Grade levels: ..... K - 8
Number of students 251
Number of certified staff 19
Free/Reduced Lunches 39%

Assessments chosen for the Pomona Elementary School Improvement Plan:

- Kansas Reading Assessment
- Comprehensive Tests of Basic Skills (CTBS)
- District CRT
- DC Heath Unit tests
- Accelerated Reader ™

Pomona High School

Grade levels: ..... 9 - 12
Number of students 192
Number of certified staff 17
Free/Reduced Lunches 23%

Assessments chosen for the Pomona High School School Improvement Plan:

- Kansas Reading Assesment
- Comprehensive Tests of Basic Skills (CTBS)
- District CRT
- ACT

Williamsburg Elementary School

Grade levels:	1-8
Number of students	164
Number of certified staff	14
Free/Reduced Lunches	29%

Williamsburg High School

Grade levels:	9-12
Number of students	76
Number of certified staff	11
Free/Reduced Lunches	--%

Assessments chosen for the Williamsburg School Improvement Plan:

- Kansas Reading Assessment
- Comprehensive Tests of Basic Skills (CTBS)
- Portfolio - best writing

Central Heights USD 288

Central Heights Elementary School

Grade levels: ..... K - 6
Number of students 391
Number of certified staff 28
Free/Reduced Lunches 38%

Central Heights High School

Grade levels: ..... 7 - 12
Number of students 326
Number of certified staff 28
Free/Reduced Lunches 30%

Assessments chosen for the Central Heights School Improvement Plan:

- Kansas Reading Assessment
- Iowa Tests of Basic Skills (ITBS)
- Criterion-referenced Test
- Teacher generated tests, portfolios, and observations

Wellsville USD 289

Wellsville Elementary School

Grade levels: ..... K - 6
Number of students 409
Number of certified staff 28
Free/Reduced Lunches 19%

Assessments chosen for the Wellsville Elementary School Improvement Plan:

- Kansas Reading Assessment
- California Achievement Test (CAT) NCE Scores
- Accelerated Reader™

Wellsville High School

Grade levels: ..... 7 - 12
Number of students 365
Number of certified staff 28
Free/Reduced Lunches 16%

Assessments chosen for the Wellsville High School Improvement Plan:

- Kansas Reading Assessment
- Explore/Reading
- Plan/Reading
- ACT
- Accelerated Reader™
- Teacher evaluation

Ottawa USD 290

Eisenhower Elementary School

Grade levels: ..... K - 5
Number of students 159
Number of certified staff 12
Free/Reduced Lunches 35%

Assessments chosen for the Eisenhower School Improvement Plan:

- Kansas Reading Assessment
- Comprehensive Tests of Basic Skills (CTBS)
- Kansas Writing Assessment

Garfield Elementary School

Grade levels: ..... K - 5
Number of students 309
Number of certified staff 17
Free/Reduced Lunches 20%

Assessments chosen for the Garfield School Improvement Plan:

- Kansas Reading Assessment
- Kansas Writing Assessment
- Comprehensive Tests of Basic Skills (CTBS) mean percent correct
- Accelerated Reader™

Hawthorne Elementary School

Grade levels: ..... K - 5
Number of students 143
Number of certified staff 14
Free/Reduced Lunches 56%

Assessments chosen for school improvement plan:

- Kansas Reading Assessment
- Comprehensive Tests of Basic Skills (CTBS)
- Accelerated Reader™

Lincoln Elementary School

Grade levels: ..... K - 5
Number of students 320
Number of certified staff 21
Free/Reduced Lunches 40%

Assessments chosen for school improvement plan:

- Kansas Reading Assessment
- Accelerated Reader™
- Criterion-referenced Test

Ottawa Middle School

Grade levels: ..... 6 - 8
Number of students 609
Number of certified staff 43
Free/Reduced Lunches 32%

Assessments chosen for school improvement plan:

- Kansas Reading Assessment
- Comprehensive Tests of Basic Skills (CTBS)
- District Reading Criterion-referenced Test

Ottawa High School

Grade levels: ..... 9 - 12
Number of students 687
Number of certified staff 56
Free/Reduced Lunches 16%

Assessments chosen for school improvement plan:

- Kansas Reading Assessment
- Comprehensive Tests of Basic Skills (CTBS)
- Degrees of Reading Power test
- Portfolios

Appendix B

August 15, 1997

Dear Educator,

Many schools in the state of Kansas are nearing completion or have completed their first cycle of Quality Performance Accreditation. An integral part of the success of a school improvement plan is linked to the selection of assessments that will support student learning and be sensitive to the growth that occurs as students are successful. The purpose of this research project is to study the attitudes of elementary and secondary school teachers toward the various types of assessments used for documenting student learning in their respective schools' improvement plans.

Your opinions are vital to this study. You, as a teacher in [USD 287], can help by sharing your attitudes on the TEACHER ATTITUDE SURVEY. Your principal has agreed to allow you and your colleagues time at an upcoming faculty meeting to assist in this study.

The survey consists of sets of fourteen items about several types of assessments. You will be asked to answer only those items which pertain to the types of assessment used by your building to show growth in communication skills as outlined in your school improvement plan. There will be additional demographic items to help in analyzing the data. All responses will be voluntary and strictly confidential. The estimated time required to complete the survey is fifteen minutes.

The results of this survey will be analyzed and shared with each of the participating schools. As teachers, we are interested in finding assessments that support our work. Thank you in advance for participating in this research and giving fifteen minutes of your time. I will be available during the faculty meeting to answer any questions you may have about the survey or the study. You may also call me at 913-242-7394 (home) or 913-229-8050 (school) if you have questions. I look forward to meeting with you in the near future.

Sincerely,

Renita K. Ubel
Teacher, Eugene Field Elementary School, Ottawa, KS
Doctoral Candidate, University of Kansas

Appendix C

Teacher Attitude Survey

Fall, 1997

Thank you for agreeing to complete the following survey. It is designed to measure teachers' attitudes toward the assessments their schools have chosen as indicators of student achievement in communication. Please answer each question in the sections that relate to your building. *When you come to a page that asks about an assessment your school is **not** using on its improvement plan, please skip to the next section.* There will be guide statements to help you.

Most of the items will be answered by circling an answer using the following Likert scale:

SD	D	A	SA	U

Mark "SD" when you strongly disagree with the statement.
Mark "D" when you tend to disagree but your feelings are not strong.
Mark "A" when you tend to agree but your feelings are not strong.
Mark "SA" when you strongly agree with the statement.
Mark "U" only when you do not have the information to form an opinion.

Example:

Students generally try very hard during testing situations. SD D A SA U

If you believe strongly that this a true statement, you will circle "SA". If you believe strongly that this statement is false, you will circle "SD". If you tend to agree but do not feel strongly, you will mark "A". If you mark "D" you indicate that you tend to disagree but do not strongly disagree. A circle around "U" indicates you do not have the information you need to form an opinion.

Students generally try very hard during testing situations. SD (D) A SA U

This person indicates that he/she tends to disagree.

Students generally try very hard during testing situations. SD D A (SA) U

This person indicates that he/she strongly agrees.

Please respond to all items that apply to the assessments used by your school.

SD: Strongly Disagree; D: Disagree; A: Agree; SA: Strongly Agree; U: Unsure

1. Standardized norm-referenced tests are one assessment measure in my school's communication improvement plan.	Yes		Don't know		No
If you answered "Don't know" or "No" to item 1, please skip to page 3, item 15.					
2. I am responsible for administering a standardized norm-referenced test to at least one class of students.	Yes			No	
3. Standardized norm-referenced tests are appropriate for secondary school students.	SD	D	A	SA	U
4. Multiple-choice items with one correct answer, the assessment method used by most standardized norm-referenced tests, parallel effective instructional methods.	SD	D	A	SA	U
5. It is difficult to improve the scores of standardized norm-referenced tests.	SD	D	A	SA	U
6. Secondary school students become actively involved in standardized norm-referenced tests.	SD	D	A	SA	U
7. Secondary school teachers generally do not use the results of the standardized norm-referenced tests to change instruction.	SD	D	A	SA	U
8. Curriculum decisions should be influenced by the results of standardized norm-referenced tests.	SD	D	A	SA	U
9. Secondary school students can concentrate and work for extended periods of time on standardized norm-referenced tests.	SD	D	A	SA	U
10. Secondary school students become anxious during standardized norm-referenced tests.	SD	D	A	SA	U
11. Standardized norm-referenced tests are meaningful measures of student learning.	SD	D	A	SA	U
12. Standardized norm-referenced tests enable secondary students to assess their own learning.	SD	D	A	SA	U
13. I have read the standardized norm-referenced tests given to our secondary school students and am familiar with the content.	Yes		Some sections		No
14. I helped with the decision to use standardized norm-referenced tests as part of our school's communication improvement plan.	Yes			No	

Please continue on the next page.

SD: Strongly Disagree; D: Disagree; A: Agree; SA: Strongly Agree; U: Unsure

15. District criterion-referenced tests are one assessment measure in my school's communication improvement plan.	Yes		Don't know		No
If you answered "Don't know" or "No" to item 15, please skip to page 4, item 29.					
16. I am responsible for administering a district criterion-referenced test to at least one class of students.	Yes			No	
17. District criterion-referenced tests are appropriate for secondary school students.	SD	D	A	SA	U
18. Multiple-choice items with one correct answer, the assessment method used by most district criterion-referenced tests, parallel effective instructional methods.	SD	D	A	SA	U
19. It is difficult to improve the scores of the district criterion-referenced tests.	SD	D	A	SA	U
20. Secondary school students become actively involved in district criterion-referenced tests.	SD	D	A	SA	U
21. Secondary school teachers generally do not use the results of the district criterion-referenced tests to change instruction.	SD	D	A	SA	U
22. Curriculum decisions should be influenced by the results of district criterion-referenced tests.	SD	D	A	SA	U
23. Secondary school students can concentrate and work for extended periods of time on district criterion-referenced tests.	SD	D	A	SA	U
24. Secondary school students become anxious during district criterion-referenced tests.	SD	D	A	SA	U
25. District criterion-referenced tests are meaningful measures of student learning.	SD	D	A	SA	U
26. District criterion-referenced tests enable secondary students to assess their own learning.	SD	D	A	SA	U
27. I have read the district criterion-referenced tests given to our secondary school students and am familiar with the content.	Yes		Some sections		No
28. I helped with the decision to use district criterion-referenced tests as part of our school's communication improvement plan.	Yes			No	

Please continue on the next page.

SD: Strongly Disagree; D: Disagree; A: Agree; SA: Strongly Agree; U: Unsure

29. The Kansas Reading Assessment is one assessment measure in my school's communication improvement plan.	Yes		Don't know		No
If you answered "Don't know" or "No" to item 29, please skip to page 5, item 43.					
30. I am responsible for administering the Kansas Reading Assessment to at least one class of students.	Yes			No	
31. The Kansas Reading Assessment is appropriate for secondary school students.	SD	D	A	SA	U
32. The items, both multi-answer and essay questions, used by the Kansas Reading Assessment parallel effective instructional methods.	SD	D	A	SA	U
33. It is difficult to improve the scores of the Kansas Reading Assessment.	SD	D	A	SA	U
34. Secondary school students become actively involved in the Kansas Reading Assessment.	SD	D	A	SA	U
35. Secondary school teachers generally do not use the results of the Kansas Reading Assessment to change instruction.	SD	D	A	SA	U
36. Curriculum decisions should be influenced by the results of the Kansas Reading Assessment.	SD	D	A	SA	U
37. Secondary school students can concentrate and work for extended periods of time on the Kansas Reading Assessment.	SD	D	A	SA	U
38. Secondary school students become anxious during the Kansas Reading Assessment.	SD	D	A	SA	U
39. The Kansas Reading Assessment is a meaningful measure of student learning.	SD	D	A	SA	U
40. The Kansas Reading Assessment enables secondary students to assess their own learning.	SD	D	A	SA	U
41. I have read the Kansas Reading Assessment given to our secondary school students and am familiar with the content.	Yes		Some sections		No
42. I helped with the decision to use the Kansas Reading Assessment as part of our school's communication improvement plan.	Yes			No	

Please continue on the next page.

SD: Strongly Disagree; D: Disagree; A: Agree; SA: Strongly Agree; U: Unsure

43. Portfolio assessment is one assessment measure in my school's communication improvement plan.	Yes		Don't know		No

If you answered "Don't know" or "No" to item 43, please skip to page 6, item 57.

44. I am responsible for supervising a portfolio assessment for at least one class of students.	Yes			No	
45. Portfolio assessment is appropriate for secondary school students.	SD	D	A	SA	U
46. The method used by most portfolio assessments, an exhibition of work collected over time, parallels effective instructional methods.	SD	D	A	SA	U
47. It is difficult to improve the scores of portfolio assessments.	SD	D	A	SA	U
48. Secondary school students become actively involved in portfolio assessments.	SD	D	A	SA	U
49. Secondary school teachers generally do not use the results of portfolio assessments to change instruction.	SD	D	A	SA	U
50. Curriculum decisions should be influenced by the results of portfolio assessments.	SD	D	A	SA	U
51. Secondary school students can concentrate and work for extended periods of time on portfolio assessments.	SD	D	A	SA	U
52. Secondary school students become anxious during portfolio assessments.	SD	D	A	SA	U
53. Portfolio assessments are meaningful measures of student learning.	SD	D	A	SA	U
54. Portfolio assessment enables secondary students to assess their own learning.	SD	D	A	SA	U
55. I have reviewed portfolios of our secondary school students and am familiar with the portfolio criteria.	Yes		Somewhat		No
56. I helped with the decision to use portfolio assessment as part of our school's communication improvement plan.	Yes			No	

Please continue on the next page.

SD: Strongly Disagree; D: Disagree; A: Agree; SA: Strongly Agree; U: Unsure

57. The Kansas Writing Assessment is one assessment measure in my school's communication improvement plan.	Yes		Don't know		No
If you answered "Don't know" or "No" to item 57, please skip to page 7, item 71.					
58. I am responsible for administering the Kansas Writing Assessment to at least one class of students.	Yes			No	
59. The Kansas Writing Assessment is appropriate for secondary school students.	SD	D	A	SA	U
60. A direct writing assessment such as the Kansas Writing Assessment parallels effective instructional methods.	SD	D	A	SA	U
61. It is difficult to improve the scores of the Kansas Writing Assessment.	SD	D	A	SA	U
62. Secondary school students become actively involved in the Kansas Writing Assessment.	SD	D	A	SA	U
63. Secondary school teachers generally do not use the results of the Kansas Writing Assessment to change instruction.	SD	D	A	SA	U
64. Curriculum decisions should be influenced by the results of the Kansas Writing Assessment.	SD	D	A	SA	U
65. Secondary school students can concentrate and work for extended periods of time on the Kansas Writing Assessment.	SD	D	A	SA	U
66. Secondary school students become anxious during the Kansas Writing Assessment.	SD	D	A	SA	U
67. The Kansas Writing Assessment is a meaningful measure of student learning.	SD	D	A	SA	U
68. The Kansas Writing Assessment enables secondary students to assess their own learning.	SD	D	A	SA	U
69. I have read the Kansas Writing Assessment given to our secondary school students and am familiar with the content.	Yes		Some sections		No
70. I helped with the decision to use the Kansas Writing Assessment as part of our school's communication improvement plan.	Yes			No	

Please continue on the next page.

SD: Strongly Disagree; D: Disagree; A: Agree; SA: Strongly Agree; U: Unsure

71. Reading tests published by a textbook publishing company are one assessment measure in my school's communication improvement plan.	Yes		Don't know		No
If you answered "Don't know" or "No" to item 71, please skip to page 8, item 85.					
72. I am responsible for administering a textbook publisher's reading test to at least one class of students.	Yes			No	
73. Publishers' reading tests are appropriate for secondary school students.	SD	D	A	SA	U
74. Multiple-choice items with one correct answer, the assessment method used by most publishers' reading tests, parallel effective instructional methods.	SD	D	A	SA	U
75. It is difficult to improve the scores of publishers' reading tests.	SD	D	A	SA	U
76. Secondary school students become actively involved in publishers' reading tests.	SD	D	A	SA	U
77. Secondary school teachers generally do not use the results of the publishers' reading tests to change instruction.	SD	D	A	SA	U
78. Curriculum decisions should be influenced by the results of publishers' reading tests.	SD	D	A	SA	U
79. Secondary school students can concentrate and work for extended periods of time on publishers' reading tests.	SD	D	A	SA	U
80. Secondary school students become anxious during publishers' reading tests.	SD	D	A	SA	U
80. Publishers' reading tests are meaningful measures of student learning.	SD	D	A	SA	U
81. Publishers' reading tests enable secondary students to assess their own learning.	SD	D	A	SA	U
83. I have read the publishers' tests given to our secondary school students and am familiar with the content.	Yes		Some sections		No
84. I helped with the decision to use publishers' tests as part of our school communication improvement plan.	Yes			No	

Please continue on the next page.

SD: Strongly Disagree; D: Disagree; A: Agree; SA: Strongly Agree; U: Unsure

85. Accelerated Reader™ tests are one assessment measure in my school's communication improvement plan. — Yes / Don't know / No

If you answered "Don't know" or "No" to item 85, please skip to page 9, item 99.

86. I am responsible for administering Accelerated Reader™ tests to at least one class of students. — Yes / No

87. Accelerated Reader™ tests are appropriate for secondary school students. — SD D A SA U

88. Multiple-choice items with one correct answer, the assessment method used by Accelerated Reader™ tests, parallel effective instructional methods. — SD D A SA U

89. It is difficult to improve the scores of Accelerated Reader™ tests. — SD D A SA U

90. Secondary school students become actively involved in Accelerated Reader™ tests. — SD D A SA U

91. Secondary school teachers generally do not use the results of Accelerated Reader™ tests to change instruction. — SD D A SA U

92. Curriculum decisions should be influenced by the results of Accelerated Reader™ tests. — SD D A SA U

93. Secondary school students can concentrate and work for extended periods of time on Accelerated Reader™ tests. — SD D A SA U

94. Secondary school students become anxious during Accelerated Reader™ tests. — SD D A SA U

95. Accelerated Reader™ tests are meaningful measures of student learning. — SD D A SA U

96. Accelerated Reader™ tests enable secondary students to assess their own learning. — SD D A SA U

97. I have read many of the Accelerated Reader™ tests given to our secondary school students and am familiar with the content. — Yes / Somewhat / No

98. I helped with the decision to use Accelerated Reader™ tests as part of our school communication improvement plan. — Yes / No

Please continue on the next page.

Please complete the following items. This information will be analyzed as part of group reporting and will not be associated with you as an individual in any way. It is strictly confidential.

99. Please indicate your gender.

_____ Female
_____ Male

100. Which level best describes your teaching responsibility? Mark (X) one.

_____ Lower elementary classroom (K - Grade 2)
_____ Upper elementary classroom (Grade 3 - Grade 5 or 6)
_____ Middle level classroom
_____ Secondary classroom
_____ Other certified personnel

101. How many years have you taught at the level you are currently teaching? Mark (X) the range that best describes your experience at this level.

_____ 1-4 years
_____ 5-9 years
_____ 10-14 years
_____ 15-19 years
_____ 20 or more years

102. Teachers may or may not have training in measurement and testing. Mark (X) the category that best describes your assessment training.

_____ inservice training only
_____ 1 - 3 undergraduate hours
_____ 1 - 3 graduate hours
_____ more than 3 graduate or undergraduate hours
_____ no training

103. Communication skills (reading, writing, speaking, and listening) are taught in varying degrees by all teachers. Do you consider teaching communication skills a major part of your responsibility?

_____ yes _____ no

104. Schools often have a committee responsible for developing and implementing their school improvement plans. Do you serve on your school's improvement committee?

_____ yes _____ no

105. Assessments sometimes require local scoring. (For example, the Kansas State Reading Assessment requires local scoring of the essay questions on the test.) In the past two years have you scored one or more of any of the assessments used by your school for its communication improvement plan?

_____ yes _____ no

Thank you for participating in this important study.
Your opinions are important to me and I appreciate your participation.

Appendix D

Table 5

Standardized Norm-referenced Test Item Means and Standard Deviations as a Function of Teaching Level of Respondents

Item:	Level:				
	Primary	Inter-mediate	Middle	Secondary	Other
	n = 55	n = 55	n = 54	n = 66	n = 37
Student-Centered Items					
Mean	-6.4545	-4.3636	-2.7407	-2.4697	-4.6757
SD	3.5215	4.6323	3.7677	3.6720	4.0281
Teacher-Centered Items					
Mean	-1.1091	-.7091	-.7037	-.5606	-.9730
SD	3.3757	3.6346	3.2192	3.5911	3.9475
Total					
Mean	-8.4182	-4.4000	-2.5556	-2.3333	-5.4054
SD	7.8048	9.3860	7.9661	7.3992	9.2239
c -- Appropriateness					
Mean	.0000	.7636	1.0741	1.1515	.6216
SD	1.5753	1.4778	1.3297	1.0848	1.4014
d -- Instructional Method					
Mean	-.3273	-.0364	-.2407	.3788	-.3514
SD	1.4914	1.3047	1.2876	1.6619	1.7672
e -- Improvement of Scores					
Mean	-.0741	-.1636	.3519	-.1061	.1622
SD	1.2108	1.3576	1.0668	1.4584	1.3232

f -- Student Involvement					
Mean	-1.1091	-.6909	-.6852	-.8939	-1.1351
SD	1.2122	1.4640	1.4119	1.5505	1.3776
g -- Use of Results for Instruction					
Mean	-.5818	-.1455	-.5741	-.7424	-.6216
SD	1.5950	1.3112	1.2973	1.4604	1.3612
h -- Curriculum Decisions					
Mean	-.1273	-.3636	-.2407	-.0909	-.1622
SD	1.5992	1.6707	1.4658	1.7162	1.5726
i -- Student Concentration					
Mean	-1.6545	-1.0370	-.2963	-.2121	-.7838
SD	1.4810	1.4789	1.5001	1.1963	1.7342
j -- Student Anxiety					
Mean	-2.0909	-1.5818	-1.0000	-.9242	-1.6486
SD	1.1906	1.3009	1.2738	1.3622	1.3378
k -- Meaningfulness					
Mean	-.8545	-.0909	-.1852	-.4545	-.3784
SD	1.4197	1.5064	1.2896	1.3943	1.6219
l -- Student Self-assessment					
Mean	-1.6000	-1.0727	-.7593	-.4394	-1.1081
SD	1.0988	1.6650	1.4398	1.4584	1.4679

Table 6

Standardized Norm-referenced Test Item Means and Standard Deviations as a Function of the Level of Decision Input

	Decision Input		No Decision Input	
	n = 74		n = 191	
Items (Individual or Set):	Mean	Std Dev	Mean	Std Dev
Student-centered Items	-3.9324	4.4609	-4.1047	4.0820
Teacher-centered Items	-.5811	3.6565	-.8746	3.4755
Total	-3.7568	9.3425	-4.8115	8.2325
c -- Appropriateness	.9189	1.4875	.6649	1.3965
d -- Instructional Method	-.0946	1.4728	-.0733	1.5440
e -- Improvement of Scores	.2297	1.3604	-.0632	1.2750
f -- Student Involvement	-.8378	1.6637	-.9058	1.3225
g -- Use of Results	-.4459	1.4818	-.5654	1.4048
h -- Curriculum Decisions	-.2703	1.6327	-.1728	1.6048
i -- Student Concentration	-.6622	1.5552	-.8263	1.5486
j -- Student Anxiety	-1.4189	1.3345	-1.4188	1.3813
k -- Meaningfulness	-.1622	1.6050	-.4974	1.3836
l -- Student Self-assessment	-1.0135	1.5746	-.9581	1.4503

Table 7

Criterion-referenced Test Item Means and Standard Deviations as a Function of Teaching Level of Respondents

Item:	Level:				
	Primary	Inter-mediate	Middle	Secondary	Other
	n = 42	n = 38	n = 42	n = 28	n = 26
Student-centered Items					
Mean	-2.8810	-1.4737	-1.3023	.1429	-1.2692
SD	3.0057	3.5923	3.0279	3.4717	3.0405
Teacher-centered Items					
Mean	2.6667	3.3158	2.0233	1.2857	2.3462
SD	2.8169	3.2224	3.8265	2.1232	3.3099
Total					
Mean	1.5238	4.0263	2.4186	3.5357	3.3077
SD	6.6635	6.2406	8.0629	6.5573	7.3254
c -- Appropriateness					
Mean	1.1667	1.3684	1.0952	1.5000	1.1923
SD	1.2478	1.1252	1.4451	1.0000	1.0590
d -- Instructional Method					
Mean	.2619	.5000	.0238	.1071	-.1923
SD	1.3078	1.2466	1.3157	.9560	1.2655
e -- Improvement of Scores					
Mean	.6667	.5789	.8571	.3929	.9615
SD	1.1189	1.2440	1.1806	.9165	1.3706

f -- Student Involvement					
Mean	-.1429	-.0263	-.2143	-.1786	.1154
SD	1.1597	1.1737	1.0250	1.3623	1.1429
g -- Use of Results for Instruction					
Mean	.8333	.9474	.6667	.1786	.7692
SD	1.1877	1.5058	1.3004	.9833	.9923
h -- Curriculum Decisions					
Mean	.9048	1.2895	.5238	.6071	.8077
SD	1.3031	1.4315	1.5018	1.4231	1.3570
i -- Student Concentration					
Mean	-1.3095	-.4737	-.2619	.4286	-.4615
SD	1.3341	1.5199	1.4324	1.1996	1.5551
j -- Student Anxiety					
Mean	-.9762	-.5000	-.6905	-.6429	-1.0000
SD	1.3157	1.4285	1.4226	1.3393	1.6000
k -- Meaningfulness					
Mean	.5714	.8158	.6429	.6071	1.0385
SD	1.1075	1.4305	1.3219	1.6407	1.3411
l -- Student Self-assessment					
Mean	-.4524	-.4737	-.1667	.5357	.0769
SD	1.2138	1.2678	1.3051	1.2615	1.2625

Table 8

Criterion-referenced Test Item Means and Standard Deviations as a Function of the Level of Decision Input

	Decision Input		No Decision Input	
	n = 74		n = 99	
Items (Individual or Set):	Mean	Std Dev	Mean	Std Dev
Student-centered Items	-.9054	3.5468	-1.9495	3.1570
Teacher-centered Items	3.3919	3.4634	1.7475	2.8007
Total	5.2027	7.4355	1.2727	6.2903
c -- Appropriateness	1.6216	1.1312	.9899	1.2079
d -- Instructional Method	.2568	1.2828	.1010	1.2330
e -- Improvement of Scores	.9459	1.3538	.5253	.9933
f -- Student Involvement	.2297	1.2556	-.3333	1.0302
g -- Use of Results	.9730	1.1701	.5354	1.2803
h -- Curriculum Decisions	1.2162	1.5639	.5859	1.2455
i -- Student Concentration	-.2162	1.5013	-.6869	1.4959
j -- Student Anxiety	-.7568	1.3428	-.7778	1.4747
k -- Meaningfulness	1.0946	1.2839	.4848	1.3121
l -- Student Self-assessment	-.1622	1.3950	-.1515	1.2402

Table 9

Kansas Reading Assessment Item Means and Standard Deviations as a Function of Teaching Level of Respondents

Item:	Level:				
	Primary	Inter-mediate	Middle	Secondary	Other
	n = 22	n = 26	n = 31	n = 38	n = 26
Student-Centered Items					
Mean	-3.8182	-3.0769	-1.9355	-.2368	-1.5000
SD	3.2607	3.7622	3.0977	3.0969	3.4088
Teacher-Centered Items					
Mean	1.0909	.3077	1.5161	1.4737	1.2692
SD	3.0847	3.9473	3.3652	2.7679	4.0453
Total					
Mean	-2.4545	-2.7308	.4516	2.6316	.9615
SD	6.2008	8.8840	7.2104	5.9020	8.9777
c -- Appropriateness					
Mean	.2273	.0769	.7097	1.0000	.8077
SD	1.1519	1.5981	1.1887	.9586	1.4972
d -- Instructional Method					
Mean	.4545	.2692	.7097	.6316	.6538
SD	1.2239	1.5635	1.3215	1.1252	1.3249
e -- Improvement of Scores					
Mean	.0909	-.4231	.1613	.2368	.1538
SD	.9715	1.2058	1.4165	.9982	1.2229

f -- Student Involvement					
Mean	-.4091	.1538	-.4516	.0526	.4231
SD	1.0075	1.4884	1.1207	1.1613	1.0648
g -- Use of Results					
Mean	.1364	.1154	.2258	.0263	.1538
SD	1.0821	1.5054	1.3092	1.4423	1.1204
h -- Curriculum Decisions					
Mean	.4091	.3462	.4194	.5789	.3077
SD	1.2596	1.3249	1.5443	1.1302	1.8497
i -- Student Concentration					
Mean	-1.0455	-.9231	.0645	.1316	.0000
SD	1.4631	1.4401	1.2093	1.2557	1.4142
j -- Student Anxiety					
Mean	-1.5909	-1.4231	-.8065	-.5000	-1.3077
SD	1.1816	1.0648	1.5582	1.2466	1.3496
k -- Meaningfulness					
Mean	.0455	-.0385	.1613	.3947	.3846
SD	.8985	1.6848	1.5937	.9737	1.5512
l -- Student Self-assessment					
Mean	-.7727	-.8846	-.7419	.0789	-.6154
SD	1.1519	1.0706	1.2902	1.1942	1.3879

Table 10

Kansas Reading Assessment Item Means and Standard Deviations as a Function of the Level of Decision Input

	Decision Input		No Decision Input	
	n = 36		n = 105	
Items (Individual or Set):	Mean	Std Dev	Mean	Std Dev
Student-centered Items	-1.6667	3.7033	-1.9619	3.3994
Teacher-centered Items	2.6944	3.2848	.7048	3.3193
Total	2.8611	6.8584	-.7524	7.6984
c -- Appropriateness	.9722	1.2532	.5048	1.3092
d -- Instructional Method	1.2222	1.0173	.3619	1.3092
e -- Improvement of Scores	.2500	1.2734	.0000	1.1519
f -- Student Involvement	.1389	1.3764	-.1048	1.1513
g -- Use of Results	.2778	1.2561	.0762	1.3279
h -- Curriculum Decisions	.9444	1.4332	.2667	1.3747
i -- Student Concentration	-.1111	1.5451	-.3238	1.3552
j -- Student Anxiety	-1.0833	1.4417	-1.0381	1.3077
k -- Meaningfulness	.8611	1.0462	.0000	1.4005
l -- Student Self-assessment	-.6111	1.1283	-.4952	1.3238

Table 11

Portfolio Assessment Item Means and Standard Deviations as a Function of Teaching Level of Respondents

Item:	Level:				
	Primary	Inter-mediate	Middle	Secondary	Other
	n = 28	n = 23	n = 25	n = 19	n = 15
Student-Centered Items					
Mean	4.5357	3.9130	2.9200	2.9474	3.6000
SD	4.0778	4.8609	2.5968	3.2227	4.2224
Teacher-Centered Items					
Mean	3.3929	1.3913	2.5600	2.6316	3.8000
SD	3.2811	3.5514	3.7202	2.9853	1.5213
Total					
Mean	11.5714	7.8261	7.4000	8.4211	10.2000
SD	8.3108	9.0737	8.4163	6.8501	5.8089
c -- Appropriateness					
Mean	1.1743	1.5217	1.0400	1.5263	1.2667
SD	1.1174	.8980	1.3687	.9048	.7037
d -- Instructional Method					
Mean	1.6429	1.0435	1.2000	1.2632	1.4000
SD	1.2237	1.6646	1.4720	.8057	.8281
e -- Improvement of Scores					
Mean	.6429	.2609	.8000	.7895	.6667
SD	.8698	1.0962	1.0000	.8550	.7237

f -- Student Involvement					
Mean	1.5714	1.1739	.7600	1.1053	1.2667
SD	1.4254	1.8003	1.3000	1.1970	1.2799
g -- Use of Results					
Mean	.3571	-.0435	.3600	.3684	.9333
SD	1.4198	1.1862	1.1860	1.4610	.7988
h -- Curriculum Decisions					
Mean	.7500	.1304	.2000	.2105	.8000
SD	1.1097	1.1403	1.2583	1.1822	.5606
i -- Student Concentration					
Mean	.5000	.2609	.4400	.7895	.7333
SD	1.3744	1.8639	1.0033	1.2727	1.4376
j -- Student Anxiety					
Mean	.8929	.8696	.8000	.0000	.4667
SD	1.1655	1.0998	.9574	1.0000	1.1255
k -- Meaningfulness					
Mean	1.9286	1.0000	.8800	1.3158	1.5333
SD	1.0157	1.5954	1.3628	1.2043	.9155
l -- Student Self-assessment					
Mean	1.5714	1.6087	.9200	1.0526	1.1333
SD	1.4254	1.2699	1.1874	1.0788	1.1872

Table 12

Portfolio Assessment Item Means and Standard Deviations as a Function of the Level of Decision Input

	Decision Input		No Decision Input	
	n = 50		n = 60	
Items (Individual or Set):	Mean	Std Dev	Mean	Std Dev
Student-centered Items	4.6800	3.4726	2.7966	3.9818
Teacher-centered Items	3.4800	2.6744	2.0847	3.6165
Total	11.6000	6.8542	7.1017	8.4214
c -- Appropriateness	1.6800	.9570	1.2167	1.1213
d -- Instructional Method	1.7000	1.1473	1.0000	1.3148
e -- Improvement of Scores	.7600	.8935	.5167	.9654
f -- Student Involvement	1.5600	1.3273	.8667	1.4552
g -- Use of Results	.4400	1.3118	.2833	1.2363
h -- Curriculum Decisions	.5800	1.0319	.2667	1.1913
i -- Student Concentration	.6800	1.3316	.3833	1.4508
j -- Student Anxiety	.8200	1.0437	.5167	1.1423
k -- Meaningfulness	1.7600	1.0606	.9833	1.3838
l -- Student Self-assessment	1.6200	1.1933	1.0000	1.2622

Table 13

Kansas Writing Assessment Item Means and Standard Deviations as a Function of Teaching Level of Respondents

Item:	Level:				
	Primary	Inter-mediate	Middle	Secondary	Other
	n = 14	n = 30	n = 29	n = 28	n = 20
Student-Centered Items					
Mean	-.3571	1.0000	.8966	1.1786	.2000
SD	5.6242	3.5233	4.1174	3.0191	4.3359
Teacher-Centered Items					
Mean	1.7857	2.7667	2.3103	2.9286	1.8500
SD	4.4752	2.5955	4.3515	3.5374	3.2326
Total					
Mean	3.0714	6.1000	5.2414	6.4286	3.1000
SD	11.1180	6.9200	10.2632	7.5642	9.7219
c -- Appropriateness					
Mean	1.0000	1.1667	1.1071	1.4815	.6500
SD	1.3009	.8339	1.3427	1.0874	1.4965
d -- Instructional Method					
Mean	.5714	1.2000	.9643	1.0741	1.0000
SD	1.6036	1.0954	1.2317	1.2687	1.2566
e -- Improvement of Scores					
Mean	.1429	.1333	.3929	.4815	.1500
SD	1.5119	1.5477	1.1655	1.2518	.9881

f -- Student Involvement					
Mean	.7143	1.1333	.3214	.6667	.5500
SD	1.5407	1.1666	1.2188	1.0742	1.3945
g -- Use of Results					
Mean	.0714	.5000	.1429	.6296	.2500
SD	1.4917	1.0086	1.3530	1.1145	.9665
h -- Curriculum Decisions					
Mean	1.0000	.9333	.6429	.7037	.4500
SD	1.5689	1.0807	1.4198	1.2954	1.4318
i -- Student Concentration					
Mean	-.7857	.0667	.5000	.5926	.0500
SD	1.8051	1.6386	1.0364	1.3661	1.3563
j -- Student Anxiety					
Mean	-.4286	-.7000	-.1071	-.4444	-.5500
SD	1.5549	1.3429	1.6631	.8473	1.3945
k -- Meaningfulness					
Mean	.6429	1.1667	.7857	.8519	.4000
SD	1.3363	1.1167	1.3705	1.1995	1.4654
l -- Student Self-assessment					
Mean	.1429	.5000	.0000	.3704	.1500
SD	1.6575	1.2526	1.3878	1.1815	1.4965

Table 14

Kansas Writing Assessment Item Means and Standard Deviations as a Function of the Level of Decision Input

	Decision Input		No Decision Input	
	n = 34		n = 85	
Items (Individual or Set):	Mean	Std Dev	Mean	Std Dev
Student-centered Items	2.2647	4.3506	.0471	3.6316
Teacher-centered Items	3.7059	3.6724	1.8471	3.4383
Total	8.7647	9.5950	3.4824	8.1517
c -- Appropriateness	1.4412	1.3301	.9882	1.1391
d -- Instructional Method	1.4412	1.3301	.8353	1.1837
e -- Improvement of Scores	.5882	1.5199	.1529	1.1803
f -- Student Involvement	1.0882	1.1110	.5294	1.2872
g -- Use of Results	.5294	1.1609	.2824	1.1813
h -- Curriculum Decisions	1.1471	1.2342	.5765	1.3307
i -- Student Concentration	.7353	1.7634	-.0353	1.2766
j -- Student Anxiety	-.1765	1.6044	-.5529	1.2489
k -- Meaningfulness	1.3529	1.3458	.61000	1.2071
l -- Student Self-assessment	.6176	1.4358	.1059	1.3004

Table 15

Publishers' Textbook Tests Item Means and Standard Deviations as a Function of Teaching Level of Respondents

Item:	Level:				
	Primary	Inter-mediate	Middle	Secondary	Other
	n = 26	n = 31	n = 15	n = 6	n = 10
Student-Centered Items					
Mean	-.7692	.6129	-.4000	-1.0000	.4000
SD	2.4051	2.0604	4.2054	3.5214	2.6331
Teacher-Centered Items					
Mean	2.1154	2.8387	1.6000	.1667	2.2000
SD	2.1969	2.6343	3.7187	1.8348	2.5734
Total					
Mean	3.0769	5.5484	1.8000	-.8333	3.5000
SD	4.5863	4.3882	9.4052	6.8240	6.8191
c -- Appropriateness					
Mean	1.538	1.1935	.4000	.3333	.6000
SD	.5435	.6011	1.4041	1.0328	1.2649
d -- Instructional Method					
Mean	.2692	.8065	.3333	.0000	.0000
SD	.9616	1.0776	1.4475	1.0954	1.4142
e -- Improvement of Scores					
Mean	.6154	.7742	.8667	.0000	1.2000
SD	.7524	1.3092	.9155	1.0954	1.1353

f -- Student Involvement					
Mean	.1923	.3226	-.2667	-.6667	.6000
SD	.9389	1.0766	1.6242	1.5055	1.5776
g -- Use of Results					
Mean	.8462	1.2581	2.0000	.0000	1.0000
SD	.7845	.8551	1.4736	1.0954	.9428
h -- Curriculum Decisions					
Mean	.3846	.0000	.2000	.1667	.0000
SD	1.0228	1.2383	1.4736	.9832	1.6997
i -- Student Concentration					
Mean	-.2308	.0968	.2667	-.3333	.4000
SD	1.2428	1.2478	1.2228	1.0328	.9661
j -- Student Anxiety					
Mean	-.6154	-.1290	-.2000	.0000	-1.0000
SD	1.0983	.9571	1.2649	1.0954	.9428
k -- Meaningfulness					
Mean	.5769	.9032	.2000	-.3333	.3000
SD	.8086	.8309	1.4736	1.6330	1.3375
l -- Student Self-assessment					
Mean	-.1154	.3226	-.2000	.0000	.4000
SD	1.1429	1.1658	1.4736	1.0954	1.3499

Table 16

Publishers' Textbook Test Item Means and Standard Deviations as a Function of the Level of Decision Input

	Decision Input		No Decision Input	
	n = 45		n = 43	
Items (Individual or Set):	Mean	Std Dev	Mean	Std Dev
Student-centered Items	.1556	2.4304	-.3721	3.1398
Teacher-centered Items	2.7333	2.7831	1.5581	2.5383
Total	4.8667	5.1061	2.0930	6.8446
c -- Appropriateness	1.1333	.5045	.6977	1.2058
d -- Instructional Method	.7111	1.0140	.1163	1.2575
e -- Improvement of Scores	.7778	1.2039	.6977	.9395
f -- Student Involvement	.3778	1.0721	-.0930	1.3941
g -- Use of Results	1.0444	1.1669	.6279	.9004
h -- Curriculum Decisions	.2000	1.2721	.1163	1.2385
i -- Student Concentration	-.0667	1.2321	.1395	1.1666
j -- Student Anxiety	-.4222	.9883	-.3256	1.1897
k -- Meaningfulness	.8444	.7965	.2093	1.3012
l -- Student Self-assessment	.2667	1.2136	-.0930	1.2308

Table 17

Accelerated Reader™ Item Means and Standard Deviations as a Function of Teaching Level of Respondents

Item:	Level:				
	Primary	Inter-mediate	Middle	Secondary	Other
	n = 38	n = 38	n = 13	n = 12	n = 16
Student-Centered Items					
Mean	4.2895	4.8158	1.2308	3.3333	4.4375
SD	3.0660	3.1610	5.3096	2.4985	3.4053
Teacher-Centered Items					
Mean	.8947	.3421	.9231	1.6667	1.5000
SD	3.2282	3.1902	2.9850	2.8069	2.3094
Total					
Mean	7.3684	7.7368	3.4615	7.6667	7.7500
SD	5.9522	6.5169	10.4771	5.2628	6.9330
c -- Appropriateness					
Mean	1.6842	1.8947	1.0000	1.2500	1.6250
SD	1.0681	1.1099	1.8257	1.2154	1.2042
d -- Instructional Method					
Mean	.3421	.5263	.6923	.6364	.3125
SD	1.3002	1.1563	1.7974	1.1201	1.1955
e -- Improvement of Scores					
Mean	.6579	.8421	1.2308	.7500	1.5000
SD	1.0724	1.2418	.8321	.4523	.8944

f -- Student Involvement					
Mean	1.9474	1.8947	.3846	1.0000	1.8750
SD	1.0120	1.1099	2.0631	1.1282	1.2583
g -- Use of Results					
Mean	.1579	-.5000	-.3077	-.3333	.0625
SD	1.1746	1.3305	1.7022	1.5570	.8539
h -- Curriculum Decisions					
Mean	-.2632	-.5263	-.6923	.6667	-.3750
SD	1.1783	1.3098	1.0316	1.4355	1.3102
i -- Student Concentration					
Mean	.6053	.5263	.4615	1.0000	1.0000
SD	1.3860	1.6397	1.1983	.7385	1.4142
j -- Student Anxiety					
Mean	.5526	1.2105	.0769	.0000	.5625
SD	1.0577	1.2116	1.5525	.9535	1.5042
k -- Meaningfulness					
Mean	.5000	.6842	.3077	1.4167	.1875
SD	1.1566	1.2757	1.7022	.9962	1.3769
l -- Student Self-assessment					
Mean	1.1842	1.1842	.3077	1.3333	1.0000
SD	.8005	.7660	1.7022	.7785	1.2649

Table 18

Accelerated Reader™ Item Means and Standard Deviations as a Function of the Level of Decision Input

	Decision Input		No Decision Input	
	n = 61		n = 56	
Items (Individual or Set):	Mean	Std Dev	Mean	Std Dev
Student-centered Items	4.8033	3.5535	3.2143	3.3123
Teacher-centered Items	.6721	3.5153	1.1071	2.3869
Total	7.8852	7.7117	6.3214	5.6988
c -- Appropriateness	1.7213	1.2666	1.5179	1.1907
d -- Instructional Method	.5082	1.3244	.4182	1.2276
e -- Improvement of Scores	.8525	1.1949	.9643	.9138
f -- Student Involvement	1.8197	1.3355	1.4643	1.3068
g -- Use of Results	-.3770	1.4161	.0536	1.1508
h -- Curriculum Decisions	-.3115	1.2047	-.3214	1.3765
i -- Student Concentration	.8361	1.4740	.4643	1.3068
j -- Student Anxiety	.9016	1.1791	.3929	1.3441
k -- Meaningfulness	.6885	1.2455	.4821	1.3617
l -- Student Self-assessment	1.2459	.9426	.8929	1.0733

Table 19
Subsample Means of Standardized Norm-referenced Test (SNRT) and Comparison Assessments Total Attitude Scores

Subsample SNRT Mean	Comparison Instrument	Comparison Subsample Mean	Paired Difference Mean	df	t value	
-4.4500	KRA	-.0143	-4.4357	139	-5.29	**
-3.8696	KWA	4.9652	-8.8348	114	-7.68	**
-3.1379	Textbook	3.6322	-6.7701	86	-8.70	**
-4.5179	CRT	2.8810	-7.3988	167	-10.26	**
-4.1650	Portfolio	9.1359	-13.3010	102	-11.30	**
-6.0000	Acc. Rdr™	7.1696	-13.1696	111	-12.77	**

(* $p \leq .05$; ** $p \leq .01$)

Table 20
Subsample Means of Standardized Norm-referenced Test (SNRT) and Comparison Assessments Student-Centered Attitude Scores

Subsample SNRT Mean	Comparison Instrument	Comparison Subsample Mean	Paired Difference Mean	df	t value	
-4.1071	KRA	-1.9714	-2.1357	139	-6.18	**
-3.8957	KWA	.6609	-4.5565	114	-8.63	**
-4.1429	CRT	-1.5417	-2.6012	167	-9.33	**
-3.9080	Textbook	-.0575	-3.8506	86	-9.45	**
-4.3495	Portfolio	3.7476	-8.0971	102	-13.12	**
-5.1607	Acc. Rdr.™	4.0714	-9.2321	111	-16.82	**

(* $p \leq .05$; ** $p \leq .01$)

Table 21
Subsample Means of Standardized Norm-referenced Test (SNRT) and Comparison Assessments Teacher-Centered Attitude Scores

Subsample SNRT Mean	Comparison Instrument	Comparison Subsample Mean	Paired Difference Mean	df	t value	
-.8750	Acc. Rdr.™	.8571	-1.7321	111	-4.13	**
-.7286	KRA	1.1214	-1.8500	139	-4.67	**
-.3689	Portfolio	2.6311	-3.0000	102	-6.68	**
-.7130	KWA	2.3913	-3.1043	114	-6.77	**
.0000	Textbook	2.1724	-2.1724	86	-6.84	**
-.6845	CRT	2.4643	-3.1488	167	-9.70	**

(* $p \leq .05$; ** $p \leq .01$)

Table 22
Subsample Means of Criterion-referenced Test (CRT) and Comparison Assessments Total Attitude Scores

Subsample CRT Mean	Comparison Instrument	Comparison Subsample Mean	Paired Difference Mean	df	t value	
2.8810	SNRT	-4.5179	7.3988	167	10.26	**
3.1978	KRA	.3956	2.8022	90	3.41	*
3.8800	Textbook	3.5600	.3200	49	.30	
3.0899	KWA	5.4607	-2.3708	88	-2.36	*
4.2647	Acc. Rdr™	7.3235	-3.0588	67	-3.26	**
2.2875	Portfolio	9.1625	-6.8750	79	-5.81	**

(* $p \leq .05$; ** $p \leq .01$)

Table 23
Subsample Means of Criterion-referenced Test (CRT) and Comparison Assessments Student-Centered Attitude Scores

Subsample CRT Mean	Comparison Instrument	Comparison Subsample Mean	Paired Difference Mean	df	t value	
-1.5417	SNRT	-4.1429	2.6012	167	9.33	**
-1.2967	KRA	-1.9231	0.6264	90	1.98	*
-1.5400	Textbook	-0.0400	-1.5000	49	-3.25	**
-1.1236	KWA	1.0787	-2.2022	88	-4.60	**
-1.9875	Portfolio	3.7750	-5.7625	79	-9.44	**
-1.4118	Acc. Rdr.™	4.1912	-5.6029	67	-9.71	**

(* $p \leq .05$; ** $p \leq .01$)

Table 24
Subsample Means of Criterion-referenced Test (CRT) and Comparison Assessments Teacher-Centered Attitude Scores

Subsample CRT Mean	Comparison Instrument	Comparison Subsample Mean	Paired Difference Mean	df	t value	
2.4643	SNRT	-.6845	3.1488	167	9.70	**
3.3971	Acc. Rdr.™	.8088	2.5882	67	5.40	**
3.3400	Textbook	2.1600	1.1800	49	2.21	*
2.2360	KWA	2.3933	-0.1573	88	-.38	
2.4750	Portfolio	2.6750	-0.2000	79	-.43	
1.4176	KRA	2.4505	-1.0330	90	-2.67	**

(* $p \leq .05$; ** $p \leq .01$)

Table 25
Subsample Means of Kansas Reading Assessment (KRA) and Comparison Assessments Total Attitude Scores

Subsample KRA Mean	Comparison Instrument	Comparison Subsample Mean	Paired Difference Mean	df	t value
-.0143	SNRT	-4.4500	4.4357	139	5.29 **
-.1220	Textbook	2.8293	-2.9512	40	-1.77
.3956	CRT	3.1978	-2.8022	90	-3.41 **
-.0250	KWA	4.7000	-4.7250	79	-5.42 **
.1143	Acc. Rdr™	6.3000	-6.1857	69	-5.85 **
.5200	Portfolio	8.2000	-7.6800	49	-6.07 **

(* $p \leq .05$; ** $p \leq .01$)

Table 26
Kansas Reading Assessment (KRA) and Comparison Assessments Student-Centered Attitude Scores

Subsample KRA Mean	Comparison Instrument	Comparison Subsample Mean	Paired Difference Mean	df	t value
-1.9714	SNRT	-4.1071	2.1357	139	6.18 **
-1.9231	CRT	-1.2967	-.6264	90	-1.98 *
-1.9268	Textbook	-.2195	-1.7073	40	-2.72 **
-1.8625	KWA	.3875	-2.2500	79	-4.80 **
-1.4600	Portfolio	3.3000	-4.7600	49	-7.10 **
-2.1286	Acc. Rdr.™	3.4714	-5.6000	69	-9.65 **

(* $p \leq .05$; ** $p \leq .01$)

Table 27
Subsample Means of Kansas Reading Assessment (KRA) and Comparison Assessments Teacher-Centered Attitude Scores

Subsample KRA Mean	Comparison Instrument	Comparison Subsample Mean	Paired Difference Mean	df	t value	
1.1214	SNRT	-.7286	1.8500	139	4.67	**
1.4000	Acc. Rdr.™	.6429	0.7571	69	1.61	
1.1707	Textbook	1.9512	-.7805	40	-1.07	
1.4176	CRT	2.4505	-1.0330	90	-2.67	**
1.1000	Portfolio	2.4200	-1.3200	49	-2.79	**
1.0000	KWA	2.4000	-1.4000	79	-3.90	**

(* $p \leq .05$; ** $p \leq .01$)

Table 28
Subsample Means of Portfolio Assessment and Comparison Assessments Total Attitude Scores

Subsample Portfolio Mean	Comparison Instrument	Comparison Subsample Mean	Paired Difference Mean	df	t value	
9.1359	SNRT	-4.1650	13.3010	102	11.30	**
8.2000	KRA	.5200	7.6800	49	6.07	**
9.1625	CRT	2.2875	6.8750	79	5.81	**
9.1607	KWA	5.1786	3.9821	55	4.05	**
8.2258	Textbook	3.6935	4.5323	61	3.33	**
10.6111	Acc. Rdr.™	7.9444	2.6667	35	1.50	

(* $p \leq .05$; ** $p \leq .01$)

Table 29
Subsample Means of Portfolio Assessment and Comparison Assessments
Student-Centered Attitude Scores

Subsample Portfolio Mean	Comparison Instrument	Comparison Subsample Mean	Paired Difference Mean	df	t value
3.7476	SNRT	-4.3495	8.0971	102	13.12 **
3.7750	CRT	-1.9875	5.7625	79	9.44 **
3.3000	KRA	-1.4600	4.7600	49	7.10 **
3.5000	Textbook	-.0161	3.5161	61	5.66 **
3.5536	KWA	1.1071	2.4464	55	4.56 **
4.7500	Acc. Rdr.™	4.4444	.3056	35	.47

(* $p \leq .05$; ** $p \leq .01$)

Table 30
Subsample Means of Portfolio Assessment and Comparison Assessments
Teacher-Centered Attitude Scores

Subsample Portfolio Mean	Comparison Instrument	Comparison Subsample Mean	Paired Difference Mean	df	t value
2.6311	SNRT	-.3689	3.0000	102	6.68 **
2.4200	KRA	1.1000	1.3200	49	2.79 **
3.0000	Acc. Rdr.™	1.3333	1.6667	35	2.20 *
2.8571	KWA	2.2143	.6429	55	1.58
2.6750	CRT	2.4750	.2000	79	.43
2.0484	Textbook	2.1613	-.1129	61	-.19

(* $p \leq .05$; ** $p \leq .01$)

Table 31
Subsample Means of Kansas Writing Assessment (KWA) and Comparison Assessments Total Attitude Scores

Subsample KWA Mean	Comparison Instrument	Comparison Subsample Mean	Paired Difference Mean	df	t value
4.9652	SNRT	-3.8696	8.8348	114	7.68 **
4.7000	KRA	-.0250	-4.7250	79	5.42 **
5.4607	CRT	3.0899	2.3708	88	2.36 *
4.3404	Textbook	3.5319	.8085	46	.46
3.5682	Acc. Rdr.™	5.3864	-1.8182	43	-1.04
5.1786	Portfolio	9.1607	-3.9821	55	-4.05 **

(* $p \leq .05$; ** $p \leq .01$)

Table 32
Subsample Means of Kansas Writing Assessment (KWA) and Comparison Assessments Student-Centered Attitude Scores

Subsample KWA Mean	Comparison Instrument	Comparison Subsample Mean	Paired Difference Mean	df	t value
.6609	SNRT	-3.8957	4.5565	114	8.63 **
.3875	KRA	-1.8625	2.2500	79	4.80 **
1.0787	CRT	-1.1236	2.2022	88	4.60 **
.3191	Textbook	-.0213	.3404	46	.47
1.1071	Portfolio	3.5536	-2.4464	55	-4.56 **
-.4545	Acc. Rdr.™	3.3636	-3.8182	43	-4.71 **

(* $p \leq .05$; ** $p \leq .01$)

Table 33
Subsample Means of Kansas Writing Assessment (KWA) and Comparison Assessments Teacher-Centered Attitude Scores

Subsample KWA Mean	Comparison Instrument	Comparison Subsample Mean	Paired Difference Mean	df	t value
2.3913	SNRT	-.7130	3.1043	114	6.77 **
2.4000	KRA	1.0000	1.4000	79	3.90 **
2.2273	Acc. Rdr.™	.2727	1.9545	43	2.70 **
2.3933	CRT	2.2360	.1573	88	.38
2.2340	Textbook	2.2340	.0000	46	.00
2.2143	Portfolio	2.8571	-.6429	55	-1.58

(* $p \leq .05$; ** $p \leq .01$)

Table 34
Subsample Means of Publishers' Textbook Tests and Comparison Assessments Total Attitude Scores

Subsample Textbook Mean	Comparison Instrument	Comparison Subsample Mean	Paired Difference Mean	df	t value
3.6322	SNRT	-3.1379	6.7701	86	8.70 **
2.8293	KRA	-0.1220	2.9512	40	1.77
3.5600	CRT	3.8800	-.3200	49	-.30
3.5319	KWA	4.3404	-.8085	46	-.46
3.6935	Portfolio	8.2258	-4.5323	61	-3.33 **
3.8696	Acc. Rdr.™	8.6087	-4.7391	45	-4.76 **

(* $p \leq .05$; ** $p \leq .01$)

Table 35
Subsample Means of Publishers' Textbook Tests and Comparison Assessments Student-Centered Attitude Scores

Subsample Textbook Mean	Comparison Instrument	Comparison Subsample Mean	Paired Difference Mean	df	t value	
-.0575	SNRT	-3.9080	3.8506	86	9.45	**
-.0400	CRT	-1.5400	1.5000	49	3.25	**
-.2195	KRA	-1.9268	1.7073	40	2.72	**
-.0213	KWA	.3191	-.3404	46	.47	
-.0161	Portfolio	3.5000	-3.5161	61	-5.66	**
-.1957	Acc. Rdr.™	4.7826	-4.9783	45	-8.58	**

(* $p \leq .05$; ** $p \leq .01$)

Table 36
Subsample Means of Publishers' Textbook Tests and Comparison Assessments Teacher-Centered Attitude Scores

Subsample Textbook Mean	Comparison Instrument	Comparison Subsample Mean	Paired Difference Mean	df	t value	
2.1724	SNRT	.0000	2.1724	86	6.84	**
2.5435	Acc. Rdr.™	1.3043	1.2391	45	2.41	*
1.9512	KRA	1.1707	.7805	40	1.07	
2.1613	Portfolio	2.0484	.1129	61	.19	
2.2340	KWA	2.2340	.0000	46	.00	
2.1600	CRT	3.3400	-1.1800	49	-2.21	*

(* $p \leq .05$; ** $p \leq .01$)

Table 37
Subsample Means of Accelerated Reader™ Tests and Comparison Assessments Total Attitude Scores

Subsample Acc. Rdr.™ Mean	Comparison Instrument	Comparison Subsample Mean	Paired Difference Mean	df	t value	
7.1696	SNRT	-6.0000	13.1696	111	12.77	**
6.3000	KRA	.1143	6.1857	69	5.85	**
8.6087	Textbook	3.8696	4.7391	45	4.76	**
7.3235	CRT	4.2647	3.0588	67	3.26	**
5.3864	KWA	3.5682	1.8182	43	1.04	
7.9444	Portfolio	10.6111	-2.6667	35	-1.50	

(* $p \leq .05$; ** $p \leq .01$)

Table 38
Subsample Means of Accelerated Reader™ Tests and Comparison Assessments Student-Centered Attitude Scores

Subsample Acc. Rdr.™ Mean	Comparison Instrument	Comparison Subsample Mean	Paired Difference Mean	df	t value	
4.0714	SNRT	-5.1607	9.2321	111	16.82	**
4.1912	CRT	-1.4118	5.6029	67	9.71	**
3.4714	KRA	-2.1286	5.6000	69	9.65	**
4.7826	Textbook	-.1957	4.9783	45	8.58	**
3.3636	KWA	-.4545	3.8182	43	4.71	**
4.4444	Portfolio	4.7500	-.3056	35	-.47	

(* $p \leq .05$; ** $p \leq .01$)

Table 38
Subsample Means of Accelerated Reader™ Tests and Comparison Assessments Teacher-Centered Attitude Scores

Subsample Acc. Rdr.™ Mean	Comparison Instrument	Comparison Subsample Mean	Paired Difference Mean	df	t value	
.8571	SNRT	-.8750	1.7321	111	4.13	**
.6429	KRA	1.4000	-.7571	69	-1.61	
1.3333	Portfolio	3.0000	-1.6667	35	-2.20	*
1.3043	Textbook	2.5435	-1.2391	45	-2.41	*
.2727	KWA	2.2273	-1.9545	43	-2.70	**
.8088	CRT	3.3971	-2.5882	67	-5.40	**

(* $p \leq .05$; ** $p \leq .01$)