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# Cross-validation of easyCBM Reading Cut Scores in Washington: 2009-2010

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## Abstract

This technical report presents results from a cross-validation study designed to identify optimal cut scores when using easyCBM® reading tests in Washington state. The cross-validation study analyzes data from the 2009-2010 academic year for easyCBM® reading measures. A sample of approximately 900 students per grade, randomly split into two groups of roughly the same size, was used for this study. Students state test performance classification (passing/not passing) on the Measurements of Student Progress (MSP) state test in Washington was used as the criterion. Optimal cut scores were identified for each of the randomly split groups with a receiver operating characteristic curve (ROC) analysis. Results indicated reasonably stable cut scores between groups. Further, the overall area under the ROC curve (AUC) was not statistically different between groups for any measurement occasion at any grade, providing strong evidence for the validity of identified cut scores as optimal to predict student performance classification on the Washington state large-scale assessment.

**Cross-validation of easyCBM Reading Cut Scores in Washington: 2009-2010**

In this technical report, we present findings from a cross-validation study examining the diagnostic efficiency of easyCBM® reading tests. Data for these tests were analyzed for grades 3-8, and came from the 2009-2010 academic year. Park, Anderson, Irvin, Alonzo, and Tindal (2011) used a large sample in Washington state to establish optimal cut scores for predicting performance classification (not passing/passing) of the Measurements of Student Progress (MSP) state test in Washington. We extend their study by randomly splitting the same sample into two groups and examining the *stability* of the optimal cut scores for each easyCBM® reading measure across the randomly selected groups. The relative stability of the cut points provides further evidence to support the specified cut point for predicting state test classification in Washington state.

**Theoretical Framework**

The online easyCBM® progress monitoring assessment system was launched in September 2006 as part of a Model Demonstration Center on Progress Monitoring funded by the Office of Special Education Programs (OSEP). Since 2006, up to 17 forms for each reading measure have been developed for grades K-8. These reading measures accompany the 33 test forms available at each of grades K-8 for mathematics, together making up the easyCBM® online assessment system.

The easyCBM® reading measures were developed specifically for use within a response to intervention (RTI) framework. Within RTI, students are administered benchmark screening assessments periodically throughout the year (e.g., fall, winter, and spring). From these benchmark assessments, students are classified into tiers of "academic risk," typically based on normative cut scores. For example, a district using easyCBM® may administer the reading

assessments in the fall for benchmark screening purposes. Based on student results on these screening tests, and on a set of performance-associated normative risk ratings that the district identifies for each measure, students are classified into one of two tiers of risk (Tier 1: *not at-risk* or Tier 2: *at risk*). Students identified as *at-risk* on one or more easyCBM® reading assessments are then provided with a targeted academic intervention, and their progress is monitored with frequent easyCBM® administrations. The progress-monitoring probes are administered until the student (a) has responded to the intervention and is placed back in Tier 1, or (b) the subsequent benchmarking occasion, at which point tier placement is re-evaluated.

Although many districts operate under a normative evaluation of student achievement when assigning tier placement, a criterion-referenced view may provide additional useful information. For example, a district may know that students scoring an 8 or below on a particular screener are below the 20$^{th}$ percentile. However, from a criterion-referenced view, the district may also take into account that students scoring an 11 or below are not likely to pass the state test. A score of 11 may be closer to the 30$^{th}$ percentile of normative achievement. The educators within the district can then determine what the most optimal cut-point would be for their district given the resources available, weighing both the normative and criterion-referenced interpretations of student achievement.

The easyCBM® system has three designated benchmark screening assessments for reading, administered during the fall, winter, and spring for fluency and comprehension, and during fall and spring for vocabulary. The remaining reading assessment forms for a given measure and at a given grade are designated for progress-monitoring between the seasonal benchmark assessments. Although ostensibly low-stakes in nature, perhaps the most critical assessment occasion for easyCBM® reading assessments is the fall benchmark screener. As in

the example above, the results from the fall benchmarks are used to initially classify students into RTI tiers, from which two types of errors can occur: false positives and false negatives. A false positive occurs when a student is incorrectly identified as being *at-risk,* while a false negative occurs when a student is incorrectly identified as being *not at risk*. From an instructional standpoint and within the RTI model, false negatives are of far greater concern than false positives. Students who are not identified as *at-risk* when they should be are provided only typical grade-level instruction and are not tested again until the next benchmark screening in the winter. In other words, when a false negative occurs, students may be excluded from potentially valuable reading interventions for months, unless their teacher or a separate measure deems them *at-risk*. In contrast, false positives result in providing targeted interventions to students who are not necessarily in need. In the case of a false positive, additional interventions given to students not in need can be a drain on instructional resources.

Although false positives may drain limited resources, they are not as great a concern as false negatives because students receiving unneeded additional support are also administered additional progress-monitoring measures. Thus, students who are not in need of the additional support will likely be correctly reclassified as being *not at-risk* based on results from additional progress monitoring assessments, whereas students misclassified by false negatives may spend much of the school year not receiving instructional interventions they need to improve their reading. Given the importance of the instructional decisions made based on student performance on the easyCBM® benchmark reading measures and the inherent complexity around identifying a student as being at-risk, it is important to scrutinize potential easyCBM® cut scores used for classifying students.

We examine raw score cut points on easyCBM® benchmarks with a criterion-referenced evaluation, determining how well each score predicts performance-level classification on the reading portion of the MSP. Park et al. (2011) established optimal raw score cut points, and we extend this work by conducting a cross-validation study to explore the stability of optimal cut scores when the sample is randomly split into two similar groups. Therefore, we examine and report only the diagnostic efficiency information obtained from the receiver operating characteristics (ROC) curve analysis (including the ROC curve figure, area under the curve statistics, and the sensitivity and specificity of each cut score), and not other classification statistics such as the positive and negative predictive power, or overall correct classification rate. Readers are referred to Park et al.'s (2011) technical report for this information.

## Methods

### Setting and Subjects

Two Washington districts participated in this study. The demographics and number of students in the sample are reported by grade level and district in Table 1. The two public school districts that participated in this study were both located in the western half of Washington state. Data came from a convenience sample of students in each district who participated in the districts' benchmarking assessments in the fall of 2009 and the winter and spring of 2010. All analyses were conducted by grade level.

### Measures

In this section, we begin by first describing the easyCBM® reading benchmark screening assessments under investigation. We then describe the state test, used as the criterion to determine students "true classification": the MSP.

For students in grades two through eight, three types of reading measures are available through easyCBM®: fluency, comprehension, and vocabulary. The fluency and comprehension

measures are administered in the fall, winter, and spring, while the vocabulary measure is administered only in the fall and spring. Both the comprehension and vocabulary easyCBM® measures are computer-based, although teachers have access to printable versions of the tests so they can be administered via paper-pencil. Fluency measures are designed for individual administration, with scores recorded on the computer after student performance has been assessed. All easyCBM® test forms of a specific type and within a grade-level were designed to be of equivalent difficulty. However, no attempt was made to control the difficulty of the measures across different test types (i.e., the comprehension tests are not designed to be of equivalent difficulty to the fluency or vocabulary tests within a given grade level).

**Fluency.** There are two types of fluency measures available through easyCBM®: word reading fluency (WRF) and passage reading fluency (PRF). The WRF measures are available in grades K-3, while the PRF measures are available in grades 1-8. For the current study, we analyze easyCBM® PRF results only in the grades where the MSP was administered (3-8). Although some data were available on the WRF measures in grade 3, this measure was not included in the current study. By grade 3 students have typically "graduated" from the WRF measures to the PRF measures, and very few teachers chose to use WRF for benchmark screening in the study samples.

The PRF measures consist of an original work of fictional narrative varying in length from 250 to 380 words, depending on the grade-level. Students are administered the measures individually by trained assessors. The assessor begins by reading a standardized set of directions and presenting the student with the passage on a single page. The assessor provides one-minute of reading time and scores the number of correctly read words per minute. Words students fail to read or read incorrectly are counted as errors, while self-corrections are scored as correct. A

complete description of the development of the PRF measures can be found in Alonzo, Park, and Tindal (2008), Alonzo and Tindal (2008), and Alonzo and Tindal (2007).

**Comprehension.** Students' comprehension skills are assessed with the easyCBM® multiple-choice reading comprehension (MCRC) measures. MCRC measures for grades 3-8 contain 20 items assessing students' comprehension of a 1,500 word fictional narrative. The comprehension items are designed to target students' literal (7 items), inferential (7 items), and evaluative (6 items) comprehension. Literal items ask the student to identify a specific event from the text. Inferential questions require students to infer unwritten meaning from the text. For example, a story may describe how a character feels, but not explicitly describe the character's feelings. A typical inferential question might then explicitly ask how the character felt. Evaluative questions ask the reader to evaluate the situation and make a judgment. For example, an item may ask what a character in the story would likely do if he or she were in the situation described in the story at another time. Students are allowed to read back through the text as they are answering the items. Each item consists of a question stem followed by three possible answer choices: one correct, one intended as a near-distractor, and one intended as a far-distractor. Each item is worth one point for a total possible raw score of 20. Additional description of the development of the MCRC measures can be found in Park, Alonzo, and Tindal (2011) and Alonzo, Liu, and Tindal (2007).

**Vocabulary.** The vocabulary (VOC) measures available through easyCBM® contain 25 multiple-choice items. The stem of each item consists of a single vocabulary word targeted at the students' grade level. Various word-lists were used during development to determine appropriate words (e.g., Fry, EDL Core Vocabulary, etc.). Each item contains three answer options consisting of a correct response and two relevant distractors. The correct response was the

second most-common synonym of the word as indicated in the dictionary. Complete description of the development of the VOC measures can be found in Alonzo and Tindal (2004).

**Measurements of Student Progress (MSP)**

The MSP was newly implemented for the 2009-2010 school year. Previously, Washington state had administered the Washington Assessment of Student Learning, a longer test that was limited to paper pencil format. According to the Washington Department of Education, the MSP will eventually be a computer administered assessment; however, because this was the first year the assessment was administered, only about 25% of students in grades 6-8 were administered the assessment by computer. The state plans to move to a fully computer administered test within 2-3 years. Reading portions of the MSP include multiple-choice and short answer item types. Students' scores are reported on an equal-interval scale typically ranging from 200 to 600, with 400 representing the meeting score for the *proficient* (i.e., meeting standards) performance level classification.

**Data Analyses**

To evaluate the stability of the optimal cut scores selected for each easyCBM® measure, we randomly split the sample into two similar groups. After each group was selected, we followed a two-stage process. First, we evaluated the groups to ensure that the random group selection resulted in two demographically comparable samples. Second, we conducted receiver operating characteristic curve (ROC) analyses with each group for each measure at each time-point. The results of the ROC analyses were then used to select an optimal cut-score for each group. The stability of the optimal cut-scores across the randomly selected groups was then compared.

**Random Split-File.** Groups were randomly split into two groups using the random sample selection function in SPSS 18.0, by which each case is randomly assigned a value based on the specified probability parameter of 0.5, giving each student case an equal probability of being assigned to either group. We then conducted a series of *t*-tests with student subgroups to determine whether the students from a particular subgroup differed significantly between the randomly selected groups. In addition, we conducted *t*-tests with each measure used in the study to determine if students' performance differed significantly between the two groups. For these *t*-tests, we analyzed comparability of the samples based on ten student subgroup categories: seven for ethnicity (American Indian/Alaskan Native, Asian/Pacific Islander, Black, Hispanic, White, Multiethnic, and Decline to Identify) and one for each of Special Education; English Language Learner; and economically disadvantaged students (determined by free or reduced priced lunch eligibility).

**ROC Analyses.** When *t*-test results indicated that the randomly selected groups were comparable, we conducted a ROC analysis for each measure and grade for each randomly selected half of the sample. We examined the overall AUC for comparability between the groups, with respect to a 95% confidence interval. Overlapping confidence intervals indicated a non-significant difference between the randomly selected groups. We then evaluated the sensitivity and specificity of each cut score and chose an optimal cut score for each group, using the same approach described in the study by Anderson, Alonzo, and Tindal (2010).

These decision rules applied a slightly modified version of the decision rules outlined by Silberglitt and Hintze (2005). Silberglitt and Hintze aimed to maximize both sensitivity and specificity, but placed an increased emphasis on sensitivity. When determining an optimal cut score, they suggest the researcher:

> (a) determine the cut score(s) that yield at least 0.7 for sensitivity and specificity; (b) if possible, increase sensitivity from this point, continuing upward while still maintaining specificity of 0.7, stopping if sensitivity exceeds 0.8; (c) if sensitivity exceeds 0.8 and specificity can still be increased, continue to maximize specificity (while maintaining sensitivity of 0.8); and (d) if both sensitivity and specificity exceed 0.8, repeat steps 2 and 3, using 0.9 as the next cutoff (p. 316).

We felt that if both sensitivity and specificity were above 0.8, that cut score would be the best option. However, if no cut score resulted in both sensitivity and specificity being above 0.8, sensitivity was maximized while keeping specificity above 0.7, even if a different cut score would have resulted in both statistics being close to 0.8. These modified rules placed a further emphasis on sensitivity, which we felt was warranted given the importance of reducing false negatives in an RTI model.

## Results

We present the results of this cross-validation study in two sections: (a) sample comparisons of demographic characteristics between the two randomly split groups, and (b) optimal cut scores and ROC analyses for both groups.

### Section One: Demographic Comparison, By Group

Sample characteristics were compared based on the proportion of each student subgroup and the descriptive statistics of each measure. The *t*-test results indicated that across all grades, the two groups did not differ significantly in their demographic characteristics with five exceptions: the proportion of Asian/Pacific Islander students in grade 4, $t(1253) = 2.10$, $p = .036$, the proportion of female students in grade 4, $t(1253)$ -3.30, $p = .002$, the proportion of Hispanic students in grade 6, $t(1183) = -2.16$, $p = .031$, the proportion of students receiving free or

reduced priced lunch in grade 6, $t(1934) = -1.99$, $p = .047$, and the proportion of students receiving free or reduced priced lunch in grade 8 $t(1113) = 3.31$, $p = .001$. Although *t*-tests indicated statistically significant differences in these five instances, examination of the descriptive statistics related to each group indicated that the differences between the groups in the five aforementioned categories were minimal. Thus, we concluded that student demographic characteristics across the two randomly split groups were sufficiently similar for cross-validation analysis of identified optimal cut scores between the groups. The results of comparison of sample demographic characteristics of the two groups are presented, by grade in Appendix A.

**Section Two: Optimal Cut Scores and ROC Analyses, By Group**

ROC analysis computes sensitivity and specificity statistics for all possible cut scores in half-point increments. When selecting an optimal meeting score, the next highest whole number of a chosen cut score is reported, serving as the basis for student classification. For example, given a cut score value of 9.5 on a benchmark vocabulary measure, students who score 9 or below would be classified as at-risk of failing to meet the state standard, whereas students who score 10 or above would be classified as not at-risk. In this case, 10 would be reported as an optimal *meeting* score for this measure. The chosen meeting cut scores for each measure yielded the most optimal sensitivity and specificity statistics based on the decision rules outlined above for the two groups.

**Grade 3 results.** For students in Grade 3, the optimal meeting score on the easyCBM® fall PRF benchmark test was 74 correct words per minute (CWPM) for the first group and 75 CWPM for the second group. On the fall MCRC benchmark test, the optimal meeting scores were 11 and 10 for the first and the second group, respectively. On the fall VOC benchmark test, the optimal meeting scores were 15 and 16 for the first and the second group, respectively. The

optimal meeting score on the easyCBM® winter PRF benchmark test was 111 CWPM for the first group and 109 CWPM for the second group. On the winter MCRC benchmark test, the optimal meeting scores were 10 for both groups. The optimal meeting score on the easyCBM® spring PRF benchmark test was 100 CWPM for the first group and 106 CWPM for the second group. On the spring MCRC benchmark test, the optimal meeting scores were 13 for both groups. On the spring VOC benchmark test, the optimal meeting scores were 22 for both groups.

**Grade 4 results.** For students in Grade 4, the optimal meeting score on the easyCBM® fall PRF benchmark test was 106 CWPM for the first group and 113 CWPM for the second group. On the fall MCRC benchmark test, the optimal meeting scores were 12 and 10 for the first and the second group, respectively. On the fall VOC benchmark test, the optimal meeting scores were 15 and 17 for the first and the second group, respectively. The optimal meeting scores on the easyCBM® winter PRF benchmark test were 131 CWPM for both groups. On the winter MCRC benchmark test, the optimal meeting scores were 14 and 16 for the first and the second groups, respectively. The optimal meeting score on the easyCBM® spring PRF benchmark test was 129 CWPM for the first group and 133 CWPM for the second group. On the spring MCRC benchmark test, the optimal meeting scores were 14 and 15 for the first and the second group, respectively. On the spring VOC benchmark test, the optimal meeting scores were 20 and 19 for the first and the second group, respectively.

**Grade 5 results.** For students in Grade 5, the optimal meeting score on the easyCBM® fall PRF benchmark test was 143 CWPM for the first group and 118 CWPM for the second group. On the fall MCRC benchmark test, the optimal meeting scores were 15 and 14 for the first and the second group, respectively. On the fall VOC benchmark test, the optimal meeting scores were 17 and 15 for the first and the second group, respectively. The optimal meeting score on the

easyCBM® winter PRF benchmark test was 148 CWPM for the first group and 135 CWPM for the second group. On the winter MCRC benchmark test, the optimal meeting scores were 17 for both groups. The optimal meeting score on the easyCBM® spring PRF benchmark test was 162 CWPM for the first group and 149 CWPM for the second group. On the spring MCRC benchmark test, the optimal meeting scores were 16 for both groups. On the spring VOC benchmark test, the optimal meeting scores were 20 and 19 for the first and the second group, respectively.

**Grade 6 results.** For students in Grade 6, the optimal meeting score on the easyCBM® fall PRF benchmark test was 154 CWPM for the first group and 158 CWPM for the second group. On the fall MCRC benchmark test, the optimal meeting scores were 16 for both groups. On the fall VOC benchmark test, the optimal meeting scores were 15 for both groups. The optimal meeting score on the easyCBM® winter PRF benchmark test was 176 CWPM for the first group and 173 CWPM for the second group. On the winter MCRC benchmark test, the optimal meeting scores were 15 and 14 for the first and the second group, respectively. The optimal meeting score on the easyCBM® spring PRF benchmark test was 168 CWPM for the first group and 192 CWPM for the second group. On the spring MCRC benchmark test, the optimal meeting scores were 15 and 16 for the first and the second group, respectively. On the spring VOC benchmark test, the optimal meeting scores were 17 and 16 for the first and the second group, respectively.

**Grade 7 results.** For students in Grade 7, the optimal meeting score on the easyCBM® fall PRF benchmark test was 149 CWPM for the first group and 139 CWPM for the second group. On the fall MCRC benchmark test, the optimal meeting scores were 14 for both groups. On the fall VOC benchmark test, the optimal meeting scores were 13 for both groups. The

optimal meeting score on the easyCBM® winter PRF benchmark test was 167 CWPM for the first group and 169 CWPM for the second group. On the winter MCRC benchmark test, the optimal meeting scores were 16 for both groups. The optimal meeting score on the easyCBM® spring PRF benchmark test was 157 CWPM for the first group and 152 CWPM for the second group. On the spring MCRC benchmark test, the optimal meeting scores were 13 for both groups. On the spring VOC benchmark test, the optimal meeting scores were 15 for both groups.

**Grade 8 results.** For students in Grade 8, the optimal meeting score on the easyCBM® fall PRF benchmark test was 141 CWPM for the first group and 145 CWPM for the second group. Because there were not any students who took easyCBM® fall MCRC and VOC benchmark tests, ROC analyses were not conducted for these two measures. The optimal meeting score on the easyCBM® winter PRF benchmark test was 153 CWPM for the first group and 155 CWPM for the second group. On the winter MCRC benchmark test, the optimal meeting scores were 13 and 14 for the first and the second group, respectively. The optimal meeting score on the easyCBM® spring PRF benchmark test was 170 CWPM for the first group and 173 CWPM for the second group. On the spring MCRC benchmark test, the optimal meeting scores were 13 for both groups. On the spring VOC benchmark test, the optimal meeting scores were 16 for both groups.

The sensitivity and specificity statistics for all possible cut scores and the results of ROC analyses for the three reading easyCBM® measures are presented in the order of PRF, MCRC, and VOC, by grade, for both groups in Appendix B. The results are presented in the order of (a) case processing summary, (b) area under curve statistics, (c) ROC curve figures, and (d) sensitivity and specificity statistics for each cut score. The determined optimal cut scores for each group are displayed in bold-faced font in the sensitivity and specificity tables.

## Discussion

Overall, identified optimal cut scores appear reasonably stable across the two randomly split groups. Specifically, the average difference in cut scores for the easyCBM® PRF measure between groups was 7.11 CWPM for 18 grade-level and measurement occasion comparisons. The average difference between cut scores for the MCRC and VOC measures was 0.59 and 1.00 for 17 and 11 grade-level and measurement occasion comparisons respectively. Additionally, 95% confidence intervals for AUC statistics overlapped between groups for each measure type at all measurement occasions, indicating that observed differences in identified optimal cut scores between the two groups are non-significant. The consistency of optimal cut scores across measurement occasions for the two groups and the non-significant differences in AUC statistics at all measurement occasion and grades provide strong evidence for the validity of the cut scores derived.

Although identified optimal cut scores appear stable across the two groups used in the study, caution is warranted when extrapolating the actual *values* of identified cut scores. The identified cut scores were chosen using the Washington state test as the criterion; a different criterion may well produce different optimal cut-scores. Performance standards vary from state to state and we would expect the identified cut scores to differ based on the state test used (for example, see Anderson, Park, Irvin, Alonzo, & Tindal, 2011). However, given a common criterion, the results of this study indicate that the optimal cut-score is quite stable. Caution is also warranted when considering the identified optimal cut scores used in this study given that the sample, although large, included only two districts within the state of Washington. Identified optimal cut-scores could serve as a guide to districts within Washington, but should not serve as

a substitute for careful state- and district-level judgment of easyCBM® cut score identification and evaluation within high-stakes accountability systems.

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Table 1
*Demographics*

| | | | | | | % Ethnicity | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Grade | *n* | % ELL | % FRL | % SPED | % Female | Amer Ind | Asian/Pac Islander | Black | Hispanic | White | Multi | Decline/ Missing |
| | | | | | | District 1 | | | | | | |
| 3 | 1023 | 3.1 | 45.2 | 12.7 | 48.5 | 2.8 | 10.9 | 5.2 | 8.7 | 57.9 | 11.9 | 2.5 |
| 4 | 993 | 2.9 | 43.1 | 11.7 | 48.8 | 2.1 | 9.4 | 5.5 | 9.4 | 57.5 | 13.9 | 2.2 |
| 5 | 1000 | 2.9 | 39.7 | 15.1 | 42.6 | 1.9 | 10.8 | 5.3 | 7.8 | 57.3 | 14.7 | 2.2 |
| 6 | 940 | 2.1 | 40.1 | 11.6 | 49.1 | 3.2 | 10.0 | 5.5 | 8.9 | 59.0 | 10.9 | 2.4 |
| 7 | 982 | 2.0 | 38.9 | 13.1 | 48.8 | 2.3 | 10.3 | 9.0 | 9.6 | 58.5 | 6.2 | 4.2 |
| 8 | 1107 | 2.3 | 34.3 | 10.3 | 41.9 | 3.0 | 13.6 | 9.8 | 11.1 | 60.7 | 1.0 | 0.8 |
| | | | | | | District 2 | | | | | | |
| 3 | 271 | 12.2 | - | 13.7 | 47.2 | 5.5 | 4.1 | 1.1 | 24.0 | 61.3 | 2.6 | 1.5 |
| 4 | 262 | 8.4 | - | 18.7 | 48.5 | 4.2 | 2.7 | 0.4 | 22.9 | 67.6 | 2.3 | - |
| 5 | 258 | 6.2 | - | 21.3 | 57.8 | 7.8 | 3.5 | 1.2 | 20.9 | 65.5 | 0.4 | 0.8 |
| 6 | 245 | 4.9 | - | 7.8 | 49.0 | 5.3 | 1.6 | 1.6 | 18.4 | 70.2 | 2.4 | 0.4 |
| 7 | 225 | 4.4 | - | 4.9 | 49.3 | 6.7 | 1.8 | 1.3 | 17.3 | 70.2 | 0.9 | 1.8 |
| 8 | 592 | 3.4 | - | 12.5 | 47.6 | 7.4 | 2.0 | 1.7 | 14.9 | 71.6 | 1.0 | 1.4 |
| | | | | | | Full Sample | | | | | | |
| 3 | 1294 | 5.0 | - | 12.9 | 48.2 | 3.4 | 9.5 | 4.3 | 11.9 | 58.6 | 10.0 | 2.3 |
| 4 | 1255 | 4.1 | - | 13.1 | 48.8 | 2.5 | 8.0 | 4.5 | 12.2 | 59.6 | 11.5 | 1.7 |
| 5 | 1258 | 3.6 | - | 16.4 | 45.7 | 3.1 | 9.3 | 4.5 | 10.5 | 59.0 | 11.8 | 1.8 |
| 6 | 1185 | 2.7 | - | 10.8 | 49.1 | 3.6 | 8.3 | 4.7 | 10.9 | 61.4 | 9.1 | 2.0 |
| 7 | 1207 | 2.5 | - | 11.6 | 48.9 | 3.1 | 8.7 | 7.5 | 11.0 | 60.6 | 5.2 | 3.9 |
| 8 | 1699 | 2.7 | - | 11.6 | 47.4 | 4.3 | 9.1 | 6.6 | 11.7 | 60.9 | 0.9 | 6.5 |

*Note.* Numbers reflect full sample separated by District. However, during analyses students were excluded listwise and the actual demographics of students included varies by analysis. All values thus more accurately represent the Districts and sample, but not necessarily the analyses. Statistics are intended to provide only a general indication of the students included in the analyses.
ELL – English Language Learner, FRL – Free or reduced lunch eligible, SPED – Student receives special education services

Appendix A: Results of the Random Sample Split

**Grade 3**

**Crossvalidation**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Group 1 | 647 | 50.0 | 50.0 | 50.0 |
| | Group 2 | 647 | 50.0 | 50.0 | 100.0 |
| | Total | 1294 | 100.0 | 100.0 | |

**EthnicCd**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | American Indian/Alakan Native | 19 | 2.9 | 2.9 | 2.9 |
| | | Asian/Pacific Islander | 60 | 9.3 | 9.3 | 12.2 |
| | | Black | 33 | 5.1 | 5.1 | 17.3 |
| | | Hispanic | 75 | 11.6 | 11.6 | 28.9 |
| | | White | 380 | 58.7 | 58.7 | 87.6 |
| | | Multiethnic | 63 | 9.7 | 9.7 | 97.4 |
| | | Decline | 17 | 2.6 | 2.6 | 100.0 |
| | | Total | 647 | 100.0 | 100.0 | |
| Group 2 | Valid | American Indian/Alakan Native | 25 | 3.9 | 3.9 | 3.9 |
| | | Asian/Pacific Islander | 63 | 9.7 | 9.7 | 13.6 |
| | | Black | 23 | 3.6 | 3.6 | 17.2 |
| | | Hispanic | 79 | 12.2 | 12.2 | 29.4 |
| | | White | 378 | 58.4 | 58.4 | 87.8 |
| | | Multiethnic | 66 | 10.2 | 10.2 | 98.0 |
| | | Decline | 13 | 2.0 | 2.0 | 100.0 |
| | | Total | 647 | 100.0 | 100.0 | |

**SPED**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | No | 568 | 87.8 | 87.8 | 87.8 |
| | | Yes | 79 | 12.2 | 12.2 | 100.0 |
| | | Total | 647 | 100.0 | 100.0 | |
| Group 2 | Valid | No | 559 | 86.4 | 86.4 | 86.4 |
| | | Yes | 88 | 13.6 | 13.6 | 100.0 |
| | | Total | 647 | 100.0 | 100.0 | |

**Female**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | Male | 356 | 55.0 | 55.0 | 55.0 |
| | | Female | 291 | 45.0 | 45.0 | 100.0 |
| | | Total | 647 | 100.0 | 100.0 | |
| Group 2 | Valid | Male | 314 | 48.5 | 48.5 | 48.5 |
| | | Female | 333 | 51.5 | 51.5 | 100.0 |
| | | Total | 647 | 100.0 | 100.0 | |

**ELL**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | No | 610 | 94.3 | 94.3 | 94.3 |
| | | Yes | 37 | 5.7 | 5.7 | 100.0 |
| | | Total | 647 | 100.0 | 100.0 | |
| Group 2 | Valid | No | 619 | 95.7 | 95.7 | 95.7 |
| | | Yes | 28 | 4.3 | 4.3 | 100.0 |
| | | Total | 647 | 100.0 | 100.0 | |

**EconDsvntg**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | No | 269 | 41.6 | 53.8 | 53.8 |
| | | Yes | 231 | 35.7 | 46.2 | 100.0 |
| | | Total | 500 | 77.3 | 100.0 | |
| | Missing | System | 147 | 22.7 | | |
| | Total | | 647 | 100.0 | | |
| Group 2 | Valid | No | 280 | 43.3 | 54.8 | 54.8 |
| | | Yes | 231 | 35.7 | 45.2 | 100.0 |
| | | Total | 511 | 79.0 | 100.0 | |
| | Missing | System | 136 | 21.0 | | |
| | Total | | 647 | 100.0 | | |

**MSPRdg_Perf**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | .00 | 185 | 28.6 | 28.7 | 28.7 |
| | | 1.00 | 460 | 71.1 | 71.3 | 100.0 |
| | | Total | 645 | 99.7 | 100.0 | |
| | Missing | System | 2 | .3 | | |
| | Total | | 647 | 100.0 | | |
| Group 2 | Valid | .00 | 175 | 27.0 | 27.0 | 27.0 |
| | | 1.00 | 472 | 73.0 | 73.0 | 100.0 |
| | | Total | 647 | 100.0 | 100.0 | |

**Descriptive Statistics**

| Crossvalidation | | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|---|
| Group 1 | MSP Reading | 645 | 0 | 500 | 406.66 | 47.531 |
| | MSPRdg_Perf | 645 | .00 | 1.00 | .7132 | .45263 |
| | Fall09PRF | 127 | 14 | 199 | 80.32 | 33.936 |
| | Fall09MCRC | 127 | 0 | 17 | 9.91 | 3.237 |
| | Fall09Voc | 128 | 5 | 25 | 15.79 | 4.581 |
| | Wint10PRF | 147 | 13 | 212 | 108.01 | 38.987 |
| | Wint10MCRC | 192 | 0 | 17 | 10.40 | 3.263 |
| | Spr10PRF | 163 | 16 | 223 | 108.95 | 40.889 |
| | Spr10MCRC | 310 | 0 | 20 | 13.06 | 3.950 |
| | Spr10Voc | 257 | 6 | 25 | 20.93 | 4.076 |
| | Valid N (listwise) | 122 | | | | |
| Group 2 | MSP Reading | 647 | 0 | 500 | 405.10 | 57.232 |
| | MSPRdg_Perf | 647 | .00 | 1.00 | .7295 | .44455 |
| | Fall09PRF | 127 | 9 | 167 | 77.22 | 37.559 |
| | Fall09MCRC | 127 | 0 | 17 | 9.53 | 3.509 |
| | Fall09Voc | 127 | 5 | 24 | 15.39 | 4.842 |
| | Wint10PRF | 140 | 18 | 217 | 108.09 | 37.822 |
| | Wint10MCRC | 172 | 0 | 16 | 9.87 | 3.310 |
| | Spr10PRF | 148 | 32 | 254 | 107.76 | 41.351 |
| | Spr10MCRC | 283 | 0 | 20 | 13.43 | 3.879 |
| | Spr10Voc | 245 | 0 | 25 | 20.43 | 4.683 |
| | Valid N (listwise) | 122 | | | | |

**Independent Samples Test**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| AmerIndAkNative | Equal variances assumed | 3.393 | .066 | -.920 | 1292 | .358 | -.009 | .010 | -.029 | .011 |
| | Equal variances not assumed | | | -.920 | 1269.989 | .358 | -.009 | .010 | -.029 | .011 |
| AsianPacIslnder | Equal variances assumed | .323 | .570 | -.284 | 1292 | .776 | -.005 | .016 | -.037 | .027 |
| | Equal variances not assumed | | | -.284 | 1291.385 | .776 | -.005 | .016 | -.037 | .027 |
| Black | Equal variances assumed | 7.506 | .006 | 1.366 | 1292 | .172 | .015 | .011 | -.007 | .038 |
| | Equal variances not assumed | | | 1.366 | 1255.402 | .172 | .015 | .011 | -.007 | .038 |
| Hispanic | Equal variances assumed | .471 | .493 | -.343 | 1292 | .732 | -.006 | .018 | -.042 | .029 |
| | Equal variances not assumed | | | -.343 | 1291.348 | .732 | -.006 | .018 | -.042 | .029 |
| White | Equal variances assumed | .051 | .822 | .113 | 1292 | .910 | .003 | .027 | -.051 | .057 |
| | Equal variances not assumed | | | .113 | 1291.998 | .910 | .003 | .027 | -.051 | .057 |
| Multiethnic | Equal variances assumed | .310 | .578 | -.278 | 1292 | .781 | -.005 | .017 | -.037 | .028 |
| | Equal variances not assumed | | | -.278 | 1291.448 | .781 | -.005 | .017 | -.037 | .028 |
| Decline | Equal variances assumed | 2.185 | .140 | .738 | 1292 | .460 | .006 | .008 | -.010 | .023 |
| | Equal variances not assumed | | | .738 | 1270.455 | .460 | .006 | .008 | -.010 | .023 |
| SPED | Equal variances assumed | 2.228 | .136 | -.746 | 1292 | .456 | -.014 | .019 | -.050 | .023 |
| | Equal variances not assumed | | | -.746 | 1289.281 | .456 | -.014 | .019 | -.050 | .023 |

**Independent Samples Test Continued**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Female | Equal variances assumed | 5.072 | .024 | -2.340 | 1292 | .019 | -.065 | .028 | -.119 | -.010 |
| | Equal variances not assumed | | | -2.340 | 1291.972 | .019 | -.065 | .028 | -.119 | -.010 |
| ELL | Equal variances assumed | 5.266 | .022 | 1.145 | 1292 | .252 | .014 | .012 | -.010 | .038 |
| | Equal variances not assumed | | | 1.145 | 1270.113 | .252 | .014 | .012 | -.010 | .038 |
| EconDsvntg | Equal variances assumed | .396 | .529 | .317 | 1009 | .751 | .010 | .031 | -.052 | .071 |
| | Equal variances not assumed | | | .317 | 1008.442 | .751 | .010 | .031 | -.052 | .071 |
| MSP Reading | Equal variances assumed | 1.442 | .230 | .532 | 1290 | .595 | 1.557 | 2.927 | -4.186 | 7.300 |
| | Equal variances not assumed | | | .532 | 1249.258 | .595 | 1.557 | 2.927 | -4.185 | 7.299 |
| MSPRdg_Perf | Equal variances assumed | 1.714 | .191 | -.655 | 1290 | .513 | -.01634 | .02496 | -.06531 | .03263 |
| | Equal variances not assumed | | | -.655 | 1289.426 | .513 | -.01634 | .02496 | -.06531 | .03263 |
| Fall09PRF | Equal variances assumed | 1.366 | .244 | .691 | 252 | .490 | 3.102 | 4.492 | -5.744 | 11.949 |
| | Equal variances not assumed | | | .691 | 249.451 | .490 | 3.102 | 4.492 | -5.744 | 11.949 |
| Fall09MCRC | Equal variances assumed | 1.522 | .218 | .911 | 252 | .363 | .386 | .424 | -.448 | 1.220 |
| | Equal variances not assumed | | | .911 | 250.371 | .363 | .386 | .424 | -.448 | 1.220 |

**Independent Samples Test Continued**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Fall09Voc | Equal variances assumed | .904 | .343 | .670 | 253 | .504 | .395 | .590 | -.767 | 1.558 |
| | Equal variances not assumed | | | .670 | 251.992 | .504 | .395 | .590 | -.767 | 1.558 |
| Wint10PRF | Equal variances assumed | .077 | .781 | -.019 | 285 | .985 | -.086 | 4.537 | -9.017 | 8.845 |
| | Equal variances not assumed | | | -.019 | 284.901 | .985 | -.086 | 4.534 | -9.011 | 8.839 |
| Wint10MCRC | Equal variances assumed | .144 | .705 | 1.550 | 362 | .122 | .535 | .345 | -.144 | 1.213 |
| | Equal variances not assumed | | | 1.549 | 356.464 | .122 | .535 | .345 | -.144 | 1.214 |
| Spr10PRF | Equal variances assumed | .031 | .861 | .254 | 309 | .799 | 1.187 | 4.668 | -7.997 | 10.372 |
| | Equal variances not assumed | | | .254 | 305.431 | .799 | 1.187 | 4.670 | -8.002 | 10.377 |
| Spr10MCRC | Equal variances assumed | .081 | .776 | -1.159 | 591 | .247 | -.373 | .322 | -1.006 | .259 |
| | Equal variances not assumed | | | -1.160 | 587.854 | .246 | -.373 | .322 | -1.005 | .259 |
| Spr10Voc | Equal variances assumed | 1.618 | .204 | 1.261 | 500 | .208 | .493 | .391 | -.275 | 1.262 |
| | Equal variances not assumed | | | 1.257 | 483.414 | .209 | .493 | .393 | -.278 | 1.265 |

**Grade 4**

**Crossvalidation**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Group 1 | 627 | 50.0 | 50.0 | 50.0 |
| | Group 2 | 628 | 50.0 | 50.0 | 100.0 |
| | Total | 1255 | 100.0 | 100.0 | |

**EthnicCd**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | American Indian/Alakan Native | 17 | 2.7 | 2.7 | 2.7 |
| | | Asian/Pacific Islander | 60 | 9.6 | 9.6 | 12.3 |
| | | Black | 30 | 4.8 | 4.8 | 17.1 |
| | | Hispanic | 66 | 10.5 | 10.5 | 27.6 |
| | | White | 371 | 59.2 | 59.2 | 86.8 |
| | | Multiethnic | 70 | 11.2 | 11.2 | 97.9 |
| | | Decline | 13 | 2.1 | 2.1 | 100.0 |
| | | Total | 627 | 100.0 | 100.0 | |
| Group 2 | Valid | American Indian/Alakan Native | 15 | 2.4 | 2.4 | 2.4 |
| | | Asian/Pacific Islander | 40 | 6.4 | 6.4 | 8.8 |
| | | Black | 26 | 4.1 | 4.1 | 12.9 |
| | | Hispanic | 87 | 13.9 | 13.9 | 26.8 |
| | | White | 377 | 60.0 | 60.0 | 86.8 |
| | | Multiethnic | 74 | 11.8 | 11.8 | 98.6 |
| | | Decline | 9 | 1.4 | 1.4 | 100.0 |
| | | Total | 628 | 100.0 | 100.0 | |

**SPED**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | No | 539 | 86.0 | 86.0 | 86.0 |
| | | Yes | 88 | 14.0 | 14.0 | 100.0 |
| | | Total | 627 | 100.0 | 100.0 | |
| Group 2 | Valid | No | 551 | 87.7 | 87.7 | 87.7 |
| | | Yes | 77 | 12.3 | 12.3 | 100.0 |
| | | Total | 628 | 100.0 | 100.0 | |

**Female**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | Male | 348 | 55.5 | 55.5 | 55.5 |
| | | Female | 279 | 44.5 | 44.5 | 100.0 |
| | | Total | 627 | 100.0 | 100.0 | |
| Group 2 | Valid | Male | 295 | 47.0 | 47.0 | 47.0 |
| | | Female | 333 | 53.0 | 53.0 | 100.0 |
| | | Total | 628 | 100.0 | 100.0 | |

**ELL**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | No | 605 | 96.5 | 96.5 | 96.5 |
| | | Yes | 22 | 3.5 | 3.5 | 100.0 |
| | | Total | 627 | 100.0 | 100.0 | |
| Group 2 | Valid | No | 599 | 95.4 | 95.4 | 95.4 |
| | | Yes | 29 | 4.6 | 4.6 | 100.0 |
| | | Total | 628 | 100.0 | 100.0 | |

**EconDsvntg**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | No | 299 | 47.7 | 59.0 | 59.0 |
| | | Yes | 208 | 33.2 | 41.0 | 100.0 |
| | | Total | 507 | 80.9 | 100.0 | |
| | Missing | System | 120 | 19.1 | | |
| | Total | | 627 | 100.0 | | |
| Group 2 | Valid | No | 258 | 41.1 | 54.0 | 54.0 |
| | | Yes | 220 | 35.0 | 46.0 | 100.0 |
| | | Total | 478 | 76.1 | 100.0 | |
| | Missing | System | 150 | 23.9 | | |
| | Total | | 628 | 100.0 | | |

**MSPRdg_Perf**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | .00 | 186 | 29.7 | 29.8 | 29.8 |
| | | 1.00 | 439 | 70.0 | 70.2 | 100.0 |
| | | Total | 625 | 99.7 | 100.0 | |
| | Missing | System | 2 | .3 | | |
| | Total | | 627 | 100.0 | | |
| Group 2 | Valid | .00 | 211 | 33.6 | 33.7 | 33.7 |
| | | 1.00 | 415 | 66.1 | 66.3 | 100.0 |
| | | Total | 626 | 99.7 | 100.0 | |
| | Missing | System | 2 | .3 | | |
| | Total | | 628 | 100.0 | | |

**Descriptive Statistics**

| Crossvalidation | | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|---|
| Group 1 | MSP Reading | 625 | 0 | 475 | 403.56 | 40.878 |
| | MSPRdg_Perf | 625 | .00 | 1.00 | .7024 | .45757 |
| | Fall09PRF | 63 | 43 | 178 | 102.97 | 26.538 |
| | Fall09MCRC | 63 | 0 | 19 | 10.89 | 4.337 |
| | Fall09Voc | 63 | 0 | 24 | 14.44 | 4.306 |
| | Wint10PRF | 107 | 37 | 199 | 119.83 | 32.643 |
| | Wint10MCRC | 178 | 0 | 19 | 13.87 | 3.591 |
| | Spr10PRF | 118 | 35 | 208 | 126.22 | 37.207 |
| | Spr10MCRC | 267 | 0 | 20 | 13.40 | 4.803 |
| | Spr10Voc | 222 | 0 | 25 | 18.84 | 4.289 |
| | Valid N (listwise) | 53 | | | | |
| Group 2 | MSP Reading | 626 | 0 | 475 | 400.58 | 49.460 |
| | MSPRdg_Perf | 626 | .00 | 1.00 | .6629 | .47308 |
| | Fall09PRF | 68 | 25 | 187 | 100.04 | 32.429 |
| | Fall09MCRC | 68 | 0 | 19 | 10.32 | 3.880 |
| | Fall09Voc | 68 | 7 | 22 | 14.76 | 3.891 |
| | Wint10PRF | 140 | 35 | 199 | 119.22 | 33.773 |
| | Wint10MCRC | 223 | 0 | 20 | 14.30 | 3.723 |
| | Spr10PRF | 142 | 38 | 252 | 129.97 | 40.612 |
| | Spr10MCRC | 275 | 0 | 20 | 13.92 | 4.014 |
| | Spr10Voc | 244 | 0 | 25 | 18.52 | 4.279 |
| | Valid N (listwise) | 56 | | | | |

**Independent Samples Test**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| AmerIndAkNative | Equal variances assumed | .526 | .469 | .362 | 1253 | .717 | .003 | .009 | -.014 | .021 |
| | Equal variances not assumed | | | .362 | 1248.009 | .717 | .003 | .009 | -.014 | .021 |
| AsianPacIslnder | Equal variances assumed | 17.780 | .000 | 2.095 | 1253 | .036 | .032 | .015 | .002 | .062 |
| | Equal variances not assumed | | | 2.095 | 1211.279 | .036 | .032 | .015 | .002 | .062 |
| Black | Equal variances assumed | 1.223 | .269 | .553 | 1253 | .581 | .006 | .012 | -.016 | .029 |
| | Equal variances not assumed | | | .553 | 1246.811 | .581 | .006 | .012 | -.016 | .029 |
| Hispanic | Equal variances assumed | 13.102 | .000 | -1.802 | 1253 | .072 | -.033 | .018 | -.069 | .003 |
| | Equal variances not assumed | | | -1.802 | 1236.293 | .072 | -.033 | .018 | -.069 | .003 |
| White | Equal variances assumed | .385 | .535 | -.311 | 1253 | .756 | -.009 | .028 | -.063 | .046 |
| | Equal variances not assumed | | | -.311 | 1252.968 | .756 | -.009 | .028 | -.063 | .046 |
| Multiethnic | Equal variances assumed | .473 | .492 | -.344 | 1253 | .731 | -.006 | .018 | -.042 | .029 |
| | Equal variances not assumed | | | -.344 | 1252.400 | .731 | -.006 | .018 | -.042 | .029 |
| Decline | Equal variances assumed | 2.991 | .084 | .864 | 1253 | .388 | .006 | .007 | -.008 | .021 |
| | Equal variances not assumed | | | .864 | 1213.249 | .388 | .006 | .007 | -.008 | .021 |
| SPED | Equal variances assumed | 3.463 | .063 | .929 | 1253 | .353 | .018 | .019 | -.020 | .055 |
| | Equal variances not assumed | | | .929 | 1248.671 | .353 | .018 | .019 | -.020 | .055 |

**Independent Samples Test Continued**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Female | Equal variances assumed | 2.866 | .091 | -3.031 | 1253 | .002 | -.085 | .028 | -.140 | -.030 |
| | Equal variances not assumed | | | -3.031 | 1252.991 | .002 | -.085 | .028 | -.140 | -.030 |
| ELL | Equal variances assumed | 3.968 | .047 | -.995 | 1253 | .320 | -.011 | .011 | -.033 | .011 |
| | Equal variances not assumed | | | -.995 | 1232.423 | .320 | -.011 | .011 | -.033 | .011 |
| EconDsvntg | Equal variances assumed | 8.623 | .003 | -1.582 | 983 | .114 | -.050 | .032 | -.112 | .012 |
| | Equal variances not assumed | | | -1.582 | 977.900 | .114 | -.050 | .032 | -.112 | .012 |
| MSP Reading | Equal variances assumed | .906 | .341 | 1.158 | 1249 | .247 | 2.971 | 2.566 | -2.063 | 8.004 |
| | Equal variances not assumed | | | 1.158 | 1206.916 | .247 | 2.971 | 2.565 | -2.063 | 8.004 |
| MSPRdg_Perf | Equal variances assumed | 8.955 | .003 | 1.499 | 1249 | .134 | .03946 | .02632 | -.01217 | .09109 |
| | Equal variances not assumed | | | 1.500 | 1247.743 | .134 | .03946 | .02632 | -.01217 | .09109 |
| Fall09PRF | Equal variances assumed | 1.613 | .206 | .562 | 129 | .575 | 2.924 | 5.201 | -7.367 | 13.215 |
| | Equal variances not assumed | | | .566 | 127.102 | .572 | 2.924 | 5.162 | -7.290 | 13.138 |
| Fall09MCRC | Equal variances assumed | .818 | .367 | .787 | 129 | .433 | .565 | .718 | -.855 | 1.986 |
| | Equal variances not assumed | | | .784 | 124.631 | .435 | .565 | .721 | -.862 | 1.993 |

**Independent Samples Test Continued**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Fall09Voc | Equal variances assumed | .099 | .753 | -.447 | 129 | .655 | -.320 | .716 | -1.737 | 1.097 |
| | Equal variances not assumed | | | -.445 | 125.056 | .657 | -.320 | .719 | -1.743 | 1.103 |
| Wint10PRF | Equal variances assumed | .323 | .570 | .143 | 245 | .887 | .610 | 4.275 | -7.809 | 9.030 |
| | Equal variances not assumed | | | .143 | 231.980 | .886 | .610 | 4.255 | -7.773 | 8.994 |
| Wint10MCRC | Equal variances assumed | .353 | .553 | -1.166 | 399 | .244 | -.430 | .368 | -1.154 | .294 |
| | Equal variances not assumed | | | -1.171 | 385.044 | .242 | -.430 | .367 | -1.151 | .292 |
| Spr10PRF | Equal variances assumed | 1.079 | .300 | -.770 | 258 | .442 | -3.751 | 4.871 | -13.344 | 5.841 |
| | Equal variances not assumed | | | -.776 | 255.524 | .438 | -3.751 | 4.832 | -13.267 | 5.764 |
| Spr10MCRC | Equal variances assumed | 5.360 | .021 | -1.387 | 540 | .166 | -.527 | .380 | -1.273 | .219 |
| | Equal variances not assumed | | | -1.383 | 517.906 | .167 | -.527 | .381 | -1.275 | .221 |
| Spr10Voc | Equal variances assumed | .026 | .873 | .800 | 464 | .424 | .318 | .397 | -.463 | 1.099 |
| | Equal variances not assumed | | | .800 | 459.664 | .424 | .318 | .397 | -.463 | 1.099 |

## Grade 5

**Crossvalidation**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Group 1 | 629 | 50.0 | 50.0 | 50.0 |
| | Group 2 | 629 | 50.0 | 50.0 | 100.0 |
| | Total | 1258 | 100.0 | 100.0 | |

**EthnicCd**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | American Indian/Alakan Native | 18 | 2.9 | 2.9 | 2.9 |
| | | Asian/Pacific Islander | 57 | 9.1 | 9.1 | 11.9 |
| | | Black | 28 | 4.5 | 4.5 | 16.4 |
| | | Hispanic | 74 | 11.8 | 11.8 | 28.1 |
| | | White | 373 | 59.3 | 59.3 | 87.4 |
| | | Multiethnic | 68 | 10.8 | 10.8 | 98.3 |
| | | Decline | 11 | 1.7 | 1.7 | 100.0 |
| | | Total | 629 | 100.0 | 100.0 | |
| Group 2 | Valid | American Indian/Alakan Native | 21 | 3.3 | 3.3 | 3.3 |
| | | Asian/Pacific Islander | 60 | 9.5 | 9.5 | 12.9 |
| | | Black | 28 | 4.5 | 4.5 | 17.3 |
| | | Hispanic | 58 | 9.2 | 9.2 | 26.6 |
| | | White | 369 | 58.7 | 58.7 | 85.2 |
| | | Multiethnic | 80 | 12.7 | 12.7 | 97.9 |
| | | Decline | 13 | 2.1 | 2.1 | 100.0 |
| | | Total | 629 | 100.0 | 100.0 | |

**SPED**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | No | 530 | 84.3 | 84.3 | 84.3 |
| | | Yes | 99 | 15.7 | 15.7 | 100.0 |
| | | Total | 629 | 100.0 | 100.0 | |
| Group 2 | Valid | No | 522 | 83.0 | 83.0 | 83.0 |
| | | Yes | 107 | 17.0 | 17.0 | 100.0 |
| | | Total | 629 | 100.0 | 100.0 | |

**Female**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | Male | 328 | 52.1 | 52.1 | 52.1 |
| | | Female | 301 | 47.9 | 47.9 | 100.0 |
| | | Total | 629 | 100.0 | 100.0 | |
| Group 2 | Valid | Male | 355 | 56.4 | 56.4 | 56.4 |
| | | Female | 274 | 43.6 | 43.6 | 100.0 |
| | | Total | 629 | 100.0 | 100.0 | |

**ELL**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | No | 610 | 97.0 | 97.0 | 97.0 |
| | | Yes | 19 | 3.0 | 3.0 | 100.0 |
| | | Total | 629 | 100.0 | 100.0 | |
| Group 2 | Valid | No | 603 | 95.9 | 95.9 | 95.9 |
| | | Yes | 26 | 4.1 | 4.1 | 100.0 |
| | | Total | 629 | 100.0 | 100.0 | |

**EconDsvntg**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | No | 314 | 49.9 | 62.7 | 62.7 |
| | | Yes | 187 | 29.7 | 37.3 | 100.0 |
| | | Total | 501 | 79.7 | 100.0 | |
| | Missing | System | 128 | 20.3 | | |
| | Total | | 629 | 100.0 | | |
| Group 2 | Valid | No | 282 | 44.8 | 57.3 | 57.3 |
| | | Yes | 210 | 33.4 | 42.7 | 100.0 |
| | | Total | 492 | 78.2 | 100.0 | |
| | Missing | System | 137 | 21.8 | | |
| | Total | | 629 | 100.0 | | |

**MSPRdg_Perf**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | .00 | 218 | 34.7 | 34.8 | 34.8 |
| | | 1.00 | 409 | 65.0 | 65.2 | 100.0 |
| | | Total | 627 | 99.7 | 100.0 | |
| | Missing | System | 2 | .3 | | |
| | Total | | 629 | 100.0 | | |
| Group 2 | Valid | .00 | 223 | 35.5 | 35.5 | 35.5 |
| | | 1.00 | 405 | 64.4 | 64.5 | 100.0 |
| | | Total | 628 | 99.8 | 100.0 | |
| | Missing | System | 1 | .2 | | |
| | Total | | 629 | 100.0 | | |

**Descriptive Statistics**

| Crossvalidation | | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|---|
| Group 1 | MSP Reading | 627 | 0 | 475 | 406.32 | 42.143 |
| | MSPRdg_Perf | 627 | .00 | 1.00 | .6523 | .47662 |
| | Fall09PRF | 70 | 0 | 240 | 133.79 | 47.972 |
| | Fall09MCRC | 70 | 4 | 18 | 13.20 | 3.086 |
| | Fall09Voc | 70 | 6 | 24 | 15.59 | 4.652 |
| | Wint10PRF | 120 | 3 | 248 | 144.30 | 43.860 |
| | Wint10MCRC | 137 | 4 | 20 | 15.39 | 3.385 |
| | Spr10PRF | 108 | 9 | 256 | 156.19 | 42.137 |
| | Spr10MCRC | 342 | 0 | 20 | 14.28 | 3.262 |
| | Spr10Voc | 291 | 5 | 25 | 19.53 | 3.933 |
| | Valid N (listwise) | 66 | | | | |
| Group 2 | MSP Reading | 628 | 0 | 475 | 402.05 | 50.601 |
| | MSPRdg_Perf | 628 | .00 | 1.00 | .6449 | .47892 |
| | Fall09PRF | 78 | 13 | 236 | 127.42 | 44.388 |
| | Fall09MCRC | 77 | 0 | 20 | 13.14 | 3.546 |
| | Fall09Voc | 78 | 5 | 23 | 15.35 | 5.116 |
| | Wint10PRF | 131 | 21 | 241 | 137.76 | 38.889 |
| | Wint10MCRC | 159 | 6 | 20 | 15.82 | 2.892 |
| | Spr10PRF | 122 | 24 | 256 | 148.98 | 39.130 |
| | Spr10MCRC | 337 | 0 | 19 | 14.10 | 3.183 |
| | Spr10Voc | 283 | 0 | 25 | 18.96 | 4.279 |
| | Valid N (listwise) | 76 | | | | |

**Independent Samples Test**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| AmerIndAkNative | Equal variances assumed | .952 | .329 | -.488 | 1256 | .626 | -.005 | .010 | -.024 | .014 |
| | Equal variances not assumed | | | -.488 | 1249.072 | .626 | -.005 | .010 | -.024 | .014 |
| AsianPacIslnder | Equal variances assumed | .339 | .561 | -.291 | 1256 | .771 | -.005 | .016 | -.037 | .027 |
| | Equal variances not assumed | | | -.291 | 1255.335 | .771 | -.005 | .016 | -.037 | .027 |
| Black | Equal variances assumed | .000 | 1.000 | .000 | 1256 | 1.000 | .000 | .012 | -.023 | .023 |
| | Equal variances not assumed | | | .000 | 1256.000 | 1.000 | .000 | .012 | -.023 | .023 |
| Hispanic | Equal variances assumed | 8.719 | .003 | 1.472 | 1256 | .141 | .025 | .017 | -.008 | .059 |
| | Equal variances not assumed | | | 1.472 | 1241.734 | .141 | .025 | .017 | -.008 | .059 |
| White | Equal variances assumed | .210 | .647 | .229 | 1256 | .819 | .006 | .028 | -.048 | .061 |
| | Equal variances not assumed | | | .229 | 1255.993 | .819 | .006 | .028 | -.048 | .061 |
| Multiethnic | Equal variances assumed | 4.420 | .036 | -1.050 | 1256 | .294 | -.019 | .018 | -.055 | .017 |
| | Equal variances not assumed | | | -1.050 | 1249.818 | .294 | -.019 | .018 | -.055 | .017 |
| Decline | Equal variances assumed | .679 | .410 | -.412 | 1256 | .680 | -.003 | .008 | -.018 | .012 |
| | Equal variances not assumed | | | -.412 | 1247.667 | .680 | -.003 | .008 | -.018 | .012 |
| SPED | Equal variances assumed | 1.485 | .223 | -.609 | 1256 | .543 | -.013 | .021 | -.054 | .028 |
| | Equal variances not assumed | | | -.609 | 1254.775 | .543 | -.013 | .021 | -.054 | .028 |

**Independent Samples Test Continued**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Female | Equal variances assumed | 7.519 | .006 | 1.528 | 1256 | .127 | .043 | .028 | -.012 | .098 |
| | Equal variances not assumed | | | 1.528 | 1255.931 | .127 | .043 | .028 | -.012 | .098 |
| ELL | Equal variances assumed | 4.530 | .034 | -1.062 | 1256 | .288 | -.011 | .010 | -.032 | .009 |
| | Equal variances not assumed | | | -1.062 | 1228.391 | .288 | -.011 | .010 | -.032 | .009 |
| EconDsvntg | Equal variances assumed | 11.167 | .001 | -1.724 | 991 | .085 | -.054 | .031 | -.115 | .007 |
| | Equal variances not assumed | | | -1.724 | 989.374 | .085 | -.054 | .031 | -.115 | .007 |
| MSP Reading | Equal variances assumed | .455 | .500 | 1.626 | 1253 | .104 | 4.274 | 2.629 | -.883 | 9.432 |
| | Equal variances not assumed | | | 1.626 | 1213.958 | .104 | 4.274 | 2.629 | -.883 | 9.432 |
| MSPRdg_Perf | Equal variances assumed | .302 | .583 | .275 | 1253 | .784 | .00741 | .02697 | -.04551 | .06033 |
| | Equal variances not assumed | | | .275 | 1252.987 | .784 | .00741 | .02697 | -.04551 | .06033 |
| Fall09PRF | Equal variances assumed | .477 | .491 | .838 | 146 | .403 | 6.363 | 7.593 | -8.643 | 21.368 |
| | Equal variances not assumed | | | .834 | 141.115 | .405 | 6.363 | 7.625 | -8.711 | 21.436 |
| Fall09MCRC | Equal variances assumed | .922 | .339 | .104 | 145 | .918 | .057 | .551 | -1.031 | 1.146 |
| | Equal variances not assumed | | | .104 | 144.737 | .917 | .057 | .547 | -1.024 | 1.139 |

**Independent Samples Test Continued**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Fall09Voc | Equal variances assumed | .655 | .420 | .297 | 146 | .767 | .240 | .807 | -1.356 | 1.835 |
| | Equal variances not assumed | | | .298 | 145.973 | .766 | .240 | .803 | -1.347 | 1.826 |
| Wint10PRF | Equal variances assumed | 1.113 | .292 | 1.251 | 249 | .212 | 6.537 | 5.224 | -3.752 | 16.825 |
| | Equal variances not assumed | | | 1.245 | 238.764 | .214 | 6.537 | 5.251 | -3.808 | 16.881 |
| Wint10MCRC | Equal variances assumed | 2.134 | .145 | -1.178 | 294 | .240 | -.430 | .365 | -1.148 | .288 |
| | Equal variances not assumed | | | -1.164 | 269.167 | .245 | -.430 | .369 | -1.156 | .297 |
| Spr10PRF | Equal variances assumed | .876 | .350 | 1.345 | 228 | .180 | 7.210 | 5.360 | -3.352 | 17.771 |
| | Equal variances not assumed | | | 1.339 | 219.570 | .182 | 7.210 | 5.384 | -3.402 | 17.821 |
| Spr10MCRC | Equal variances assumed | .262 | .609 | .727 | 677 | .468 | .180 | .247 | -.306 | .665 |
| | Equal variances not assumed | | | .727 | 676.936 | .468 | .180 | .247 | -.306 | .665 |
| Spr10Voc | Equal variances assumed | .569 | .451 | 1.657 | 572 | .098 | .568 | .343 | -.105 | 1.242 |
| | Equal variances not assumed | | | 1.655 | 564.930 | .098 | .568 | .343 | -.106 | 1.243 |

## Grade 6

**Crossvalidation**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Group 1 | 593 | 50.0 | 50.0 | 50.0 |
| | Group 2 | 592 | 50.0 | 50.0 | 100.0 |
| | Total | 1185 | 100.0 | 100.0 | |

**EthnicCd**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | American Indian/Alakan Native | 23 | 3.9 | 3.9 | 3.9 |
| | | Asian/Pacific Islander | 47 | 7.9 | 7.9 | 11.8 |
| | | Black | 28 | 4.7 | 4.7 | 16.5 |
| | | Hispanic | 53 | 8.9 | 8.9 | 25.5 |
| | | White | 379 | 63.9 | 63.9 | 89.4 |
| | | Multiethnic | 50 | 8.4 | 8.4 | 97.8 |
| | | Decline | 13 | 2.2 | 2.2 | 100.0 |
| | | Total | 593 | 100.0 | 100.0 | |
| Group 2 | Valid | American Indian/Alakan Native | 20 | 3.4 | 3.4 | 3.4 |
| | | Asian/Pacific Islander | 51 | 8.6 | 8.6 | 12.0 |
| | | Black | 28 | 4.7 | 4.7 | 16.7 |
| | | Hispanic | 76 | 12.8 | 12.8 | 29.6 |
| | | White | 348 | 58.8 | 58.8 | 88.3 |
| | | Multiethnic | 58 | 9.8 | 9.8 | 98.1 |
| | | Decline | 11 | 1.9 | 1.9 | 100.0 |
| | | Total | 592 | 100.0 | 100.0 | |

**SPED**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | No | 521 | 87.9 | 87.9 | 87.9 |
| | | Yes | 72 | 12.1 | 12.1 | 100.0 |
| | | Total | 593 | 100.0 | 100.0 | |
| Group 2 | Valid | No | 536 | 90.5 | 90.5 | 90.5 |
| | | Yes | 56 | 9.5 | 9.5 | 100.0 |
| | | Total | 592 | 100.0 | 100.0 | |

**Female**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | Male | 305 | 51.4 | 51.4 | 51.4 |
| | | Female | 288 | 48.6 | 48.6 | 100.0 |
| | | Total | 593 | 100.0 | 100.0 | |
| Group 2 | Valid | Male | 298 | 50.3 | 50.3 | 50.3 |
| | | Female | 294 | 49.7 | 49.7 | 100.0 |
| | | Total | 592 | 100.0 | 100.0 | |

**ELL**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | No | 580 | 97.8 | 97.8 | 97.8 |
| | | Yes | 13 | 2.2 | 2.2 | 100.0 |
| | | Total | 593 | 100.0 | 100.0 | |
| Group 2 | Valid | No | 573 | 96.8 | 96.8 | 96.8 |
| | | Yes | 19 | 3.2 | 3.2 | 100.0 |
| | | Total | 592 | 100.0 | 100.0 | |

**EconDsvntg**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | No | 292 | 49.2 | 62.9 | 62.9 |
| | | Yes | 172 | 29.0 | 37.1 | 100.0 |
| | | Total | 464 | 78.2 | 100.0 | |
| | Missing | System | 129 | 21.8 | | |
| | Total | | 593 | 100.0 | | |
| Group 2 | Valid | No | 267 | 45.1 | 56.6 | 56.6 |
| | | Yes | 205 | 34.6 | 43.4 | 100.0 |
| | | Total | 472 | 79.7 | 100.0 | |
| | Missing | System | 120 | 20.3 | | |
| | Total | | 592 | 100.0 | | |

**MSPRdg_Perf**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | .00 | 214 | 36.1 | 36.1 | 36.1 |
| | | 1.00 | 379 | 63.9 | 63.9 | 100.0 |
| | | Total | 593 | 100.0 | 100.0 | |
| Group 2 | Valid | .00 | 245 | 41.4 | 41.5 | 41.5 |
| | | 1.00 | 346 | 58.4 | 58.5 | 100.0 |
| | | Total | 591 | 99.8 | 100.0 | |
| | Missing | System | 1 | .2 | | |
| | Total | | 592 | 100.0 | | |

**Descriptive Statistics**

| Crossvalidation | | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|---|
| Group 1 | MSP Reading | 593 | 0 | 475 | 399.37 | 45.268 |
| | MSPRdg_Perf | 593 | .00 | 1.00 | .6391 | .48066 |
| | Fall09PRF | 123 | 74 | 236 | 143.78 | 32.255 |
| | Fall09MCRC | 124 | 6 | 19 | 14.26 | 2.927 |
| | Fall09Voc | 124 | 6 | 23 | 14.66 | 3.899 |
| | Wint10PRF | 127 | 87 | 259 | 169.20 | 37.026 |
| | Wint10MCRC | 138 | 0 | 19 | 13.79 | 2.873 |
| | Spr10PRF | 28 | 80 | 299 | 161.36 | 51.746 |
| | Spr10MCRC | 457 | 0 | 20 | 14.27 | 3.532 |
| | Spr10Voc | 413 | 1 | 25 | 16.01 | 4.084 |
| | Valid N (listwise) | 1 | | | | |
| Group 2 | MSP Reading | 591 | 6 | 475 | 401.33 | 26.973 |
| | MSPRdg_Perf | 591 | .00 | 1.00 | .5854 | .49306 |
| | Fall09PRF | 108 | 75 | 247 | 146.97 | 30.887 |
| | Fall09MCRC | 109 | 1 | 19 | 13.72 | 2.909 |
| | Fall09Voc | 108 | 2 | 23 | 14.19 | 4.442 |
| | Wint10PRF | 115 | 65 | 247 | 165.78 | 35.536 |
| | Wint10MCRC | 123 | 0 | 19 | 13.42 | 3.141 |
| | Spr10PRF | 34 | 84 | 280 | 178.00 | 51.663 |
| | Spr10MCRC | 441 | 0 | 20 | 14.30 | 3.352 |
| | Spr10Voc | 392 | 0 | 25 | 15.63 | 4.259 |
| | Valid N (listwise) | 0 | | | | |

**Independent Samples Test**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| AmerIndAkNative | Equal variances assumed | .847 | .358 | .460 | 1183 | .646 | .005 | .011 | -.016 | .026 |
| | Equal variances not assumed | | | .460 | 1178.075 | .646 | .005 | .011 | -.016 | .026 |
| AsianPacIslnder | Equal variances assumed | .741 | .390 | -.430 | 1183 | .667 | -.007 | .016 | -.038 | .025 |
| | Equal variances not assumed | | | -.430 | 1181.148 | .667 | -.007 | .016 | -.038 | .025 |
| Black | Equal variances assumed | .000 | .990 | -.006 | 1183 | .995 | .000 | .012 | -.024 | .024 |
| | Equal variances not assumed | | | -.006 | 1182.993 | .995 | .000 | .012 | -.024 | .024 |
| Hispanic | Equal variances assumed | 18.872 | .000 | -2.158 | 1183 | .031 | -.039 | .018 | -.074 | -.004 |
| | Equal variances not assumed | | | -2.157 | 1153.645 | .031 | -.039 | .018 | -.074 | -.004 |
| White | Equal variances assumed | 12.649 | .000 | 1.814 | 1183 | .070 | .051 | .028 | -.004 | .107 |
| | Equal variances not assumed | | | 1.814 | 1182.182 | .070 | .051 | .028 | -.004 | .107 |
| Multiethnic | Equal variances assumed | 2.670 | .103 | -.816 | 1183 | .415 | -.014 | .017 | -.046 | .019 |
| | Equal variances not assumed | | | -.816 | 1177.374 | .415 | -.014 | .017 | -.046 | .019 |
| Decline | Equal variances assumed | .666 | .415 | .408 | 1183 | .683 | .003 | .008 | -.013 | .019 |
| | Equal variances not assumed | | | .408 | 1175.641 | .683 | .003 | .008 | -.013 | .019 |
| SPED | Equal variances assumed | 8.906 | .003 | 1.487 | 1183 | .137 | .027 | .018 | -.009 | .062 |
| | Equal variances not assumed | | | 1.488 | 1169.446 | .137 | .027 | .018 | -.009 | .062 |

**Independent Samples Test Continued**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Female | Equal variances assumed | .411 | .522 | -.377 | 1183 | .706 | -.011 | .029 | -.068 | .046 |
| | Equal variances not assumed | | | -.377 | 1182.995 | .706 | -.011 | .029 | -.068 | .046 |
| ELL | Equal variances assumed | 4.681 | .031 | -1.080 | 1183 | .280 | -.010 | .009 | -.029 | .008 |
| | Equal variances not assumed | | | -1.080 | 1143.881 | .281 | -.010 | .009 | -.029 | .008 |
| EconDsvntg | Equal variances assumed | 14.563 | .000 | -1.987 | 934 | .047 | -.064 | .032 | -.126 | -.001 |
| | Equal variances not assumed | | | -1.987 | 933.928 | .047 | -.064 | .032 | -.126 | -.001 |
| MSP Reading | Equal variances assumed | 3.252 | .072 | -.906 | 1182 | .365 | -1.964 | 2.167 | -6.215 | 2.287 |
| | Equal variances not assumed | | | -.907 | 965.916 | .365 | -1.964 | 2.165 | -6.212 | 2.284 |
| MSPRdg_Perf | Equal variances assumed | 13.759 | .000 | 1.897 | 1182 | .058 | .05367 | .02830 | -.00185 | .10920 |
| | Equal variances not assumed | | | 1.897 | 1181.017 | .058 | .05367 | .02830 | -.00185 | .10920 |
| Fall09PRF | Equal variances assumed | .648 | .422 | -.765 | 229 | .445 | -3.192 | 4.170 | -11.408 | 5.025 |
| | Equal variances not assumed | | | -.768 | 227.264 | .444 | -3.192 | 4.158 | -11.386 | 5.002 |
| Fall09MCRC | Equal variances assumed | .001 | .971 | 1.392 | 231 | .165 | .533 | .383 | -.222 | 1.288 |
| | Equal variances not assumed | | | 1.392 | 227.538 | .165 | .533 | .383 | -.221 | 1.288 |

**Independent Samples Test Continued**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Fall09Voc | Equal variances assumed | 1.515 | .220 | .853 | 230 | .395 | .467 | .548 | -.612 | 1.546 |
| | Equal variances not assumed | | | .845 | 214.693 | .399 | .467 | .553 | -.622 | 1.556 |
| Wint10PRF | Equal variances assumed | .237 | .627 | .730 | 240 | .466 | 3.414 | 4.676 | -5.797 | 12.625 |
| | Equal variances not assumed | | | .732 | 239.178 | .465 | 3.414 | 4.666 | -5.778 | 12.607 |
| Wint10MCRC | Equal variances assumed | 1.803 | .180 | .986 | 259 | .325 | .367 | .372 | -.366 | 1.100 |
| | Equal variances not assumed | | | .981 | 248.647 | .328 | .367 | .374 | -.370 | 1.104 |
| Spr10PRF | Equal variances assumed | .162 | .689 | -1.261 | 60 | .212 | -16.643 | 13.194 | -43.034 | 9.749 |
| | Equal variances not assumed | | | -1.261 | 57.706 | .212 | -16.643 | 13.196 | -43.060 | 9.774 |
| Spr10MCRC | Equal variances assumed | .331 | .565 | -.132 | 896 | .895 | -.030 | .230 | -.482 | .421 |
| | Equal variances not assumed | | | -.132 | 895.757 | .895 | -.030 | .230 | -.481 | .421 |
| Spr10Voc | Equal variances assumed | .703 | .402 | 1.325 | 803 | .186 | .390 | .294 | -.188 | .967 |
| | Equal variances not assumed | | | 1.323 | 795.934 | .186 | .390 | .294 | -.188 | .967 |

**Grade 7**

**Crossvalidation**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Group 1 | 604 | 50.0 | 50.0 | 50.0 |
| | Group 2 | 603 | 50.0 | 50.0 | 100.0 |
| | Total | 1207 | 100.0 | 100.0 | |

**EthnicCd**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | American Indian/Alakan Native | 19 | 3.1 | 3.1 | 3.1 |
| | | Asian/Pacific Islander | 52 | 8.6 | 8.6 | 11.8 |
| | | Black | 46 | 7.6 | 7.6 | 19.4 |
| | | Hispanic | 70 | 11.6 | 11.6 | 31.0 |
| | | White | 370 | 61.3 | 61.3 | 92.2 |
| | | Multiethnic | 24 | 4.0 | 4.0 | 96.2 |
| | | Decline | 23 | 3.8 | 3.8 | 100.0 |
| | | Total | 604 | 100.0 | 100.0 | |
| Group 2 | Valid | American Indian/Alakan Native | 19 | 3.2 | 3.2 | 3.2 |
| | | Asian/Pacific Islander | 53 | 8.8 | 8.8 | 11.9 |
| | | Black | 45 | 7.5 | 7.5 | 19.4 |
| | | Hispanic | 63 | 10.4 | 10.4 | 29.9 |
| | | White | 362 | 60.0 | 60.0 | 89.9 |
| | | Multiethnic | 39 | 6.5 | 6.5 | 96.4 |
| | | Decline | 22 | 3.6 | 3.6 | 100.0 |
| | | Total | 603 | 100.0 | 100.0 | |

**SPED**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | No | 534 | 88.4 | 88.4 | 88.4 |
| | | Yes | 70 | 11.6 | 11.6 | 100.0 |
| | | Total | 604 | 100.0 | 100.0 | |
| Group 2 | Valid | No | 533 | 88.4 | 88.4 | 88.4 |
| | | Yes | 70 | 11.6 | 11.6 | 100.0 |
| | | Total | 603 | 100.0 | 100.0 | |

**Female**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | Male | 299 | 49.5 | 49.5 | 49.5 |
| | | Female | 305 | 50.5 | 50.5 | 100.0 |
| | | Total | 604 | 100.0 | 100.0 | |
| Group 2 | Valid | Male | 318 | 52.7 | 52.7 | 52.7 |
| | | Female | 285 | 47.3 | 47.3 | 100.0 |
| | | Total | 603 | 100.0 | 100.0 | |

**ELL**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | No | 587 | 97.2 | 97.2 | 97.2 |
| | | Yes | 17 | 2.8 | 2.8 | 100.0 |
| | | Total | 604 | 100.0 | 100.0 | |
| Group 2 | Valid | No | 590 | 97.8 | 97.8 | 97.8 |
| | | Yes | 13 | 2.2 | 2.2 | 100.0 |
| | | Total | 603 | 100.0 | 100.0 | |

**EconDsvntg**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | No | 289 | 47.8 | 58.7 | 58.7 |
| | | Yes | 203 | 33.6 | 41.3 | 100.0 |
| | | Total | 492 | 81.5 | 100.0 | |
| | Missing | System | 112 | 18.5 | | |
| | Total | | 604 | 100.0 | | |
| Group 2 | Valid | No | 307 | 50.9 | 63.2 | 63.2 |
| | | Yes | 179 | 29.7 | 36.8 | 100.0 |
| | | Total | 486 | 80.6 | 100.0 | |
| | Missing | System | 117 | 19.4 | | |
| | Total | | 603 | 100.0 | | |

**MSPRdg_Perf**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | .00 | 227 | 37.6 | 38.0 | 38.0 |
| | | 1.00 | 370 | 61.3 | 62.0 | 100.0 |
| | | Total | 597 | 98.8 | 100.0 | |
| | Missing | System | 7 | 1.2 | | |
| | Total | | 604 | 100.0 | | |
| Group 2 | Valid | .00 | 209 | 34.7 | 35.0 | 35.0 |
| | | 1.00 | 388 | 64.3 | 65.0 | 100.0 |
| | | Total | 597 | 99.0 | 100.0 | |
| | Missing | System | 6 | 1.0 | | |
| | Total | | 603 | 100.0 | | |

**Descriptive Statistics**

| Crossvalidation | | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|---|
| Group 1 | MSP Reading | 597 | 12 | 475 | 402.53 | 40.283 |
| | MSPRdg_Perf | 597 | .00 | 1.00 | .6198 | .48585 |
| | Fall09PRF | 98 | 91 | 257 | 150.80 | 30.731 |
| | Fall09MCRC | 101 | 0 | 20 | 13.76 | 3.573 |
| | Fall09Voc | 102 | 4 | 24 | 13.61 | 4.426 |
| | Wint10PRF | 217 | 46 | 304 | 170.93 | 41.692 |
| | Wint10MCRC | 182 | 0 | 19 | 14.90 | 3.106 |
| | Spr10PRF | 128 | 49 | 255 | 150.11 | 39.459 |
| | Spr10MCRC | 541 | 0 | 19 | 12.22 | 3.082 |
| | Spr10Voc | 405 | 0 | 25 | 14.63 | 4.069 |
| | Valid N (listwise) | 84 | | | | |
| Group 2 | MSP Reading | 597 | 6 | 475 | 404.61 | 37.015 |
| | MSPRdg_Perf | 597 | .00 | 1.00 | .6499 | .47740 |
| | Fall09PRF | 100 | 72 | 240 | 145.19 | 28.632 |
| | Fall09MCRC | 110 | 6 | 18 | 13.18 | 2.956 |
| | Fall09Voc | 108 | 3 | 24 | 13.00 | 4.207 |
| | Wint10PRF | 215 | 39 | 265 | 166.46 | 39.525 |
| | Wint10MCRC | 161 | 2 | 20 | 14.86 | 3.049 |
| | Spr10PRF | 135 | 52 | 224 | 149.61 | 33.138 |
| | Spr10MCRC | 530 | 0 | 19 | 12.09 | 2.975 |
| | Spr10Voc | 411 | 0 | 24 | 14.55 | 4.214 |
| | Valid N (listwise) | 87 | | | | |

**Independent Samples Test**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| AmerIndAkNative | Equal variances assumed | .000 | .992 | -.005 | 1205 | .996 | .000 | .010 | -.020 | .020 |
| | Equal variances not assumed | | | -.005 | 1204.993 | .996 | .000 | .010 | -.020 | .020 |
| AsianPacIslnder | Equal variances assumed | .049 | .824 | -.111 | 1205 | .912 | -.002 | .016 | -.034 | .030 |
| | Equal variances not assumed | | | -.111 | 1204.854 | .912 | -.002 | .016 | -.034 | .030 |
| Black | Equal variances assumed | .041 | .840 | .101 | 1205 | .920 | .002 | .015 | -.028 | .031 |
| | Equal variances not assumed | | | .101 | 1204.929 | .920 | .002 | .015 | -.028 | .031 |
| Hispanic | Equal variances assumed | 1.604 | .206 | .633 | 1205 | .527 | .011 | .018 | -.024 | .047 |
| | Equal variances not assumed | | | .633 | 1202.698 | .527 | .011 | .018 | -.024 | .047 |
| White | Equal variances assumed | .756 | .385 | .435 | 1205 | .663 | .012 | .028 | -.043 | .067 |
| | Equal variances not assumed | | | .435 | 1204.939 | .663 | .012 | .028 | -.043 | .067 |
| Multiethnic | Equal variances assumed | 15.382 | .000 | -1.949 | 1205 | .051 | -.025 | .013 | -.050 | .000 |
| | Equal variances not assumed | | | -1.949 | 1145.431 | .052 | -.025 | .013 | -.050 | .000 |
| Decline | Equal variances assumed | .085 | .770 | .146 | 1205 | .884 | .002 | .011 | -.020 | .023 |
| | Equal variances not assumed | | | .146 | 1204.569 | .884 | .002 | .011 | -.020 | .023 |
| SPED | Equal variances assumed | .000 | .983 | -.010 | 1205 | .992 | .000 | .018 | -.036 | .036 |
| | Equal variances not assumed | | | -.010 | 1204.993 | .992 | .000 | .018 | -.036 | .036 |

**Independent Samples Test Continued**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Female | Equal variances assumed | 1.640 | .201 | 1.123 | 1205 | .262 | .032 | .029 | -.024 | .089 |
| | Equal variances not assumed | | | 1.123 | 1205.000 | .262 | .032 | .029 | -.024 | .089 |
| ELL | Equal variances assumed | 2.162 | .142 | .735 | 1205 | .463 | .007 | .009 | -.011 | .024 |
| | Equal variances not assumed | | | .735 | 1185.708 | .463 | .007 | .009 | -.011 | .024 |
| EconDsvntg | Equal variances assumed | 7.823 | .005 | 1.419 | 976 | .156 | .044 | .031 | -.017 | .106 |
| | Equal variances not assumed | | | 1.420 | 975.935 | .156 | .044 | .031 | -.017 | .106 |
| MSP Reading | Equal variances assumed | .322 | .571 | -.930 | 1192 | .353 | -2.082 | 2.239 | -6.475 | 2.311 |
| | Equal variances not assumed | | | -.930 | 1183.566 | .353 | -2.082 | 2.239 | -6.475 | 2.311 |
| MSPRdg_Perf | Equal variances assumed | 4.639 | .031 | -1.082 | 1192 | .280 | -.03015 | .02788 | -.08485 | .02454 |
| | Equal variances not assumed | | | -1.082 | 1191.633 | .280 | -.03015 | .02788 | -.08485 | .02454 |
| Fall09PRF | Equal variances assumed | .464 | .496 | 1.328 | 196 | .186 | 5.606 | 4.220 | -2.717 | 13.928 |
| | Equal variances not assumed | | | 1.327 | 194.395 | .186 | 5.606 | 4.223 | -2.723 | 13.935 |
| Fall09MCRC | Equal variances assumed | 1.117 | .292 | 1.290 | 209 | .198 | .581 | .450 | -.307 | 1.468 |
| | Equal variances not assumed | | | 1.280 | 194.663 | .202 | .581 | .454 | -.314 | 1.475 |

**Independent Samples Test Continued**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Fall09Voc | Equal variances assumed | .734 | .392 | 1.020 | 208 | .309 | .608 | .596 | -.567 | 1.782 |
| | Equal variances not assumed | | | 1.019 | 205.605 | .309 | .608 | .597 | -.568 | 1.784 |
| Wint10PRF | Equal variances assumed | .185 | .668 | 1.143 | 430 | .253 | 4.470 | 3.909 | -3.214 | 12.154 |
| | Equal variances not assumed | | | 1.144 | 429.166 | .253 | 4.470 | 3.909 | -3.212 | 12.153 |
| Wint10MCRC | Equal variances assumed | .104 | .747 | .132 | 341 | .895 | .044 | .333 | -.611 | .699 |
| | Equal variances not assumed | | | .132 | 337.309 | .895 | .044 | .333 | -.611 | .699 |
| Spr10PRF | Equal variances assumed | 4.655 | .032 | .110 | 261 | .912 | .495 | 4.485 | -8.336 | 9.325 |
| | Equal variances not assumed | | | .110 | 248.378 | .913 | .495 | 4.505 | -8.379 | 9.368 |
| Spr10MCRC | Equal variances assumed | .069 | .793 | .669 | 1069 | .504 | .124 | .185 | -.239 | .487 |
| | Equal variances not assumed | | | .669 | 1068.773 | .504 | .124 | .185 | -.239 | .487 |
| Spr10Voc | Equal variances assumed | .520 | .471 | .258 | 814 | .796 | .075 | .290 | -.495 | .644 |
| | Equal variances not assumed | | | .258 | 813.663 | .796 | .075 | .290 | -.494 | .644 |

## Grade 8

**Crossvalidation**

| | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|
| Valid | Group 1 | 900 | 50.0 | 50.0 | 50.0 |
| | Group 2 | 900 | 50.0 | 50.0 | 100.0 |
| | Total | 1800 | 100.0 | 100.0 | |

**EthnicCd**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | American Indian/Alakan Native | 31 | 3.4 | 3.7 | 3.7 |
| | | Asian/Pacific Islander | 71 | 7.9 | 8.4 | 12.0 |
| | | Black | 58 | 6.4 | 6.8 | 18.9 |
| | | Hispanic | 111 | 12.3 | 13.1 | 32.0 |
| | | White | 558 | 62.0 | 65.8 | 97.8 |
| | | Multiethnic | 10 | 1.1 | 1.2 | 98.9 |
| | | Decline | 9 | 1.0 | 1.1 | 100.0 |
| | | Total | 848 | 94.2 | 100.0 | |
| | Missing | System | 52 | 5.8 | | |
| | Total | | 900 | 100.0 | | |
| Group 2 | Valid | American Indian/Alakan Native | 46 | 5.1 | 5.4 | 5.4 |
| | | Asian/Pacific Islander | 92 | 10.2 | 10.8 | 16.2 |
| | | Black | 60 | 6.7 | 7.1 | 23.3 |
| | | Hispanic | 100 | 11.1 | 11.8 | 35.0 |
| | | White | 538 | 59.8 | 63.2 | 98.2 |
| | | Multiethnic | 7 | .8 | .8 | 99.1 |
| | | Decline | 8 | .9 | .9 | 100.0 |
| | | Total | 851 | 94.6 | 100.0 | |
| | Missing | System | 49 | 5.4 | | |
| | Total | | 900 | 100.0 | | |

**SPED**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | No | 752 | 83.6 | 88.1 | 88.1 |
| | | Yes | 102 | 11.3 | 11.9 | 100.0 |
| | | Total | 854 | 94.9 | 100.0 | |
| | Missing | System | 46 | 5.1 | | |
| | Total | | 900 | 100.0 | | |
| Group 2 | Valid | No | 764 | 84.9 | 88.7 | 88.7 |
| | | Yes | 97 | 10.8 | 11.3 | 100.0 |
| | | Total | 861 | 95.7 | 100.0 | |
| | Missing | System | 39 | 4.3 | | |
| | Total | | 900 | 100.0 | | |

**Female**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | Male | 459 | 51.0 | 55.2 | 55.2 |
| | | Female | 373 | 41.4 | 44.8 | 100.0 |
| | | Total | 832 | 92.4 | 100.0 | |
| | Missing | System | 68 | 7.6 | | |
| | Total | | 900 | 100.0 | | |
| Group 2 | Valid | Male | 417 | 46.3 | 50.1 | 50.1 |
| | | Female | 415 | 46.1 | 49.9 | 100.0 |
| | | Total | 832 | 92.4 | 100.0 | |
| | Missing | System | 68 | 7.6 | | |
| | Total | | 900 | 100.0 | | |

**ELL**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | No | 829 | 92.1 | 97.1 | 97.1 |
| | | Yes | 25 | 2.8 | 2.9 | 100.0 |
| | | Total | 854 | 94.9 | 100.0 | |
| | Missing | System | 46 | 5.1 | | |
| | Total | | 900 | 100.0 | | |
| Group 2 | Valid | No | 840 | 93.3 | 97.6 | 97.6 |
| | | Yes | 21 | 2.3 | 2.4 | 100.0 |
| | | Total | 861 | 95.7 | 100.0 | |
| | Missing | System | 39 | 4.3 | | |
| | Total | | 900 | 100.0 | | |

**EconDsvntg**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | Not eligible | 378 | 42.0 | 67.6 | 67.6 |
| | | Eligible | 181 | 20.1 | 32.4 | 100.0 |
| | | Total | 559 | 62.1 | 100.0 | |
| | Missing | System | 341 | 37.9 | | |
| | Total | | 900 | 100.0 | | |
| Group 2 | Valid | Not eligible | 323 | 35.9 | 58.1 | 58.1 |
| | | Eligible | 233 | 25.9 | 41.9 | 100.0 |
| | | Total | 556 | 61.8 | 100.0 | |
| | Missing | System | 344 | 38.2 | | |
| | Total | | 900 | 100.0 | | |

**MSPRdg_Perf**

| Crossvalidation | | | Frequency | Percent | Valid Percent | Cumulative Percent |
|---|---|---|---|---|---|---|
| Group 1 | Valid | .00 | 283 | 31.4 | 36.4 | 36.4 |
| | | 1.00 | 495 | 55.0 | 63.6 | 100.0 |
| | | Total | 778 | 86.4 | 100.0 | |
| | Missing | System | 122 | 13.6 | | |
| | Total | | 900 | 100.0 | | |
| Group 2 | Valid | .00 | 252 | 28.0 | 31.9 | 31.9 |
| | | 1.00 | 538 | 59.8 | 68.1 | 100.0 |
| | | Total | 790 | 87.8 | 100.0 | |
| | Missing | System | 110 | 12.2 | | |
| | Total | | 900 | 100.0 | | |

**Descriptive Statistics**

| Crossvalidation | | N | Minimum | Maximum | Mean | Std. Deviation |
|---|---|---|---|---|---|---|
| Group 1 | MSP Reading | 778 | 0 | 500 | 399.44 | 61.368 |
| | MSPRdg_Perf | 778 | .00 | 1.00 | .6362 | .48139 |
| | Fall09PRF | 242 | 15 | 267 | 144.14 | 41.718 |
| | Fall09MCRC | 0 | | | | |
| | Fall09Voc | 0 | | | | |
| | Wint10PRF | 252 | 32 | 267 | 154.23 | 42.613 |
| | Wint10MCRC | 270 | 0 | 19 | 12.25 | 3.482 |
| | Spr10PRF | 255 | 25 | 248 | 167.81 | 37.370 |
| | Spr10MCRC | 420 | 0 | 19 | 12.84 | 3.552 |
| | Spr10Voc | 161 | 0 | 24 | 15.80 | 4.957 |
| | Valid N (listwise) | 0 | | | | |
| Group 2 | MSP Reading | 790 | 0 | 500 | 406.46 | 44.160 |
| | MSPRdg_Perf | 790 | .00 | 1.00 | .6810 | .46638 |
| | Fall09PRF | 250 | 15 | 267 | 144.21 | 41.982 |
| | Fall09MCRC | 0 | | | | |
| | Fall09Voc | 0 | | | | |
| | Wint10PRF | 264 | 32 | 267 | 154.27 | 41.160 |
| | Wint10MCRC | 278 | 0 | 19 | 12.11 | 3.755 |
| | Spr10PRF | 260 | 25 | 274 | 169.16 | 37.359 |
| | Spr10MCRC | 463 | 0 | 20 | 12.60 | 3.819 |
| | Spr10Voc | 183 | 0 | 25 | 15.83 | 4.718 |
| | Valid N (listwise) | 0 | | | | |

**Independent Samples Test**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| AmerIndAkNative | Equal variances assumed | 12.112 | .001 | -1.734 | 1697 | .083 | -.017 | .010 | -.037 | .002 |
| | Equal variances not assumed | | | -1.735 | 1643.288 | .083 | -.017 | .010 | -.037 | .002 |
| AsianPacIslnder | Equal variances assumed | 11.722 | .001 | -1.707 | 1697 | .088 | -.024 | .014 | -.052 | .004 |
| | Equal variances not assumed | | | -1.707 | 1676.604 | .088 | -.024 | .014 | -.052 | .004 |
| Black | Equal variances assumed | .117 | .733 | -.171 | 1697 | .864 | -.002 | .012 | -.026 | .022 |
| | Equal variances not assumed | | | -.171 | 1696.812 | .864 | -.002 | .012 | -.026 | .022 |
| Hispanic | Equal variances assumed | 2.801 | .094 | .836 | 1697 | .403 | .013 | .016 | -.018 | .045 |
| | Equal variances not assumed | | | .836 | 1692.802 | .403 | .013 | .016 | -.018 | .045 |
| White | Equal variances assumed | 4.923 | .027 | 1.112 | 1697 | .266 | .026 | .023 | -.020 | .071 |
| | Equal variances not assumed | | | 1.112 | 1696.720 | .266 | .026 | .023 | -.020 | .071 |
| Multiethnic | Equal variances assumed | 2.183 | .140 | .738 | 1697 | .460 | .004 | .005 | -.006 | .013 |
| | Equal variances not assumed | | | .738 | 1643.791 | .461 | .004 | .005 | -.006 | .013 |
| Decline | Equal variances assumed | .252 | .616 | .251 | 1697 | .802 | .001 | .005 | -.008 | .011 |
| | Equal variances not assumed | | | .251 | 1690.184 | .802 | .001 | .005 | -.008 | .011 |
| SPED | Equal variances assumed | .768 | .381 | .438 | 1713 | .661 | .007 | .015 | -.024 | .037 |
| | Equal variances not assumed | | | .438 | 1711.075 | .661 | .007 | .015 | -.024 | .037 |

**Independent Samples Test Continued**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Female | Equal variances assumed | 8.960 | .003 | -2.064 | 1662 | .039 | -.050 | .024 | -.098 | -.002 |
| | Equal variances not assumed | | | -2.064 | 1661.952 | .039 | -.050 | .024 | -.098 | -.002 |
| ELL | Equal variances assumed | 1.567 | .211 | .626 | 1713 | .532 | .005 | .008 | -.010 | .020 |
| | Equal variances not assumed | | | .625 | 1697.144 | .532 | .005 | .008 | -.010 | .020 |
| EconDsvntg | Equal variances assumed | 39.729 | .000 | -3.305 | 1113 | .001 | -.095 | .029 | -.152 | -.039 |
| | Equal variances not assumed | | | -3.305 | 1109.222 | .001 | -.095 | .029 | -.152 | -.039 |
| MSP Reading | Equal variances assumed | 5.011 | .025 | -2.604 | 1566 | .009 | -7.022 | 2.697 | -12.313 | -1.732 |
| | Equal variances not assumed | | | -2.598 | 1410.336 | .009 | -7.022 | 2.704 | -12.326 | -1.719 |
| MSPRdg_Perf | Equal variances assumed | 13.810 | .000 | -1.870 | 1566 | .062 | -.04477 | .02394 | -.09171 | .00218 |
| | Equal variances not assumed | | | -1.870 | 1562.552 | .062 | -.04477 | .02394 | -.09173 | .00219 |
| Fall09PRF | Equal variances assumed | .104 | .747 | -.018 | 490 | .986 | -.068 | 3.774 | -7.483 | 7.348 |
| | Equal variances not assumed | | | -.018 | 489.662 | .986 | -.068 | 3.774 | -7.482 | 7.347 |
| Wint10PRF | Equal variances assumed | .506 | .477 | -.009 | 514 | .992 | -.035 | 3.688 | -7.280 | 7.211 |
| | Equal variances not assumed | | | -.009 | 510.629 | .992 | -.035 | 3.691 | -7.286 | 7.216 |
| Wint10MCRC | Equal variances assumed | 1.212 | .272 | .453 | 546 | .651 | .140 | .310 | -.468 | .748 |
| | Equal variances not assumed | | | .453 | 544.852 | .650 | .140 | .309 | -.467 | .748 |

**Independent Samples Test Continued**

| | | Levene's Test for Equality of Variances | | t-test for Equality of Means | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | | | 95% Confidence Interval of the Difference | |
| | | F | Sig. | t | df | Sig. (2-tailed) | Mean Difference | Std. Error Difference | Lower | Upper |
| Spr10PRF | Equal variances assumed | .311 | .577 | -.410 | 513 | .682 | -1.350 | 3.293 | -7.819 | 5.120 |
| | Equal variances not assumed | | | -.410 | 512.800 | .682 | -1.350 | 3.293 | -7.819 | 5.120 |
| Spr10MCRC | Equal variances assumed | .739 | .390 | .982 | 881 | .327 | .244 | .249 | -.244 | .733 |
| | Equal variances not assumed | | | .985 | 880.450 | .325 | .244 | .248 | -.243 | .731 |
| Spr10Voc | Equal variances assumed | .981 | .323 | -.056 | 342 | .955 | -.029 | .522 | -1.056 | .997 |
| | Equal variances not assumed | | | -.056 | 331.540 | .955 | -.029 | .524 | -1.060 | 1.001 |

Appendix B: ROC Analyses

**Grade 3**
**Fall PRF Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 40 |
| | Negative | 86 |
| | Missing | 521 |
| Group 2 | Positive[a] | 52 |
| | Negative | 75 |
| | Missing | 520 |

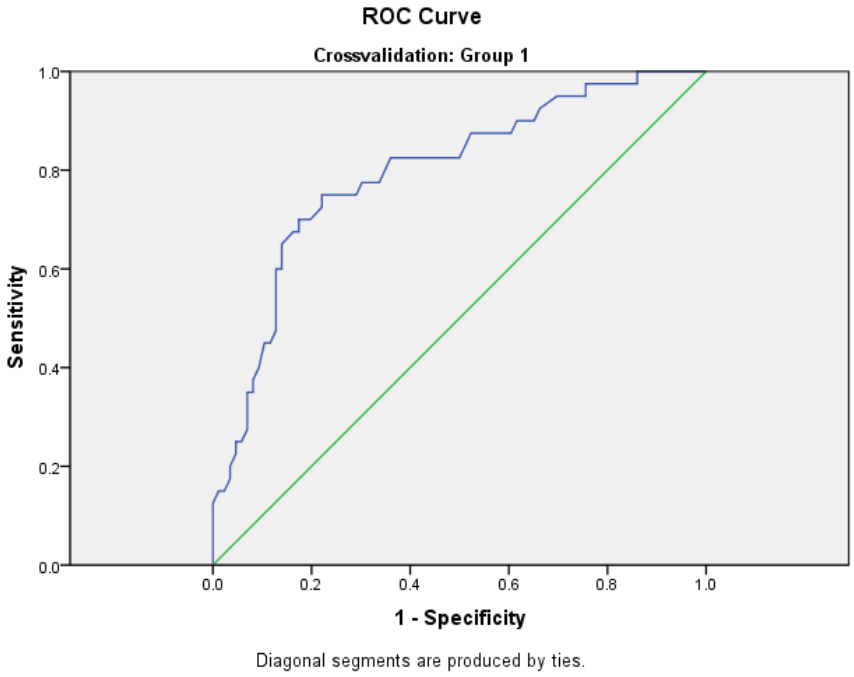
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Fall09PRF has at least one tie between the positive actual state group and the negative actual state group.

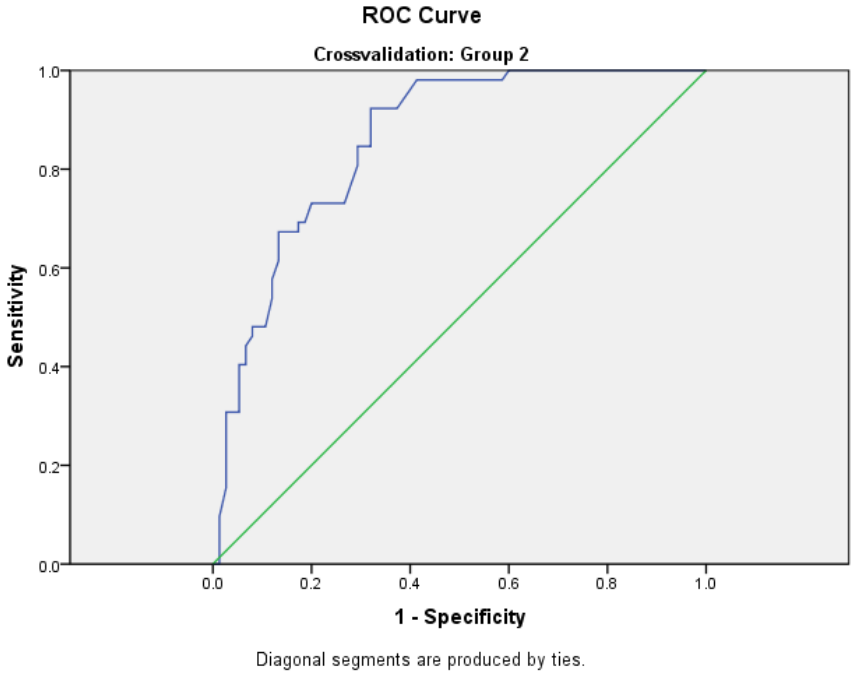
**Area Under the Curve[c,d]**

Test Result Variable(s):Fall09PRF

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .796 | .043 | .000 | .710 | .881 |
| Group 2 | .857 | .032 | .000 | .793 | .920 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Fall09PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Fall09PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.


ROC Curve
Crossvalidation: Group 1
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.


ROC Curve
Crossvalidation: Group 2
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.

**Grade 3**
**Fall PRF Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 8.00 | - | - | .000 | 1.000 |
| 9.50 | - | - | .000 | .987 |
| 10.50 | - | - | .019 | .987 |
| 12.50 | - | - | .038 | .987 |
| 13.00 | .000 | 1.000 | - | - |
| 16.50 | - | - | .058 | .987 |
| 19.00 | .050 | 1.000 | - | - |
| 20.50 | - | - | .077 | .987 |
| 22.50 | - | - | .096 | .987 |
| 23.50 | - | - | .154 | .973 |
| 24.50 | .075 | 1.000 | - | - |
| 25.00 | - | - | .173 | .973 |
| 25.50 | .100 | 1.000 | - | - |
| 26.50 | .125 | 1.000 | .192 | .973 |
| 27.50 | .150 | .988 | .231 | .973 |
| 28.50 | .150 | .977 | .250 | .973 |
| 30.00 | - | - | .269 | .973 |
| 30.50 | .175 | .965 | - | - |
| 32.00 | - | - | .288 | .973 |
| 32.50 | .200 | .965 | - | - |
| 33.50 | .225 | .953 | .308 | .973 |
| 34.50 | .250 | .953 | - | - |
| 35.00 | - | - | .308 | .960 |
| 35.50 | .250 | .942 | - | - |
| 36.50 | .275 | .930 | - | - |
| 37.50 | .300 | .930 | .308 | .947 |
| 38.50 | .325 | .930 | - | - |
| 39.50 | .350 | .930 | - | - |
| 40.00 | - | - | .327 | .947 |
| 41.50 | .350 | .919 | - | - |
| 42.00 | - | - | .346 | .947 |
| 44.00 | .375 | .919 | - | - |
| 44.50 | - | - | .385 | .947 |
| 45.50 | .400 | .907 | - | - |
| 46.50 | - | - | .404 | .947 |
| 47.50 | .450 | .895 | .404 | .933 |

**Grade 3**
**Fall PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 48.50 | - | - | .442 | .933 |
| 49.50 | .450 | .884 | - | - |
| 50.00 | - | - | .462 | .920 |
| 51.00 | .475 | .872 | - | - |
| 52.50 | - | - | .481 | .920 |
| 54.50 | .500 | .872 | .481 | .907 |
| 55.50 | - | - | .481 | .893 |
| 57.50 | .525 | .872 | .538 | .880 |
| 58.50 | .550 | .872 | - | - |
| 59.50 | .600 | .872 | .577 | .880 |
| 60.50 | - | - | .615 | .867 |
| 61.00 | .600 | .860 | - | - |
| 61.50 | - | - | .673 | .867 |
| 62.50 | .650 | .860 | .673 | .827 |
| 63.50 | - | - | .692 | .827 |
| 64.50 | .675 | .837 | .692 | .813 |
| 65.50 | - | - | .731 | .800 |
| 66.50 | .675 | .826 | .731 | .773 |
| 67.50 | .700 | .826 | - | - |
| 68.00 | - | - | .731 | .747 |
| 68.50 | .700 | .814 | - | - |
| 69.50 | .700 | .802 | .731 | .733 |
| 71.00 | - | - | .769 | .720 |
| 71.50 | .725 | .779 | - | - |
| 72.50 | - | - | .808 | .707 |
| 73.50 | .750 | .779 | .827 | .707 |
| 74.50 | .750 | .767 | .846 | .707 |
| 75.50 | .750 | .756 | .846 | .693 |
| 76.50 | .750 | .744 | .846 | .680 |
| 77.50 | - | - | .885 | .680 |
| 78.00 | .750 | .733 | - | - |
| 79.00 | - | - | .923 | .680 |
| 79.50 | .750 | .709 | - | - |
| 80.50 | .775 | .698 | - | - |
| 81.50 | .775 | .663 | .923 | .667 |
| 82.50 | .825 | .640 | - | - |

**Grade 3**
**Fall PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 83.50 | .825 | .628 | - | - |
| 84.00 | - | - | .923 | .627 |
| 85.00 | .825 | .605 | - | - |
| 85.50 | - | - | .942 | .613 |
| 86.50 | .825 | .593 | .962 | .600 |
| 87.50 | .825 | .558 | - | - |
| 88.00 | - | - | .981 | .587 |
| 88.50 | .825 | .547 | - | - |
| 89.50 | .825 | .500 | - | - |
| 90.00 | - | - | .981 | .547 |
| 90.50 | .875 | .477 | - | - |
| 91.50 | .875 | .465 | - | - |
| 92.00 | - | - | .981 | .520 |
| 92.50 | .875 | .453 | - | - |
| 93.50 | .875 | .442 | .981 | .480 |
| 94.50 | .875 | .430 | .981 | .453 |
| 95.50 | - | - | .981 | .413 |
| 96.00 | .875 | .407 | - | - |
| 97.00 | - | - | 1.000 | .400 |
| 97.50 | .875 | .395 | - | - |
| 98.50 | .900 | .384 | 1.000 | .387 |
| 100.00 | .900 | .372 | - | - |
| 100.50 | - | - | 1.000 | .373 |
| 101.50 | .900 | .349 | - | - |
| 102.50 | - | - | 1.000 | .360 |
| 103.00 | .925 | .337 | - | - |
| 104.00 | - | - | 1.000 | .347 |
| 104.50 | .950 | .302 | - | - |
| 105.50 | .950 | .291 | - | - |
| 106.50 | .950 | .279 | 1.000 | .333 |
| 108.00 | .950 | .256 | - | - |
| 109.50 | .950 | .244 | - | - |
| 110.00 | - | - | 1.000 | .320 |
| 110.50 | .975 | .244 | - | - |
| 111.50 | .975 | .233 | - | - |
| 112.50 | .975 | .198 | - | - |

**Grade 3**
**Fall PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 113.50 | .975 | .140 | 1.000 | .307 |
| 116.00 | - | - | 1.000 | .293 |
| 115.00 | 1.000 | .140 | - | - |
| 118.00 | 1.000 | .105 | 1.000 | .280 |
| 120.00 | - | - | 1.000 | .253 |
| 121.50 | 1.000 | .093 | 1.000 | .240 |
| 122.50 | - | - | 1.000 | .227 |
| 123.50 | 1.000 | .081 | - | - |
| 125.00 | - | - | 1.000 | .213 |
| 128.00 | 1.000 | .070 | 1.000 | .200 |
| 130.00 | - | - | 1.000 | .187 |
| 135.00 | - | - | 1.000 | .160 |
| 136.00 | 1.000 | .058 | - | - |
| 139.50 | - | - | 1.000 | .147 |
| 140.50 | - | - | 1.000 | .133 |
| 142.00 | - | - | 1.000 | .120 |
| 145.00 | 1.000 | .047 | - | - |
| 146.00 | - | - | 1.000 | .107 |
| 150.50 | - | - | 1.000 | .080 |
| 155.50 | - | - | 1.000 | .067 |
| 158.50 | 1.000 | .035 | | |
| 159.50 | - | - | 1.000 | .053 |
| 160.50 | - | - | 1.000 | .040 |
| 164.00 | - | - | 1.000 | .013 |
| 168.00 | - | - | 1.000 | .000 |
| 175.00 | 1.000 | .023 | - | - |
| 191.00 | 1.000 | .012 | - | - |
| 200.00 | 1.000 | .000 | - | - |

**Grade 3**
**Fall MCRC Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 40 |
| | Negative | 86 |
| | Missing | 521 |
| Group 2 | Positive[a] | 52 |
| | Negative | 75 |
| | Missing | 520 |

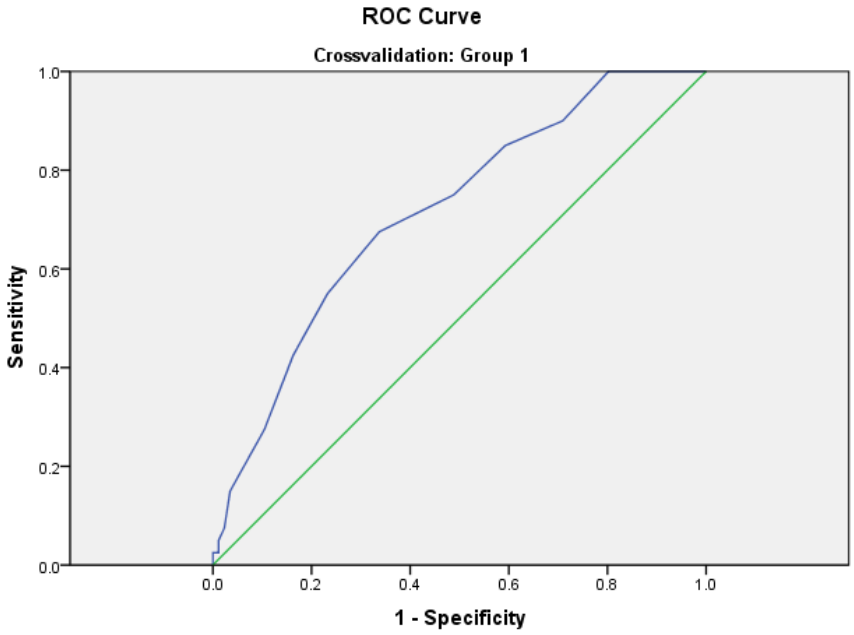
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Fall09MCRC has at least one tie between the positive actual state group and the negative actual state group.

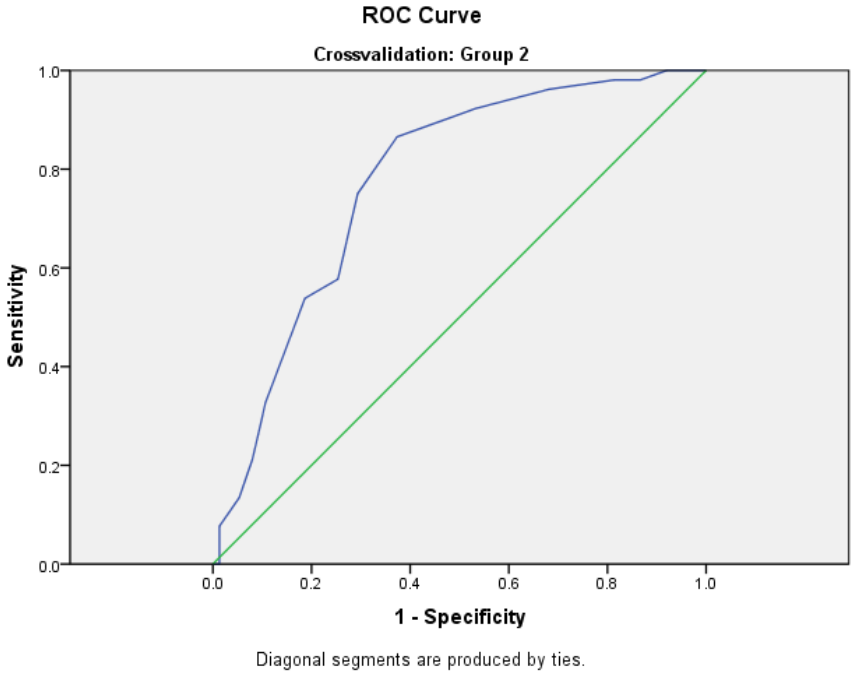
**Area Under the Curve[c,d]**

Test Result Variable(s):Fall09MCRC

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .715 | .048 | .000 | .621 | .809 |
| Group 2 | .775 | .041 | .000 | .694 | .856 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Fall09MCRC has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Fall09MCRC has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.


ROC Curve
Crossvalidation: Group 1
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.


ROC Curve
Crossvalidation: Group 2
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.

**Grade 3**
**Fall MCRC Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| -1.00 | .000 | 1.000 | .000 | 1.000 |
| 1.00 | .025 | 1.000 | - | - |
| 1.50 | - | - | .000 | .987 |
| 2.50 | .025 | .988 | - | - |
| 3.50 | .050 | .988 | .077 | .987 |
| 4.50 | .075 | .977 | .135 | .947 |
| 5.50 | .150 | .965 | .212 | .920 |
| 6.50 | .275 | .895 | .327 | .893 |
| 7.50 | .425 | .837 | .538 | .813 |
| 8.50 | .550 | .767 | .577 | .747 |
| **9.50** | .675 | .663 | **.750** | **.707** |
| **10.50** | **.750** | **.512** | .865 | .627 |
| 11.50 | .850 | .407 | .923 | .467 |
| 12.50 | .900 | .291 | .962 | .320 |
| 13.50 | 1.000 | .198 | .981 | .187 |
| 14.50 | 1.000 | .116 | .981 | .133 |
| 15.50 | 1.000 | .058 | 1.000 | .080 |
| 16.50 | 1.000 | .012 | 1.000 | .027 |
| 18.00 | 1.000 | .000 | 1.000 | .000 |

**Grade 3**
**Fall VOC Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 40 |
| | Negative | 87 |
| | Missing | 520 |
| Group 2 | Positive[a] | 52 |
| | Negative | 75 |
| | Missing | 520 |

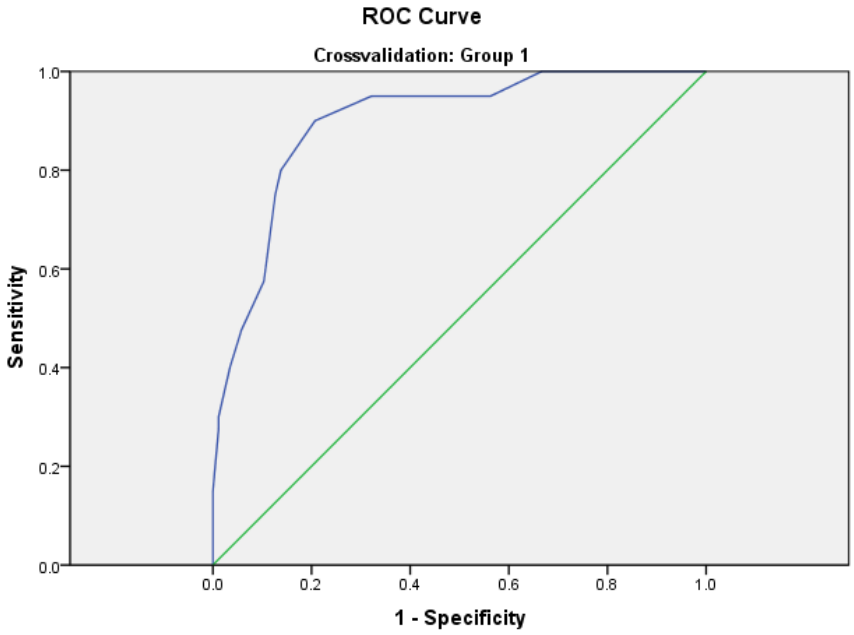
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Fall09Voc has at least one tie between the positive actual state group and the negative actual state group.

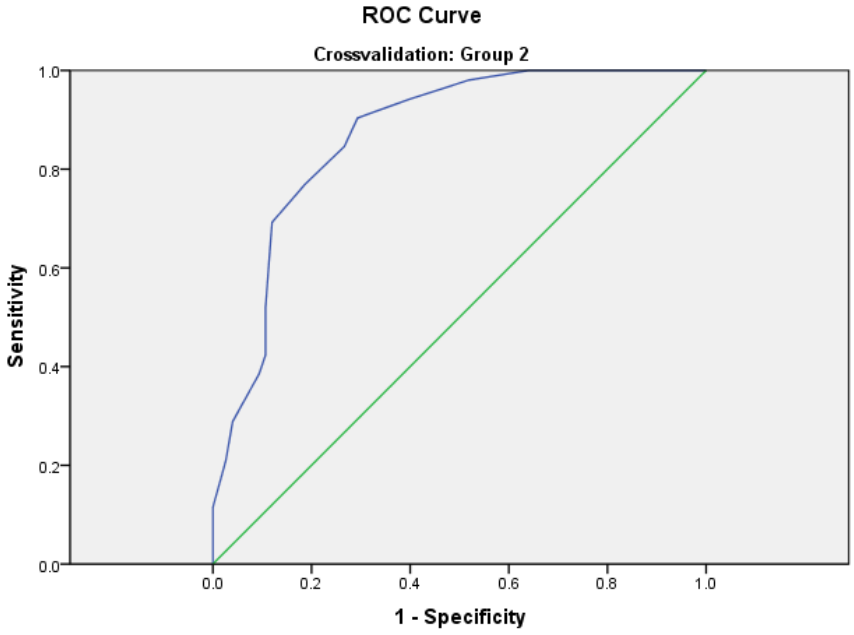
**Area Under the Curve[c,d]**

Test Result Variable(s):Fall09Voc

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .897 | .029 | .000 | .841 | .954 |
| Group 2 | .868 | .031 | .000 | .807 | .930 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Fall09Voc has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Fall09Voc has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.


ROC Curve
Crossvalidation: Group 1
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.


ROC Curve
Crossvalidation: Group 2
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.

**Grade 3**
**Fall VOC Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 4.00 | .000 | 1.000 | .000 | 1.000 |
| 5.50 | .050 | 1.000 | .038 | 1.000 |
| 6.50 | .075 | 1.000 | .058 | 1.000 |
| 7.50 | .150 | 1.000 | .115 | 1.000 |
| 8.50 | .275 | .989 | .212 | .973 |
| 9.50 | .300 | .989 | .288 | .960 |
| 10.50 | .400 | .966 | .385 | .907 |
| 11.50 | .475 | .943 | .423 | .893 |
| 12.50 | .575 | .897 | .519 | .893 |
| 13.50 | .750 | .874 | .692 | .880 |
| **14.50** | **.800** | **.862** | .769 | .813 |
| **15.50** | .900 | .793 | **.846** | **.733** |
| 16.50 | .950 | .678 | .904 | .707 |
| 17.50 | .950 | .586 | .942 | .600 |
| 18.50 | .950 | .437 | .981 | .480 |
| 19.50 | 1.000 | .333 | 1.000 | .360 |
| 20.50 | 1.000 | .218 | 1.000 | .293 |
| 21.50 | 1.000 | .149 | 1.000 | .227 |
| 22.50 | 1.000 | .069 | 1.000 | .120 |
| 23.50 | 1.000 | .034 | 1.000 | .027 |
| 24.50 | 1.000 | .011 | - | - |
| 25.00 | - | - | 1.000 | .000 |
| 26.00 | 1.000 | .000 | - | - |

**Grade 3**
**Winter PRF Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 46 |
| | Negative | 99 |
| | Missing | 502 |
| Group 2 | Positive[a] | 55 |
| | Negative | 85 |
| | Missing | 507 |

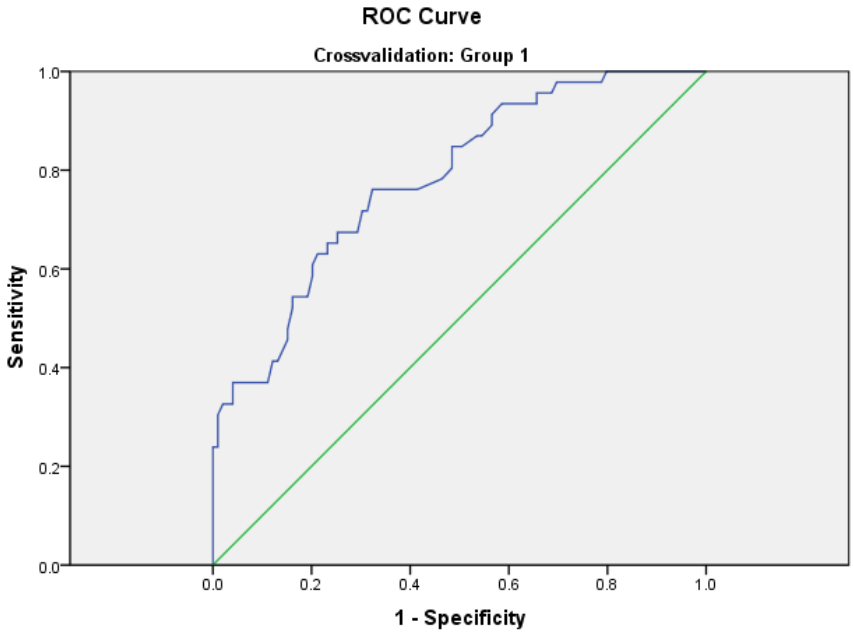
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Wint10PRF has at least one tie between the positive actual state group and the negative actual state group.

**Area Under the Curve[c,d]**

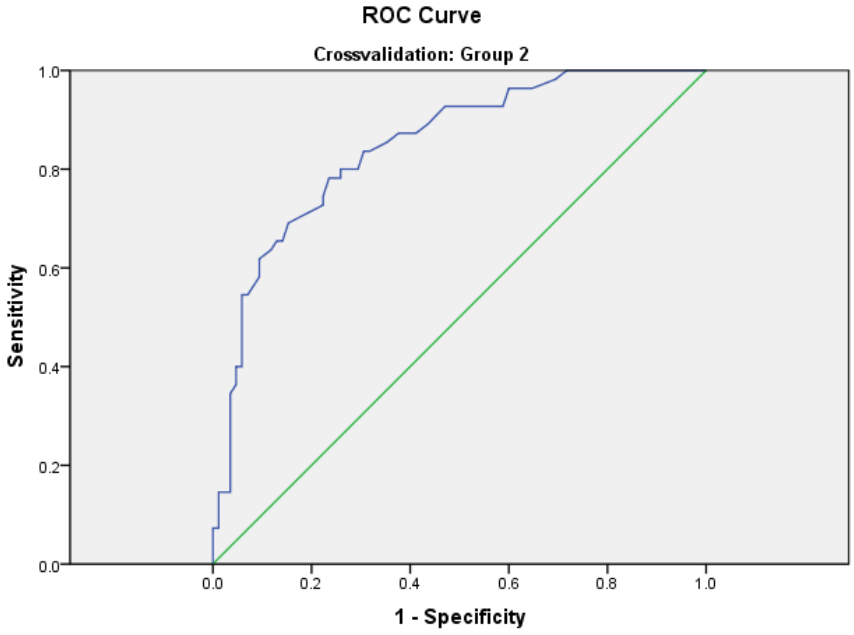
Test Result Variable(s):Wint10PRF

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .782 | .040 | .000 | .704 | .860 |
| Group 2 | .847 | .033 | .000 | .782 | .911 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Wint10PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Wint10PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.




Diagonal segments are produced by ties.




Diagonal segments are produced by ties.

**Grade 3**
**Winter PRF Benchmark**

| Cut score | Sensitivity | Specificity | Sensitivity | Specificity |
|---|---|---|---|---|
| 12.00 | .000 | 1.000 | - | - |
| 17.00 | - | - | .000 | 1.000 |
| 18.00 | .022 | 1.000 | - | - |
| 22.00 | - | - | .036 | 1.000 |
| 24.00 | .043 | 1.000 | - | - |
| 26.00 | .087 | 1.000 | - | - |
| 27.50 | - | - | .055 | 1.000 |
| 28.50 | .130 | 1.000 | - | - |
| 31.50 | - | - | .073 | 1.000 |
| 34.50 | .152 | 1.000 | - | - |
| 35.50 | - | - | .073 | .988 |
| 40.00 | - | - | .091 | .988 |
| 41.00 | .174 | 1.000 | .109 | .988 |
| 45.00 | .196 | 1.000 | - | - |
| 45.50 | - | - | .127 | .988 |
| 46.50 | - | - | .145 | .988 |
| 47.50 | .217 | 1.000 | - | - |
| 48.00 | - | - | .145 | .965 |
| 50.00 | .239 | 1.000 | - | - |
| 52.50 | - | - | .164 | .965 |
| 53.50 | .239 | .990 | - | - |
| 56.00 | .261 | .990 | - | - |
| 56.50 | - | - | .182 | .965 |
| 57.50 | .283 | .990 | - | - |
| 59.00 | - | - | .200 | .965 |
| 59.50 | .304 | .990 | - | - |
| 61.50 | - | - | .236 | .965 |
| 62.50 | .326 | .980 | - | - |
| 63.50 | - | - | .255 | .965 |
| 64.50 | .326 | .970 | - | - |
| 65.50 | - | - | .291 | .965 |
| 66.00 | .326 | .960 | - | - |
| 67.50 | .370 | .960 | - | - |
| 68.00 | - | - | .327 | .965 |
| 69.00 | .370 | .949 | - | - |
| 71.00 | .370 | .929 | - | - |

**Grade 3**
**Winter PRF Benchmark (continued)**

| Cut score | Sensitivity | Specificity | Sensitivity | Specificity |
|---|---|---|---|---|
| 71.50 | - | - | .345 | .965 |
| 73.50 | .370 | .909 | .364 | .953 |
| 75.00 | - | - | .382 | .953 |
| 76.00 | .370 | .899 | - | - |
| 76.50 | - | - | .400 | .953 |
| 77.50 | .370 | .889 | .400 | .941 |
| 78.50 | .413 | .879 | .418 | .941 |
| 79.50 | .413 | .869 | .436 | .941 |
| 80.50 | .457 | .848 | - | - |
| 81.00 | - | - | .473 | .941 |
| 82.50 | .478 | .848 | .509 | .941 |
| 83.50 | - | - | .527 | .941 |
| 84.50 | .522 | .838 | .545 | .941 |
| 85.50 | .543 | .838 | .545 | .929 |
| 86.50 | .543 | .828 | .564 | .918 |
| 88.00 | .543 | .808 | .582 | .906 |
| 89.50 | .587 | .798 | - | - |
| 90.00 | - | - | .600 | .906 |
| 90.50 | .609 | .798 | - | - |
| 92.00 | .630 | .788 | .618 | .906 |
| 93.50 | .630 | .778 | .636 | .882 |
| 94.50 | - | - | .655 | .871 |
| 95.00 | .630 | .768 | - | - |
| 96.00 | - | - | .655 | .859 |
| 97.00 | .652 | .768 | - | - |
| 98.50 | .652 | .758 | .691 | .847 |
| 99.50 | .652 | .747 | - | - |
| 100.50 | .674 | .747 | .709 | .812 |
| 101.50 | .674 | .737 | .727 | .776 |
| 102.50 | .674 | .717 | - | - |
| 103.00 | - | - | .745 | .776 |
| 103.50 | .674 | .707 | - | - |
| 104.50 | .717 | .697 | .782 | .765 |
| 105.50 | .717 | .687 | .782 | .741 |
| 106.50 | .761 | .677 | - | - |
| 107.00 | - | - | .800 | .741 |

**Grade 3**
**Winter PRF Benchmark (continued)**

| Cut score | Sensitivity | Specificity | Sensitivity | Specificity |
|---|---|---|---|---|
| 107.50 | .761 | .646 | - | - |
| **108.50** | .761 | .626 | **.800** | **.706** |
| 109.50 | .761 | .586 | .836 | .694 |
| **110.50** | **.783** | **.535** | .836 | .682 |
| 111.50 | - | - | .855 | .647 |
| 112.00 | .804 | .515 | - | - |
| 112.50 | - | - | .873 | .624 |
| 113.50 | .848 | .515 | .873 | .588 |
| 114.50 | .848 | .505 | .891 | .565 |
| 115.50 | .848 | .495 | - | - |
| 116.00 | - | - | .927 | .529 |
| 116.50 | .870 | .465 | - | - |
| 118.00 | .870 | .455 | .927 | .506 |
| 120.00 | .891 | .434 | - | - |
| 121.50 | .913 | .434 | - | - |
| 122.50 | - | - | .927 | .482 |
| 124.00 | .935 | .414 | - | - |
| 126.50 | .935 | .394 | - | - |
| 127.00 | - | - | .927 | .471 |
| 127.50 | .935 | .384 | - | - |
| 128.50 | .935 | .374 | .927 | .447 |
| 129.50 | .935 | .354 | .927 | .435 |
| 130.50 | .935 | .343 | .927 | .424 |
| 131.50 | .957 | .343 | .927 | .412 |
| 133.50 | - | - | .964 | .400 |
| 134.00 | .957 | .333 | - | - |
| 136.00 | - | - | .964 | .376 |
| 136.50 | .957 | .323 | - | - |
| 138.00 | .957 | .313 | .964 | .365 |
| 139.50 | - | - | .964 | .353 |
| 140.00 | .978 | .303 | - | - |
| 141.50 | .978 | .283 | - | - |
| 142.50 | .978 | .273 | .982 | .306 |
| 144.00 | .978 | .263 | - | - |
| 145.50 | .978 | .242 | 1.000 | .282 |
| 146.50 | .978 | .212 | 1.000 | .259 |

**Grade 3**
**Winter PRF Benchmark (continued)**

| Cut score | Sensitivity | Specificity | Sensitivity | Specificity |
|---|---|---|---|---|
| 147.50 | 1.000 | .202 | - | - |
| 148.00 | - | - | 1.000 | .224 |
| 149.50 | 1.000 | .192 | 1.000 | .212 |
| 152.00 | - | - | 1.000 | .200 |
| 153.50 | 1.000 | .162 | - | - |
| 155.00 | - | - | 1.000 | .188 |
| 156.50 | - | - | 1.000 | .176 |
| 157.50 | - | - | 1.000 | .165 |
| 158.00 | 1.000 | .141 | - | - |
| 158.50 | - | - | 1.000 | .153 |
| 159.50 | - | - | 1.000 | .141 |
| 160.50 | 1.000 | .131 | - | - |
| 161.50 | - | - | 1.000 | .129 |
| 163.50 | 1.000 | .121 | - | - |
| 164.50 | - | - | 1.000 | .118 |
| 167.00 | - | - | 1.000 | .094 |
| 168.50 | - | - | 1.000 | .082 |
| 169.50 | 1.000 | .091 | - | - |
| 170.00 | - | - | 1.000 | .071 |
| 172.00 | - | - | 1.000 | .059 |
| 174.00 | 1.000 | .081 | - | - |
| 175.00 | - | - | 1.000 | .047 |
| 176.50 | 1.000 | .071 | - | - |
| 178.50 | 1.000 | .061 | - | - |
| 180.00 | - | - | 1.000 | .035 |
| 181.00 | 1.000 | .051 | - | - |
| 184.50 | 1.000 | .040 | - | - |
| 187.00 | 1.000 | .030 | - | - |
| 191.00 | - | - | 1.000 | .024 |
| 192.50 | 1.000 | .020 | - | - |
| 204.50 | 1.000 | .010 | - | - |
| 208.00 | - | - | 1.000 | .012 |
| 213.00 | 1.000 | .000 | - | - |
| 218.00 | - | - | 1.000 | .000 |

**Grade 3**
**Winter MCRC Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 52 |
| | Negative | 139 |
| | Missing | 456 |
| Group 2 | Positive[a] | 61 |
| | Negative | 111 |
| | Missing | 475 |

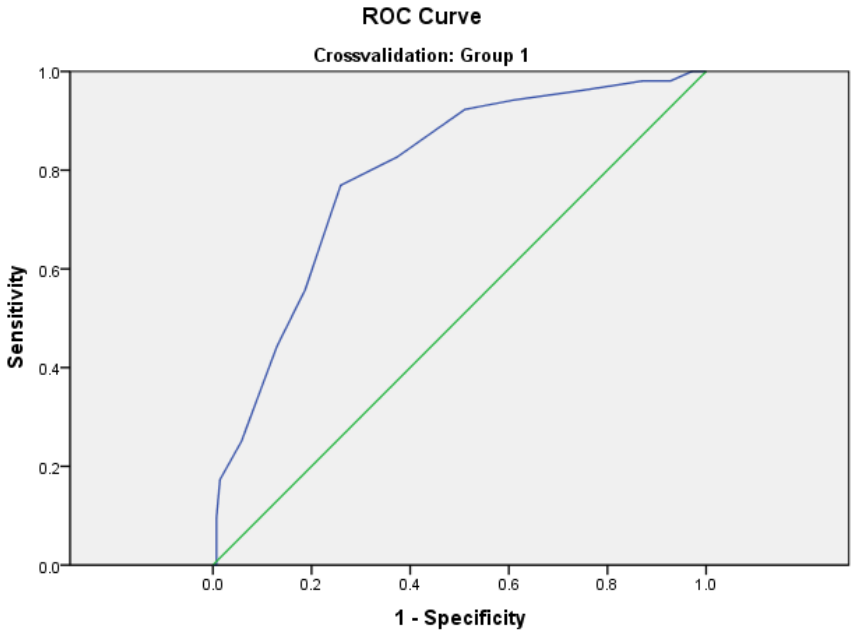
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Wint10MCRC has at least one tie between the positive actual state group and the negative actual state group.

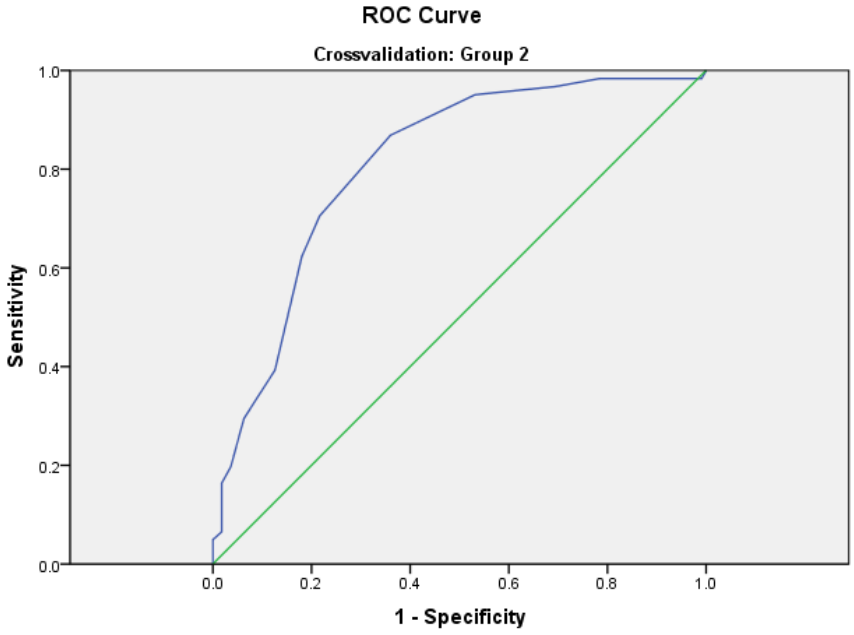
**Area Under the Curve[c,d]**

Test Result Variable(s):Wint10MCRC

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .794 | .035 | .000 | .724 | .863 |
| Group 2 | .809 | .034 | .000 | .743 | .875 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Wint10MCRC has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Wint10MCRC has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.


ROC Curve
Crossvalidation: Group 1
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.


ROC Curve
Crossvalidation: Group 2
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.

**Grade 3**
**Winter MCRC Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| -1.00 | .000 | 1.000 | .000 | 1.000 |
| .50 | - | - | .033 | 1.000 |
| 1.50 | .000 | .993 | .049 | 1.000 |
| 3.00 | - | - | .066 | .982 |
| 3.50 | .058 | .993 | - | - |
| 4.50 | .096 | .993 | .164 | .982 |
| 5.50 | .173 | .986 | .197 | .964 |
| 6.50 | .250 | .942 | .295 | .937 |
| 7.50 | .442 | .871 | .393 | .874 |
| 8.50 | .558 | .813 | .623 | .820 |
| **9.50** | **.769** | **.741** | **.705** | **.784** |
| 10.50 | .827 | .626 | .869 | .640 |
| 11.50 | .923 | .489 | .951 | .468 |
| 12.50 | .942 | .388 | .967 | .306 |
| 13.50 | .962 | .252 | .984 | .216 |
| 14.50 | .981 | .129 | .984 | .108 |
| 15.50 | .981 | .072 | .984 | .009 |
| 16.50 | 1.000 | .029 | - | - |
| 17.00 | - | - | 1.000 | .000 |
| 18.00 | 1.000 | .000 | - | - |

**Grade 3**
**Spring PRF Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 53 |
| | Negative | 109 |
| | Missing | 485 |
| Group 2 | Positive[a] | 57 |
| | Negative | 91 |
| | Missing | 499 |

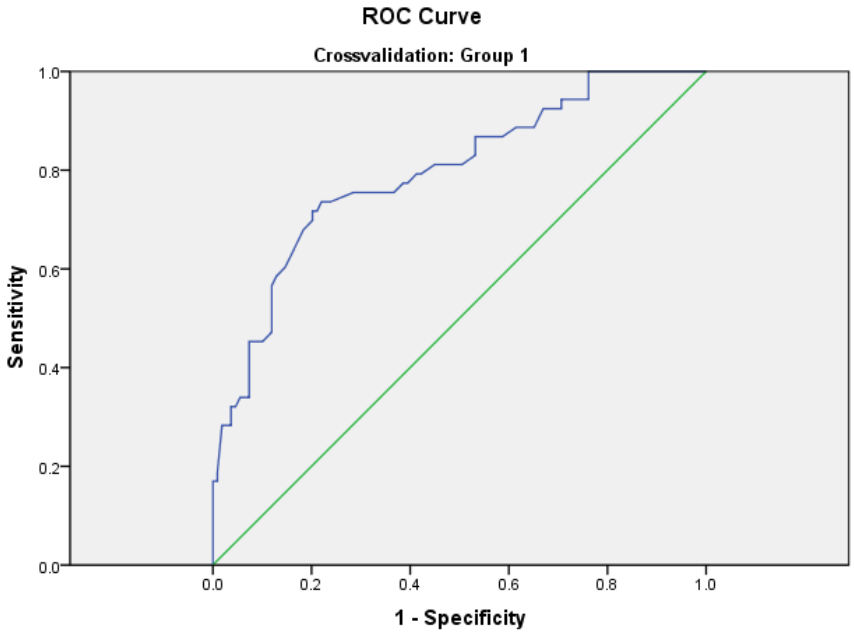
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Spr10PRF has at least one tie between the positive actual state group and the negative actual state group.

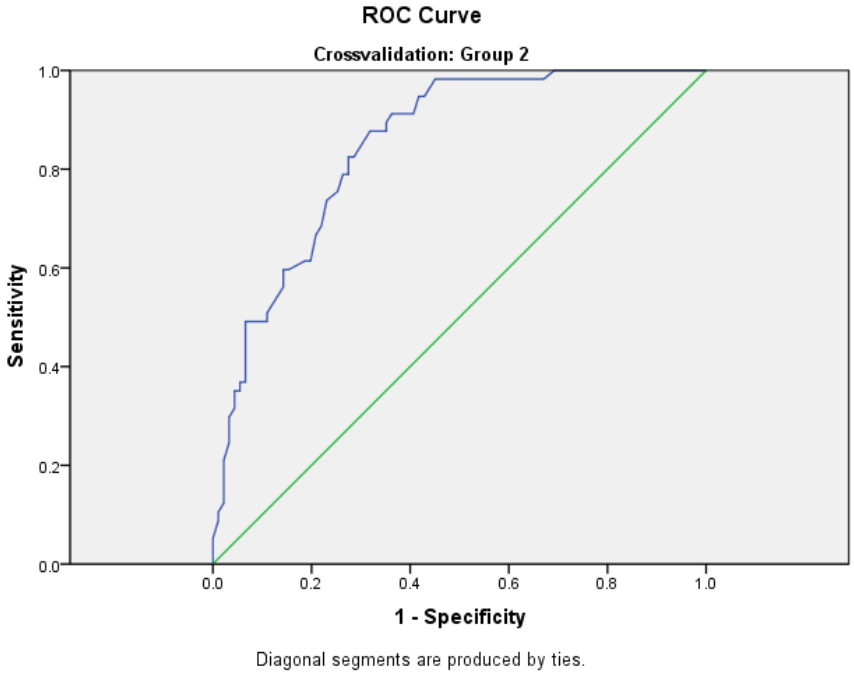
**Area Under the Curve[c,d]**

Test Result Variable(s):Spr10PRF

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .795 | .038 | .000 | .720 | .870 |
| Group 2 | .847 | .031 | .000 | .787 | .908 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Spr10PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Spr10PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.


ROC Curve
Crossvalidation: Group 1
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.


ROC Curve
Crossvalidation: Group 2
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.

**Grade 3**
**Spring PRF Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 15.00 | .000 | 1.000 | - | - |
| 22.50 | .019 | 1.000 | - | - |
| 29.50 | .038 | 1.000 | - | - |
| 30.50 | .075 | 1.000 | - | - |
| 31.00 | - | - | .000 | 1.000 |
| 33.00 | - | - | .018 | 1.000 |
| 35.00 | .094 | 1.000 | - | - |
| 37.00 | - | - | .035 | 1.000 |
| 40.00 | .113 | 1.000 | - | - |
| 41.50 | - | - | .053 | 1.000 |
| 43.00 | .132 | 1.000 | - | - |
| 43.50 | - | - | .088 | .989 |
| 44.50 | - | - | .105 | .989 |
| 46.00 | .151 | 1.000 | - | - |
| 49.00 | .170 | 1.000 | - | - |
| 46.50 | - | - | .123 | .978 |
| 49.50 | - | - | .140 | .978 |
| 52.00 | .170 | .991 | .158 | .978 |
| 53.50 | - | - | .175 | .978 |
| 54.00 | .189 | .991 | - | - |
| 54.50 | - | - | .211 | .978 |
| 55.50 | .283 | .982 | .246 | .967 |
| 56.50 | .283 | .963 | .263 | .967 |
| 57.50 | .302 | .963 | .298 | .967 |
| 58.50 | - | - | .316 | .956 |
| 59.50 | .321 | .963 | .351 | .956 |
| 61.50 | .321 | .954 | - | - |
| 62.00 | - | - | .351 | .945 |
| 63.50 | .340 | .945 | - | - |
| 64.50 | - | - | .368 | .945 |
| 65.50 | .340 | .936 | .368 | .934 |
| 66.50 | .340 | .927 | .386 | .934 |
| 67.50 | .358 | .927 | - | - |
| 68.50 | .377 | .927 | .404 | .934 |
| 70.00 | .396 | .927 | - | - |
| 72.00 | .434 | .927 | - | - |
| 72.50 | - | - | .421 | .934 |

**Grade 3**
**Spring PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 73.50 | .453 | .927 | - | - |
| 75.00 | .453 | .917 | - | - |
| 75.50 | - | - | .474 | .934 |
| 76.50 | .453 | .899 | .491 | .934 |
| 77.50 | .472 | .881 | .491 | .923 |
| 78.50 | .491 | .881 | - | - |
| 79.00 | - | - | .491 | .912 |
| 80.50 | - | - | .491 | .890 |
| 81.50 | .528 | .881 | - | - |
| 82.00 | - | - | .509 | .890 |
| 84.50 | .547 | .881 | .544 | .868 |
| 85.50 | .566 | .881 | - | - |
| 87.00 | .585 | .872 | .561 | .857 |
| 88.50 | - | - | .596 | .857 |
| 89.00 | .604 | .853 | - | - |
| 89.50 | - | - | .596 | .846 |
| 90.50 | .642 | .835 | - | - |
| 91.00 | - | - | .614 | .813 |
| 91.50 | .660 | .826 | - | - |
| 92.50 | .679 | .817 | .614 | .802 |
| 93.50 | .698 | .798 | .667 | .791 |
| 94.50 | .717 | .798 | - | - |
| 95.00 | - | - | .684 | .780 |
| 95.50 | .717 | .789 | - | - |
| 96.50 | .736 | .780 | .737 | .769 |
| 97.50 | .736 | .761 | .754 | .747 |
| 98.50 | - | - | .789 | .736 |
| **99.00** | **.755** | **.716** | - | - |
| 100.00 | - | - | .789 | .725 |
| 100.50 | .755 | .697 | - | - |
| 101.50 | .755 | .679 | - | - |
| 102.50 | - | - | .825 | .725 |
| 103.00 | .755 | .661 | - | - |
| 104.50 | .755 | .651 | - | - |
| **105.00** | - | - | **.825** | **.714** |
| 105.50 | .755 | .633 | - | - |

**Grade 3**
**Spring PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 106.50 | .774 | .615 | .860 | .692 |
| 107.50 | .774 | .606 | .877 | .681 |
| 108.50 | .792 | .587 | .877 | .648 |
| 109.50 | .792 | .578 | .895 | .648 |
| 111.00 | .811 | .550 | .912 | .637 |
| 112.50 | .811 | .532 | - | - |
| 113.00 | - | - | .912 | .615 |
| 113.50 | .811 | .514 | - | - |
| 114.50 | - | - | .912 | .604 |
| 115.00 | .811 | .505 | - | - |
| 115.50 | - | - | .912 | .593 |
| 116.50 | .811 | .495 | - | - |
| 117.00 | - | - | .947 | .582 |
| 117.50 | .830 | .468 | - | - |
| 119.00 | .868 | .468 | - | - |
| 119.50 | - | - | .947 | .571 |
| 121.50 | .868 | .459 | .965 | .560 |
| 122.50 | - | - | .982 | .549 |
| 123.50 | .868 | .450 | .982 | .527 |
| 124.50 | .868 | .431 | .982 | .495 |
| 125.50 | .868 | .422 | - | - |
| 126.00 | - | - | .982 | .484 |
| 127.50 | .868 | .413 | .982 | .473 |
| 128.50 | - | - | .982 | .440 |
| 129.50 | .887 | .385 | - | - |
| 130.00 | - | - | .982 | .429 |
| 130.50 | .887 | .376 | - | - |
| 131.50 | .887 | .367 | - | - |
| 132.00 | - | - | .982 | .418 |
| 133.00 | .887 | .358 | - | - |
| 134.50 | .887 | .349 | .982 | .407 |
| 136.50 | .906 | .339 | .982 | .396 |
| 137.50 | - | - | .982 | .385 |
| 138.50 | .925 | .330 | .982 | .374 |
| 139.50 | .925 | .321 | - | - |
| 140.00 | - | - | .982 | .352 |

**Grade 3**
**Spring PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 140.50 | .925 | .294 | - | - |
| 142.00 | .943 | .294 | .982 | .330 |
| 143.50 | .943 | .275 | 1.000 | .308 |
| 145.50 | .943 | .257 | 1.000 | .297 |
| 147.50 | .943 | .248 | - | - |
| 148.50 | .943 | .239 | - | - |
| 149.00 | - | - | 1.000 | .275 |
| 149.50 | .962 | .239 | - | - |
| 150.50 | 1.000 | .239 | - | - |
| 151.50 | 1.000 | .211 | - | - |
| 152.00 | - | - | 1.000 | .231 |
| 153.50 | - | - | 1.000 | .209 |
| 155.00 | - | - | 1.000 | .198 |
| 155.50 | 1.000 | .202 | - | - |
| 158.00 | - | - | 1.000 | .187 |
| 160.50 | 1.000 | .183 | 1.000 | .176 |
| 162.50 | 1.000 | .174 | 1.000 | .165 |
| 164.00 | 1.000 | .156 | - | - |
| 164.50 | - | - | 1.000 | .154 |
| 165.50 | 1.000 | .147 | 1.000 | .143 |
| 167.00 | 1.000 | .128 | - | - |
| 168.00 | - | - | 1.000 | .121 |
| 168.50 | 1.000 | .119 | - | - |
| 169.50 | 1.000 | .101 | - | - |
| 172.00 | - | - | 1.000 | .099 |
| 172.50 | 1.000 | .092 | - | - |
| 175.00 | - | - | 1.000 | .088 |
| 175.50 | 1.000 | .083 | - | - |
| 178.00 | - | - | 1.000 | .077 |
| 179.00 | 1.000 | .073 | - | - |
| 182.50 | 1.000 | .055 | - | - |
| 187.50 | 1.000 | .046 | - | - |
| 188.00 | - | - | 1.000 | .066 |
| 196.50 | - | - | 1.000 | .055 |
| 197.00 | 1.000 | .037 | - | - |
| 198.00 | - | - | 1.000 | .033 |

**Grade 3**
**Spring PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 203.50 | 1.000 | .028 | - | - |
| 205.00 | - | - | 1.000 | .022 |
| 214.00 | 1.000 | .018 | - | - |
| 224.00 | 1.000 | .000 | - | - |
| 232.50 | - | - | 1.000 | .011 |
| 255.00 | - | - | 1.000 | .000 |

**Grade 3**
**Spring MCRC Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 84 |
| | Negative | 225 |
| | Missing | 338 |
| Group 2 | Positive[a] | 84 |
| | Negative | 199 |
| | Missing | 364 |

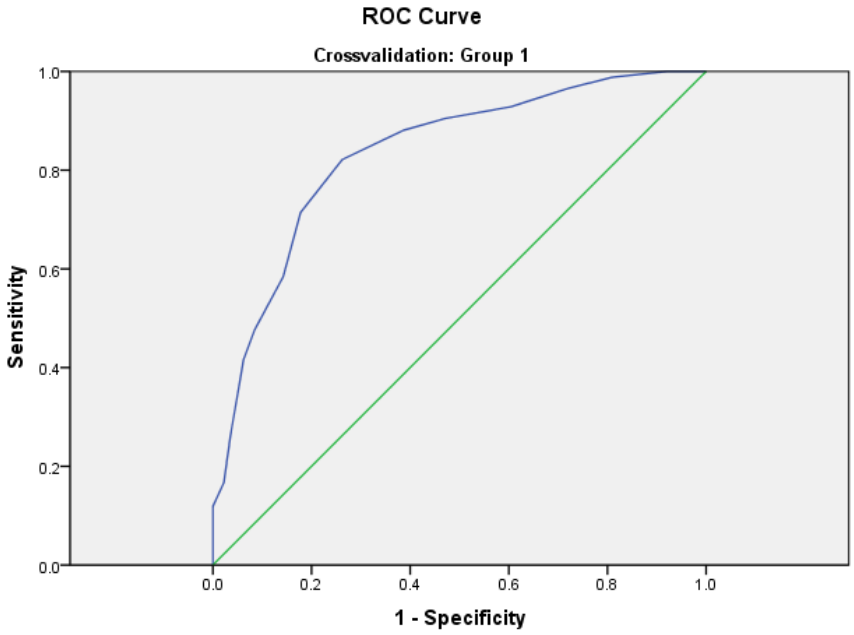
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Spr10MCRC has at least one tie between the positive actual state group and the negative actual state group.

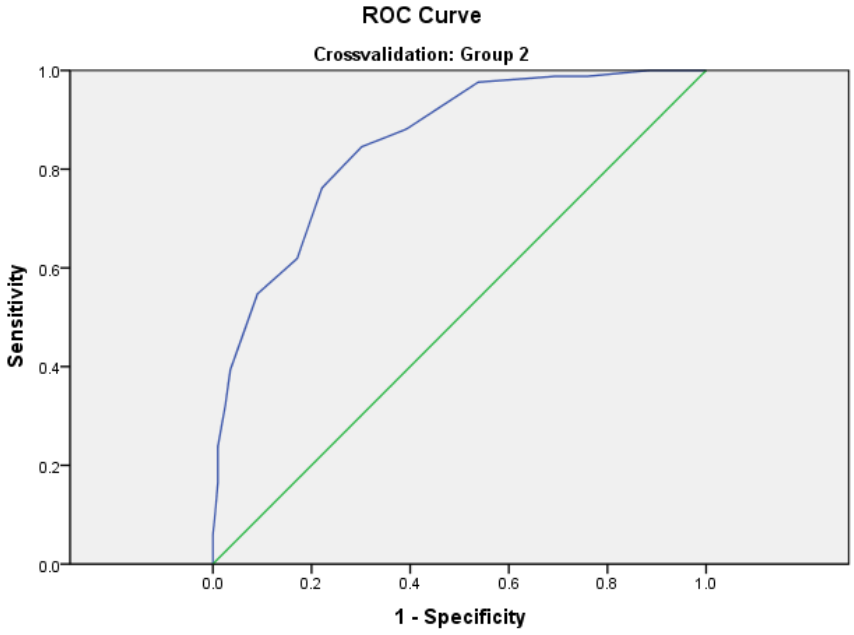
**Area Under the Curve[c,d]**

Test Result Variable(s):Spr10MCRC

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .834 | .026 | .000 | .783 | .884 |
| Group 2 | .853 | .023 | .000 | .807 | .898 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Spr10MCRC has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Spr10MCRC has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.


ROC Curve
Crossvalidation: Group 1
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.


ROC Curve
Crossvalidation: Group 2
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.

**Grade 3**
**Spring MCRC Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| -1.00 | .000 | 1.000 | .000 | 1.000 |
| 1.00 | .024 | 1.000 | - | - |
| 2.00 | - | - | .024 | 1.000 |
| 3.50 | .036 | 1.000 | - | - |
| 4.50 | - | - | .060 | 1.000 |
| 5.50 | .119 | 1.000 | .107 | .995 |
| 6.50 | .167 | .978 | .167 | .990 |
| 7.50 | .262 | .964 | .238 | .990 |
| 8.50 | .417 | .938 | .321 | .975 |
| 9.50 | .476 | .916 | .393 | .965 |
| 10.50 | .583 | .858 | .548 | .910 |
| 11.50 | .714 | .822 | .619 | .829 |
| **12.50** | **.821** | **.738** | **.762** | **.779** |
| 13.50 | .881 | .613 | .845 | .698 |
| 14.50 | .905 | .529 | .881 | .608 |
| 15.50 | .929 | .396 | .976 | .462 |
| 16.50 | .964 | .284 | .988 | .307 |
| 17.50 | .988 | .191 | .988 | .241 |
| 18.50 | 1.000 | .080 | 1.000 | .116 |
| 19.50 | 1.000 | .013 | 1.000 | .015 |
| 21.00 | 1.000 | .000 | 1.000 | .000 |

**Grade 3**
**Spring VOC Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 77 |
| | Negative | 179 |
| | Missing | 391 |
| Group 2 | Positive[a] | 82 |
| | Negative | 163 |
| | Missing | 402 |

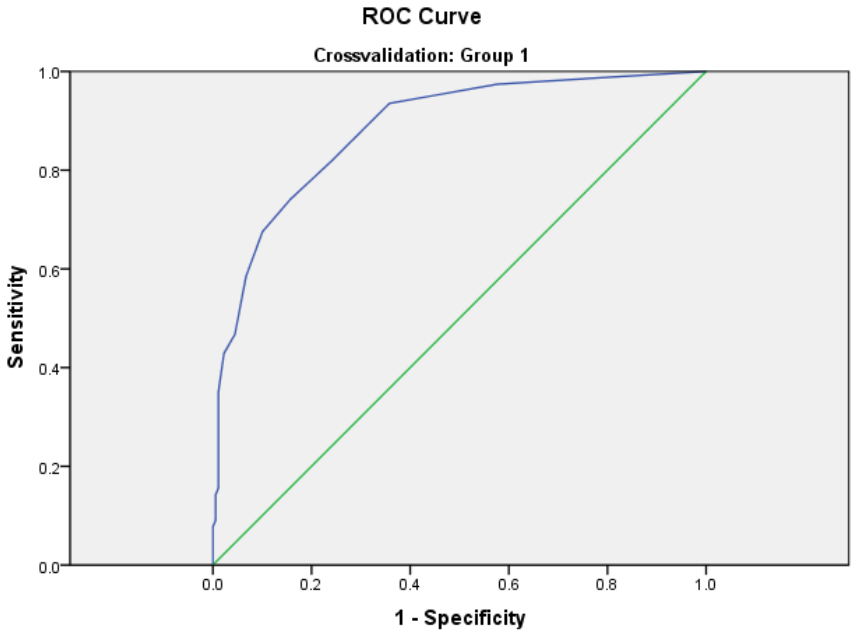
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Spr10Voc has at least one tie between the positive actual state group and the negative actual state group.

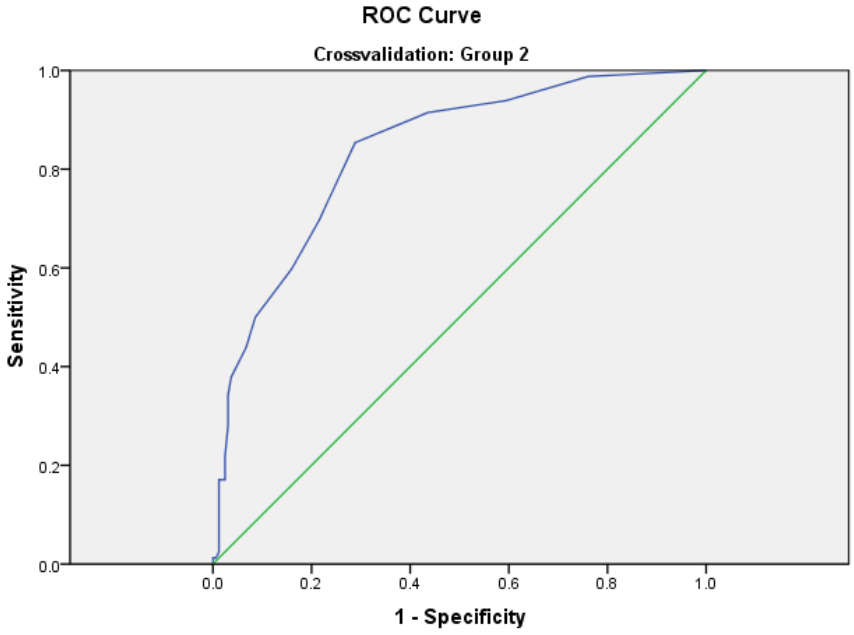
**Area Under the Curve[c,d]**

Test Result Variable(s):Spr10Voc

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .883 | .023 | .000 | .839 | .928 |
| Group 2 | .836 | .027 | .000 | .784 | .888 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Spr10Voc has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Spr10Voc has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.


ROC Curve
Crossvalidation: Group 1
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.


ROC Curve
Crossvalidation: Group 2
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.

**Grade 3**
**Spring VOC Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| -1.00 | - | - | .000 | 1.000 |
| .50 | - | - | .012 | 1.000 |
| 2.50 | - | - | .012 | .994 |
| 5.00 | .000 | 1.000 | - | - |
| 5.50 | - | - | .024 | .988 |
| 6.50 | .013 | 1.000 | - | - |
| 7.50 | - | - | .049 | .988 |
| 8.00 | .039 | 1.000 | - | - |
| 9.00 | - | - | .061 | .988 |
| 9.50 | .078 | 1.000 | - | - |
| 10.50 | .091 | .994 | .159 | .988 |
| 11.50 | .143 | .994 | .171 | .988 |
| 12.50 | .156 | .989 | .171 | .975 |
| 13.50 | .208 | .989 | .220 | .975 |
| 14.50 | .273 | .989 | .280 | .969 |
| 15.50 | .351 | .989 | .341 | .969 |
| 16.50 | .429 | .978 | .378 | .963 |
| 17.50 | .468 | .955 | .439 | .933 |
| 18.50 | .584 | .933 | .500 | .914 |
| 19.50 | .675 | .899 | .598 | .840 |
| 20.50 | .740 | .844 | .695 | .785 |
| **21.50** | **.818** | **.760** | **.854** | **.712** |
| 22.50 | .935 | .642 | .915 | .564 |
| 23.50 | .974 | .425 | .939 | .405 |
| 24.50 | .987 | .218 | .988 | .239 |
| 26.00 | 1.000 | .000 | 1.000 | .000 |

**Grade 4**
**Fall PRF Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 27 |
| | Negative | 36 |
| | Missing | 564 |
| Group 2 | Positive[a] | 31 |
| | Negative | 37 |
| | Missing | 560 |

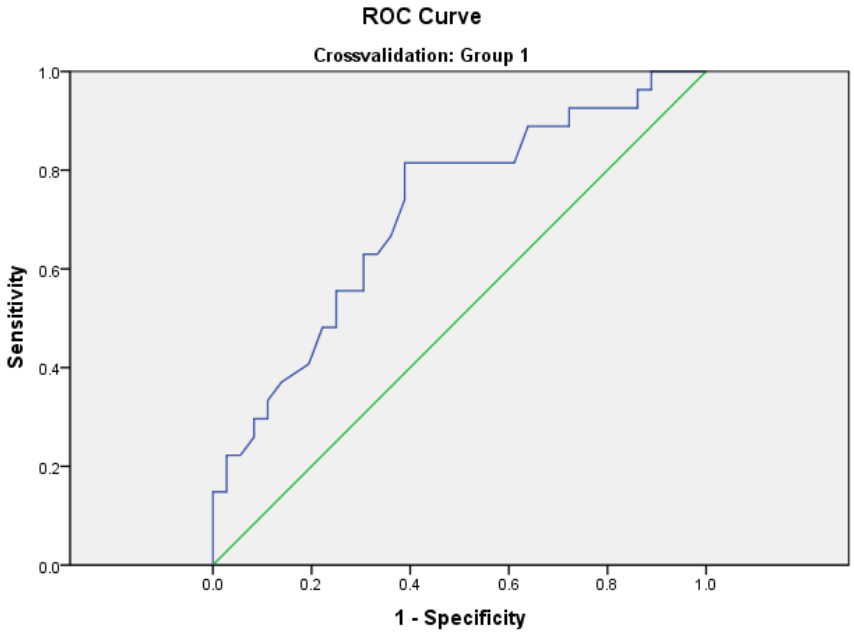
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Fall09PRF has at least one tie between the positive actual state group and the negative actual state group.

**Area Under the Curve[c,d]**

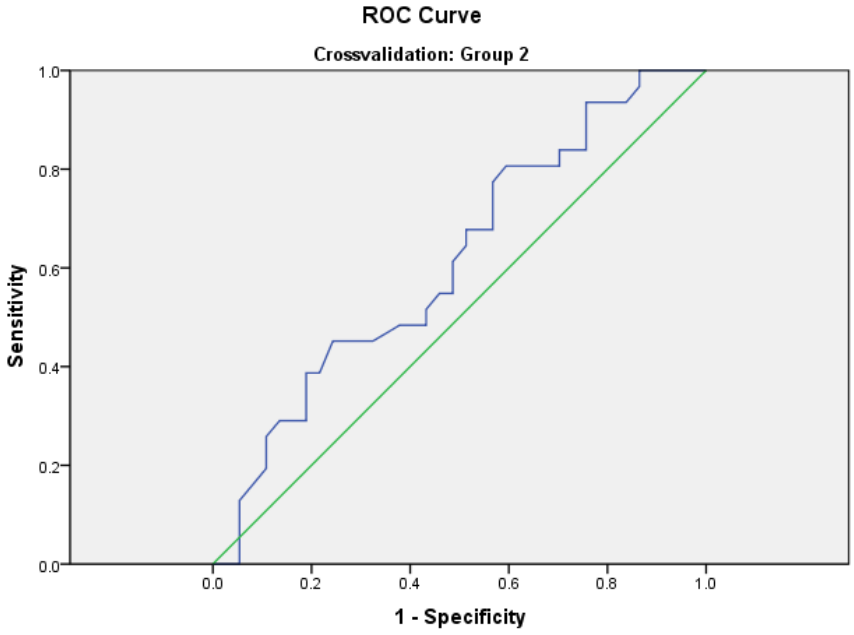
Test Result Variable(s):Fall09PRF

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .713 | .066 | .004 | .585 | .842 |
| Group 2 | .615 | .068 | .104 | .481 | .749 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Fall09PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Fall09PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.




Diagonal segments are produced by ties.




Diagonal segments are produced by ties.

**Grade 4**
**Fall PRF Benchmark**

| Cut score | Sensitivity | Specificity | Sensitivity | Specificity |
|---|---|---|---|---|
| 24.00 | - | - | .000 | 1.000 |
| 25.50 | - | - | .000 | .973 |
| 32.50 | - | - | .000 | .946 |
| 39.50 | - | - | .032 | .946 |
| 41.50 | - | - | .065 | .946 |
| 42.00 | .000 | 1.000 | - | - |
| 49.00 | .037 | 1.000 | - | - |
| 50.50 | - | - | .097 | .946 |
| 58.50 | .074 | 1.000 | - | - |
| 62.50 | - | - | .129 | .946 |
| 63.50 | .111 | 1.000 | - | - |
| 65.50 | .148 | 1.000 | - | - |
| 66.50 | .148 | .972 | - | - |
| 68.00 | .185 | .972 | - | - |
| 70.00 | - | - | .161 | .919 |
| 71.00 | .222 | .972 | - | - |
| 74.00 | - | - | .194 | .892 |
| 75.00 | .222 | .944 | - | - |
| 75.50 | - | - | .258 | .892 |
| 77.50 | .259 | .917 | .290 | .865 |
| 78.50 | .296 | .917 | - | - |
| 79.50 | - | - | .290 | .838 |
| 81.00 | .296 | .889 | .290 | .811 |
| 82.50 | - | - | .355 | .811 |
| 83.50 | - | - | .387 | .811 |
| 84.00 | .333 | .889 | - | - |
| 84.50 | - | - | .387 | .784 |
| 85.50 | .370 | .861 | - | - |
| 86.00 | - | - | .452 | .757 |
| 87.00 | .407 | .806 | - | - |
| 87.50 | - | - | .452 | .730 |
| 88.50 | .481 | .778 | .452 | .676 |
| 89.50 | .481 | .750 | .484 | .622 |
| 90.50 | - | - | .484 | .595 |
| 91.50 | .519 | .750 | - | - |
| 92.50 | - | - | .484 | .568 |

**Grade 4**
**Fall PRF Benchmark (continued)**

| Cut score | Sensitivity | Specificity | Sensitivity | Specificity |
|---|---|---|---|---|
| 93.50 | .556 | .750 | - | - |
| 94.50 | .556 | .694 | - | - |
| 95.50 | - | - | .516 | .568 |
| 96.00 | .593 | .694 | - | - |
| 97.50 | .630 | .694 | .548 | .541 |
| 99.00 | - | - | .548 | .514 |
| 99.50 | .630 | .667 | - | - |
| 101.50 | - | - | .613 | .514 |
| 102.00 | .667 | .639 | - | - |
| 103.50 | .741 | .611 | .645 | .486 |
| **105.00** | **.815** | **.611** | - | - |
| 106.00 | - | - | .677 | .486 |
| 107.50 | .815 | .556 | - | - |
| 109.00 | - | - | .677 | .459 |
| 110.00 | .815 | .528 | - | - |
| 110.50 | - | - | .677 | .432 |
| 111.50 | .815 | .500 | - | - |
| **112.00** | - | - | **.774** | **.432** |
| 113.00 | .815 | .472 | - | - |
| 114.00 | - | - | .806 | .405 |
| 115.00 | .815 | .417 | - | - |
| 115.50 | - | - | .806 | .378 |
| 116.50 | .815 | .389 | .806 | .351 |
| 117.50 | .889 | .361 | .806 | .324 |
| 119.00 | .889 | .333 | .806 | .297 |
| 120.50 | - | - | .839 | .297 |
| 121.00 | .889 | .306 | - | - |
| 122.00 | - | - | .839 | .270 |
| 123.50 | - | - | .839 | .243 |
| 124.00 | .889 | .278 | - | - |
| 125.50 | - | - | .871 | .243 |
| 127.50 | .926 | .278 | .935 | .243 |
| 128.50 | - | - | .935 | .216 |
| 130.50 | - | - | .935 | .189 |
| 132.00 | .926 | .167 | - | - |
| 135.00 | - | - | .935 | .162 |
| 135.50 | .926 | .139 | - | - |
| 138.00 | .963 | .139 | - | - |
| 140.50 | .963 | .111 | - | - |

**Grade 4**
**Fall PRF Benchmark (continued)**

| Cut score | Sensitivity | Specificity | Sensitivity | Specificity |
|---|---|---|---|---|
| 142.50 | 1.000 | .111 | .968 | .135 |
| 145.00 | 1.000 | .083 | - | - |
| 149.50 | - | - | 1.000 | .135 |
| 154.50 | - | - | 1.000 | .108 |
| 158.50 | 1.000 | .056 | - | - |
| 162.50 | - | - | 1.000 | .081 |
| 172.50 | - | - | 1.000 | .054 |
| 174.50 | 1.000 | .028 | - | - |
| 179.00 | 1.000 | .000 | - | - |
| 182.00 | - | - | 1.000 | .027 |
| 188.00 | - | - | 1.000 | .000 |

**Grade 4**
**Fall MCRC Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 27 |
| | Negative | 36 |
| | Missing | 564 |
| Group 2 | Positive[a] | 31 |
| | Negative | 37 |
| | Missing | 560 |

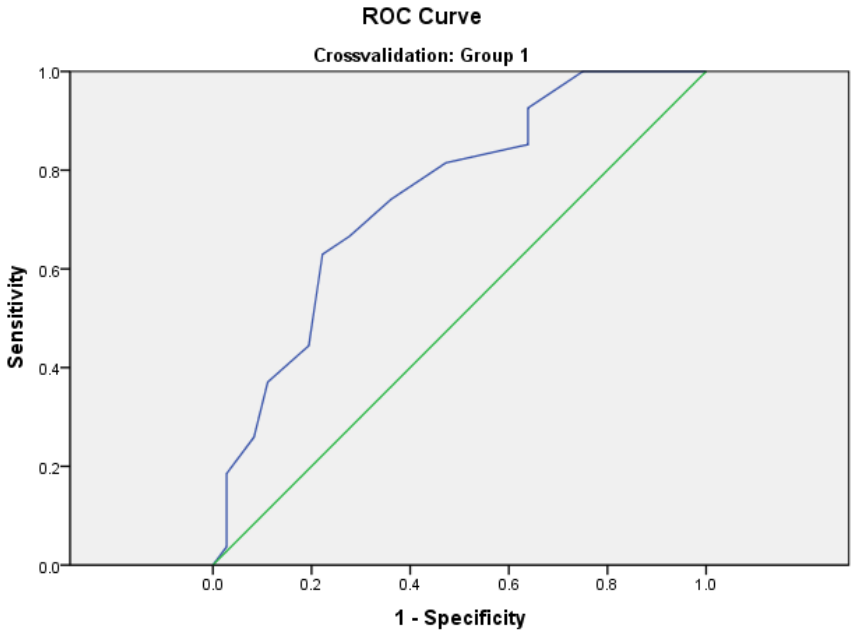
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Fall09MCRC has at least one tie between the positive actual state group and the negative actual state group.

**Area Under the Curve[c,d]**

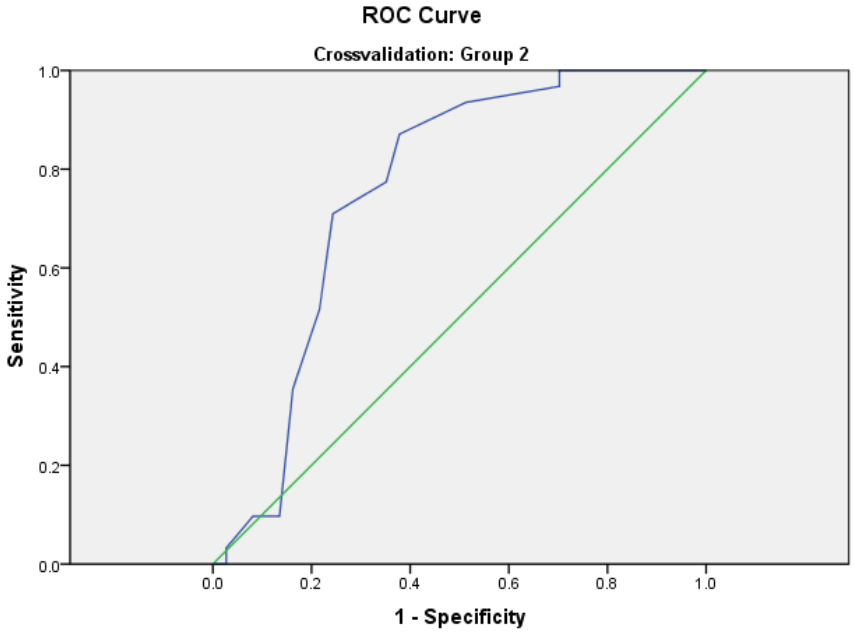
Test Result Variable(s):Fall09MCRC

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .747 | .061 | .001 | .627 | .868 |
| Group 2 | .757 | .061 | .000 | .638 | .875 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Fall09MCRC has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Fall09MCRC has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.




Diagonal segments are produced by ties.




Diagonal segments are produced by ties.

**Grade 4**
**Fall MCRC Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| -1.00 | .000 | 1.000 | .000 | 1.000 |
| 1.50 | - | - | .000 | .973 |
| 2.00 | .037 | .972 | - | - |
| 3.50 | - | - | .032 | .973 |
| 4.50 | .111 | .972 | .065 | .946 |
| 5.50 | .185 | .972 | .097 | .919 |
| 6.50 | .259 | .917 | .097 | .865 |
| 7.50 | .370 | .889 | .355 | .838 |
| 8.50 | .444 | .806 | .516 | .784 |
| **9.50** | .630 | .778 | **.710** | **.757** |
| 10.50 | .667 | .722 | .774 | .649 |
| **11.50** | **.741** | **.639** | .871 | .622 |
| 12.50 | .815 | .528 | .935 | .486 |
| 13.50 | .852 | .361 | .968 | .297 |
| 14.50 | .926 | .361 | 1.000 | .297 |
| 15.50 | 1.000 | .250 | 1.000 | .216 |
| 16.50 | 1.000 | .167 | 1.000 | .108 |
| 17.50 | 1.000 | .139 | 1.000 | .081 |
| 18.50 | 1.000 | .028 | 1.000 | .027 |
| 20.00 | 1.000 | .000 | 1.000 | .000 |

**Grade 4**
**Fall VOC Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 27 |
| | Negative | 36 |
| | Missing | 564 |
| Group 2 | Positive[a] | 31 |
| | Negative | 37 |
| | Missing | 560 |

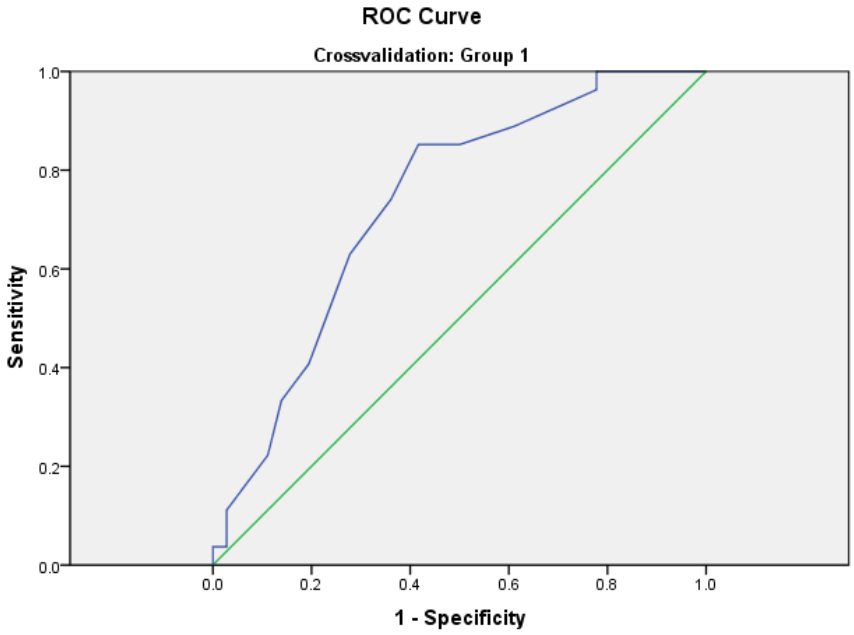
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Fall09Voc has at least one tie between the positive actual state group and the negative actual state group.

**Area Under the Curve[c,d]**

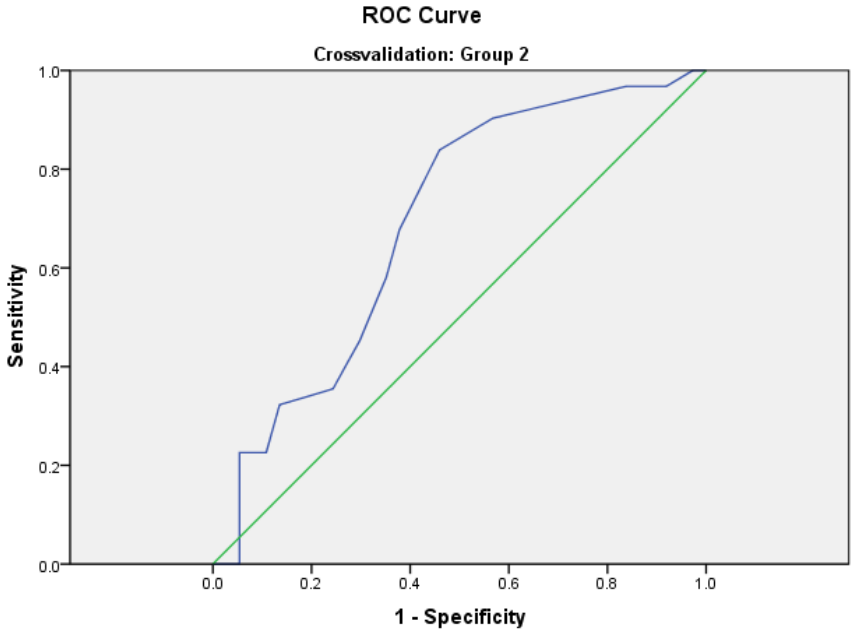
Test Result Variable(s):Fall09Voc

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .732 | .063 | .002 | .608 | .856 |
| Group 2 | .690 | .065 | .007 | .563 | .817 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Fall09Voc has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Fall09Voc has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.




Diagonal segments are produced by ties.




Diagonal segments are produced by ties.

**Grade 4**
**Fall VOC Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| -1.00 | .000 | 1.000 | - | - |
| 3.50 | .037 | 1.000 | - | - |
| 6.00 | - | - | .000 | 1.000 |
| 7.50 | .037 | .972 | .000 | .946 |
| 8.50 | .111 | .972 | .097 | .946 |
| 9.50 | - | - | .226 | .946 |
| 10.00 | .222 | .889 | | |
| 10.50 | - | - | .226 | .892 |
| 11.50 | .333 | .861 | .323 | .865 |
| 12.50 | .407 | .806 | .355 | .757 |
| 13.50 | .630 | .722 | .452 | .703 |
| **14.50** | **.741** | **.639** | .581 | .649 |
| 15.50 | .852 | .583 | .677 | .622 |
| **16.50** | .852 | .500 | **.839** | **.541** |
| 17.50 | .889 | .389 | .903 | .432 |
| 18.50 | .963 | .222 | .935 | .297 |
| 19.50 | 1.000 | .222 | .968 | .162 |
| 20.50 | 1.000 | .139 | .968 | .081 |
| 21.50 | 1.000 | .056 | 1.000 | .027 |
| 23.00 | 1.000 | .028 | 1.000 | .000 |
| 25.00 | 1.000 | .000 | - | - |

**Grade 4**
**Winter PRF Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 41 |
| | Negative | 65 |
| | Missing | 521 |
| Group 2 | Positive[a] | 53 |
| | Negative | 86 |
| | Missing | 489 |

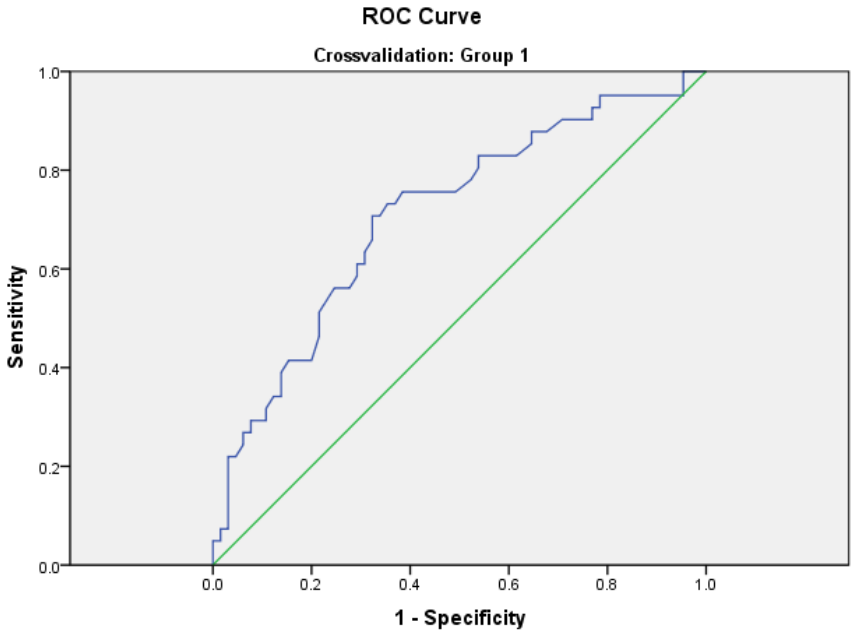
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Wint10PRF has at least one tie between the positive actual state group and the negative actual state group.

**Area Under the Curve[c,d]**

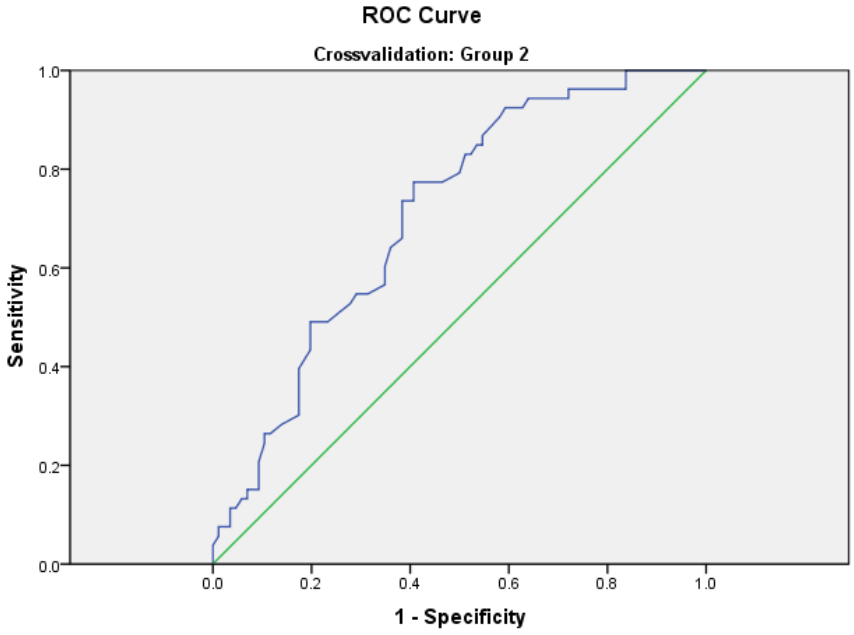
Test Result Variable(s):Wint10PRF

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .709 | .052 | .000 | .607 | .811 |
| Group 2 | .708 | .044 | .000 | .623 | .793 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Wint10PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Wint10PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.




Diagonal segments are produced by ties.




Diagonal segments are produced by ties.

**Grade 4**
**Winter PRF Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 34.00 | - | - | .000 | 1.000 |
| 36.00 | .000 | 1.000 | - | - |
| 39.00 | .024 | 1.000 | - | - |
| 43.00 | - | - | .019 | 1.000 |
| 44.50 | .049 | 1.000 | - | - |
| 51.00 | .049 | .985 | - | - |
| 53.00 | - | - | .038 | 1.000 |
| 56.50 | - | - | .057 | .988 |
| 58.50 | .073 | .985 | - | - |
| 59.00 | - | - | .075 | .988 |
| 61.00 | - | - | .075 | .965 |
| 62.50 | - | - | .094 | .965 |
| 64.00 | .073 | .969 | .113 | .965 |
| 65.50 | - | - | .113 | .953 |
| 66.50 | - | - | .132 | .942 |
| 67.00 | .098 | .969 | - | - |
| 68.00 | - | - | .132 | .930 |
| 69.50 | .122 | .969 | - | - |
| 71.00 | .146 | .969 | - | - |
| 71.50 | - | - | .151 | .930 |
| 73.50 | .171 | .969 | - | - |
| 74.50 | - | - | .151 | .919 |
| 75.50 | - | - | .151 | .907 |
| 76.00 | .220 | .969 | - | - |
| 76.50 | - | - | .170 | .907 |
| 77.50 | - | - | .189 | .907 |
| 78.50 | .220 | .954 | - | - |
| 79.50 | - | - | .208 | .907 |
| 81.50 | .244 | .938 | - | - |
| 82.00 | - | - | .245 | .895 |
| 84.00 | - | - | .264 | .895 |
| 84.00 | .268 | .938 | - | - |
| 85.50 | .268 | .923 | - | - |
| 86.50 | - | - | .264 | .884 |
| 87.00 | .293 | .923 | - | - |
| 88.50 | .293 | .892 | .283 | .860 |

**Grade 4**
**Winter PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 89.50 | .317 | .892 | - | - |
| 90.00 | - | - | .302 | .826 |
| 91.50 | .341 | .877 | - | - |
| 92.50 | - | - | .321 | .826 |
| 93.50 | .341 | .862 | - | - |
| 94.50 | - | - | .358 | .826 |
| 95.00 | .366 | .862 | - | - |
| 96.00 | - | - | .377 | .826 |
| 97.50 | .390 | .862 | .396 | .826 |
| 99.00 | - | - | .415 | .814 |
| 99.50 | .415 | .846 | - | - |
| 100.50 | - | - | .434 | .802 |
| 101.50 | - | - | .453 | .802 |
| 102.00 | .415 | .831 | - | - |
| 103.00 | - | - | .472 | .802 |
| 104.50 | .415 | .800 | .491 | .802 |
| 106.00 | .463 | .785 | .491 | .779 |
| 107.50 | .488 | .785 | .491 | .767 |
| 108.50 | .512 | .785 | .509 | .744 |
| 109.50 | .561 | .754 | .528 | .721 |
| 110.50 | .561 | .723 | - | - |
| 111.00 | - | - | .547 | .709 |
| 111.50 | .585 | .708 | - | - |
| 113.00 | .610 | .708 | - | - |
| 113.50 | - | - | .547 | .686 |
| 114.50 | .610 | .692 | - | - |
| 115.50 | - | - | .566 | .651 |
| 116.00 | .634 | .692 | - | - |
| 116.50 | - | - | .585 | .651 |
| 117.50 | .659 | .677 | .604 | .651 |
| 118.50 | .707 | .677 | .642 | .640 |
| 119.50 | .707 | .662 | - | - |
| 120.50 | .732 | .646 | .660 | .616 |
| 122.00 | .732 | .631 | .679 | .616 |
| 123.50 | .756 | .615 | .736 | .616 |
| 124.50 | .756 | .585 | .736 | .593 |

**Grade 4**
**Winter PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 125.50 | - | - | .755 | .593 |
| 126.00 | .756 | .569 | - | - |
| 126.50 | - | - | .774 | .593 |
| 127.50 | .756 | .554 | .774 | .570 |
| 128.50 | .756 | .508 | .774 | .547 |
| 129.50 | - | - | .774 | .535 |
| **130.50** | **.780** | **.477** | **.792** | **.500** |
| 132.00 | - | - | .830 | .488 |
| 133.00 | .805 | .462 | - | - |
| 133.50 | - | - | .830 | .477 |
| 134.50 | .829 | .462 | - | - |
| 135.00 | - | - | .849 | .465 |
| 135.50 | .829 | .415 | - | - |
| 136.50 | .829 | .400 | .849 | .453 |
| 137.50 | .829 | .385 | .868 | .453 |
| 138.50 | - | - | .906 | .419 |
| 139.50 | .854 | .354 | .925 | .407 |
| 140.50 | - | - | .925 | .372 |
| 141.50 | - | - | .943 | .360 |
| 142.00 | .878 | .354 | - | - |
| 142.50 | - | - | .943 | .337 |
| 143.50 | .878 | .323 | .943 | .326 |
| 144.50 | .902 | .292 | .943 | .314 |
| 145.50 | .902 | .277 | .943 | .279 |
| 146.50 | .902 | .262 | .962 | .279 |
| 147.50 | .902 | .246 | - | - |
| 149.50 | .902 | .231 | .962 | .267 |
| 151.50 | .927 | .231 | - | - |
| 152.50 | .927 | .215 | .962 | .256 |
| 153.50 | .951 | .215 | .962 | .221 |
| 154.50 | .951 | .200 | .962 | .198 |
| 155.50 | - | - | .962 | .186 |
| 156.50 | - | - | .962 | .174 |
| 157.00 | .951 | .169 | - | - |
| 159.50 | - | - | .962 | .163 |
| 160.00 | .951 | .154 | - | - |

**Grade 4**
**Winter PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 162.00 | .951 | .123 | - | - |
| 162.50 | - | - | 1.000 | .163 |
| 163.50 | - | - | 1.000 | .140 |
| 164.00 | .951 | .092 | - | - |
| 166.00 | - | - | 1.000 | .128 |
| 166.50 | .951 | .077 | - | - |
| 168.50 | - | - | 1.000 | .116 |
| 170.00 | - | - | 1.000 | .105 |
| 172.50 | - | - | 1.000 | .081 |
| 173.50 | .951 | .046 | - | - |
| 179.00 | - | - | 1.000 | .058 |
| 180.50 | .976 | .046 | - | - |
| 183.50 | 1.000 | .046 | - | - |
| 185.00 | - | - | 1.000 | .047 |
| 190.50 | - | - | 1.000 | .035 |
| 192.00 | 1.000 | .015 | - | - |
| 197.00 | - | - | 1.000 | .012 |
| 200.00 | 1.000 | .000 | 1.000 | .000 |

**Grade 4**
**Winter MCRC Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 55 |
| | Negative | 122 |
| | Missing | 450 |
| Group 2 | Positive[a] | 75 |
| | Negative | 147 |
| | Missing | 406 |

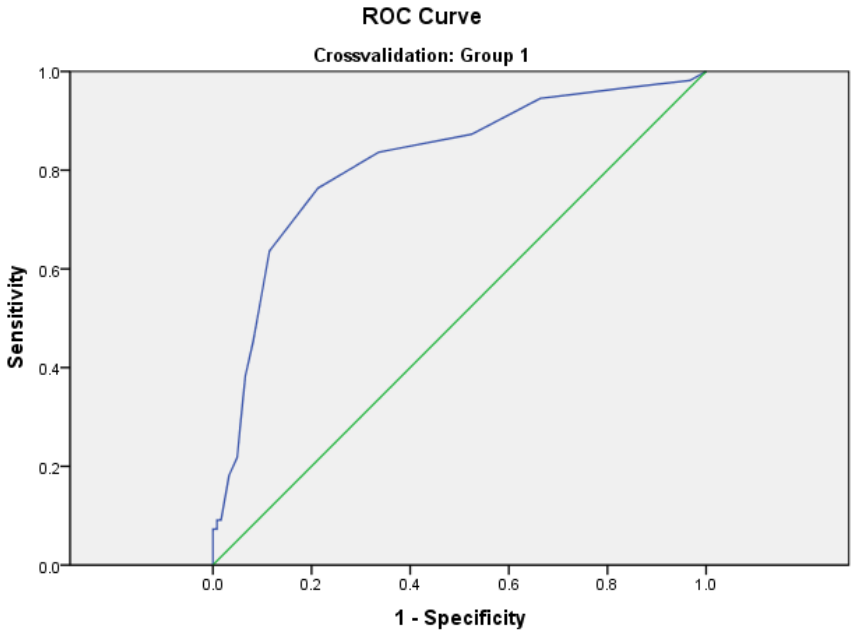
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Wint10MCRC has at least one tie between the positive actual state group and the negative actual state group.

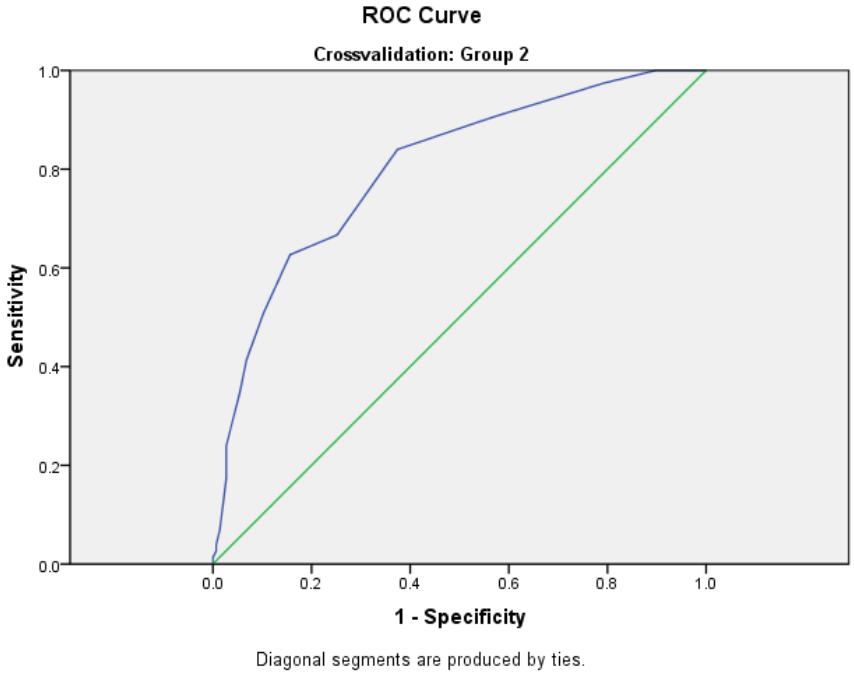
**Area Under the Curve[c,d]**

Test Result Variable(s):Wint10MCRC

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .816 | .036 | .000 | .745 | .888 |
| Group 2 | .802 | .031 | .000 | .741 | .863 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Wint10MCRC has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Wint10MCRC has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.


ROC Curve
Crossvalidation: Group 1
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.


ROC Curve
Crossvalidation: Group 2
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.

**Grade 4**
**Winter MCRC Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| -1.00 | .000 | 1.000 | .000 | 1.000 |
| 1.00 | .036 | 1.000 | - | - |
| 1.50 | - | - | .013 | 1.000 |
| 2.50 | .055 | 1.000 | - | - |
| 3.50 | .073 | 1.000 | .027 | .993 |
| 4.50 | .073 | .992 | .040 | .993 |
| 5.50 | - | - | .067 | .986 |
| 6.00 | .091 | .992 | - | - |
| 6.50 | - | - | .120 | .980 |
| 7.50 | .091 | .984 | .173 | .973 |
| 8.50 | .182 | .967 | .240 | .973 |
| 9.50 | .218 | .951 | .293 | .959 |
| 10.50 | .382 | .934 | .347 | .946 |
| 11.50 | .455 | .918 | .413 | .932 |
| 12.50 | .636 | .885 | .507 | .898 |
| **13.50** | **.764** | **.787** | .627 | .844 |
| 14.50 | .836 | .664 | .667 | .748 |
| **15.50** | .873 | .475 | **.840** | **.626** |
| 16.50 | .945 | .336 | .907 | .429 |
| 17.50 | .964 | .189 | .973 | .211 |
| 18.50 | .982 | .033 | 1.000 | .102 |
| 19.50 | - | - | 1.000 | .020 |
| 20.00 | 1.000 | .000 | - | - |
| 21.00 | - | - | 1.000 | .000 |

**Grade 4**
**Spring PRF Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 48 |
| | Negative | 70 |
| | Missing | 509 |
| Group 2 | Positive[a] | 55 |
| | Negative | 86 |
| | Missing | 487 |

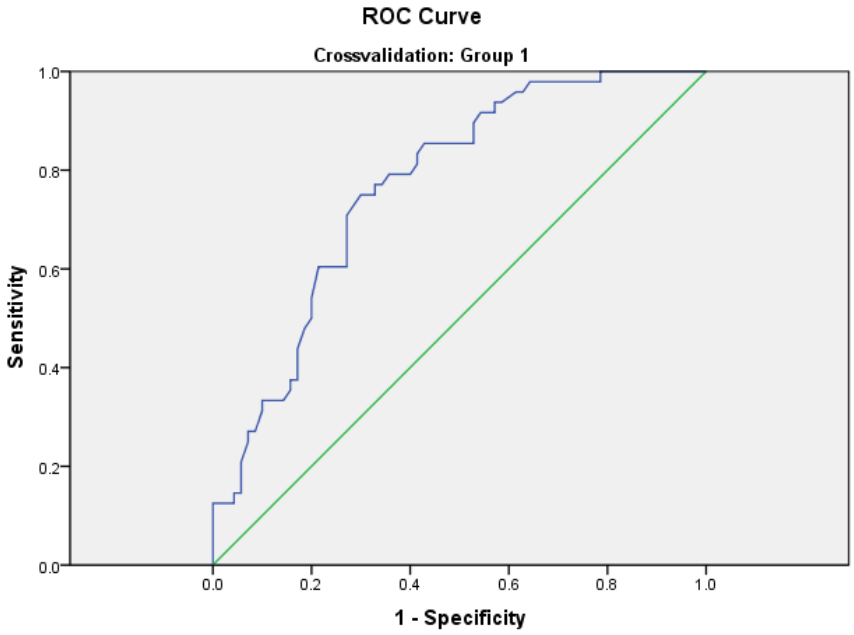
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Spr10PRF has at least one tie between the positive actual state group and the negative actual state group.

**Area Under the Curve[c,d]**

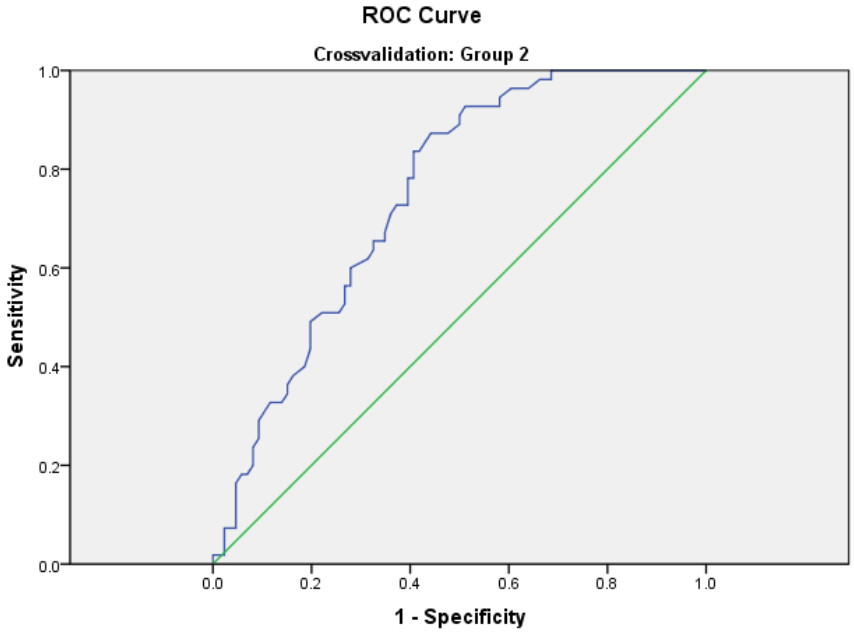
Test Result Variable(s):Spr10PRF

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .768 | .043 | .000 | .684 | .852 |
| Group 2 | .748 | .040 | .000 | .669 | .826 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Spr10PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Spr10PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.




Diagonal segments are produced by ties.




Diagonal segments are produced by ties.

**Grade 4**
**Spring PRF Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 34.00 | .000 | 1.000 | - | - |
| 37.00 | - | - | .000 | 1.000 |
| 37.50 | .021 | 1.000 | - | - |
| 46.00 | .042 | 1.000 | - | - |
| 46.50 | - | - | .018 | 1.000 |
| 53.00 | .063 | 1.000 | - | - |
| 55.00 | .083 | 1.000 | - | - |
| 57.00 | .104 | 1.000 | - | - |
| 58.00 | - | - | .018 | .988 |
| 61.50 | .125 | 1.000 | - | - |
| 62.50 | - | - | .018 | .977 |
| 64.50 | - | - | .073 | .977 |
| 66.00 | .125 | .986 | .073 | .965 |
| 68.00 | .125 | .971 | .073 | .953 |
| 69.50 | - | - | .091 | .953 |
| 70.50 | - | - | .127 | .953 |
| 72.00 | .125 | .957 | .145 | .953 |
| 74.00 | - | - | .164 | .953 |
| 75.50 | .146 | .957 | - | - |
| 76.00 | - | - | .182 | .942 |
| 76.50 | .146 | .943 | - | - |
| 77.50 | .167 | .943 | - | - |
| 78.00 | - | - | .182 | .930 |
| 78.50 | .188 | .943 | - | - |
| 80.50 | - | - | .200 | .919 |
| 81.50 | .208 | .943 | - | - |
| 84.00 | - | - | .218 | .919 |
| 86.50 | .250 | .929 | .236 | .919 |
| 87.50 | - | - | .255 | .907 |
| 89.50 | .271 | .929 | .273 | .907 |
| 90.50 | .271 | .914 | - | - |
| 91.50 | - | - | .291 | .907 |
| 92.50 | .313 | .900 | - | - |
| 93.00 | - | - | .309 | .895 |
| 94.50 | .333 | .900 | .327 | .884 |
| 95.50 | - | - | .327 | .872 |

**Grade 4**
**Spring PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 97.00 | .333 | .886 | .327 | .860 |
| 98.50 | - | - | .345 | .849 |
| 99.50 | .333 | .857 | - | - |
| 100.00 | - | - | .364 | .849 |
| 100.50 | .354 | .843 | - | - |
| 101.50 | - | - | .382 | .837 |
| 102.00 | .375 | .843 | - | - |
| 102.50 | - | - | .400 | .814 |
| 103.50 | - | - | .436 | .802 |
| 104.50 | .375 | .829 | .455 | .802 |
| 105.50 | - | - | .473 | .802 |
| 106.50 | .417 | .829 | .491 | .802 |
| 107.50 | .438 | .829 | - | - |
| 108.50 | - | - | .509 | .779 |
| 109.00 | .479 | .814 | - | - |
| 110.50 | .500 | .800 | .509 | .767 |
| 111.50 | .542 | .800 | .509 | .744 |
| 112.50 | .604 | .786 | - | - |
| 113.00 | - | - | .527 | .733 |
| 114.00 | .604 | .771 | - | - |
| 115.50 | .604 | .729 | .564 | .733 |
| 116.50 | .667 | .729 | - | - |
| 117.50 | .708 | .729 | .564 | .721 |
| 118.50 | .729 | .714 | .600 | .721 |
| 119.50 | - | - | .618 | .686 |
| 120.50 | .750 | .700 | - | - |
| 121.00 | - | - | .636 | .674 |
| 122.50 | .750 | .686 | .655 | .674 |
| 123.50 | - | - | .655 | .663 |
| 124.00 | .750 | .671 | - | - |
| 125.00 | - | - | .655 | .651 |
| 125.50 | .771 | .671 | - | - |
| 126.50 | .771 | .657 | - | - |
| 127.00 | - | - | .673 | .651 |
| **128.00** | **.792** | **.643** | - | - |
| 128.50 | - | - | .709 | .640 |
| 129.50 | .792 | .629 | - | - |

**Grade 4**
**Spring PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 130.00 | - | - | .727 | .628 |
| 130.50 | .792 | .614 | - | - |
| 131.50 | .792 | .600 | .727 | .605 |
| 132.50 | .813 | .586 | **.782** | **.605** |
| 133.50 | .833 | .586 | .782 | .593 |
| 134.50 | .854 | .571 | .800 | .593 |
| 135.50 | .854 | .543 | - | - |
| 137.00 | .854 | .500 | .818 | .593 |
| 139.50 | .854 | .486 | .836 | .593 |
| 140.50 | - | - | .836 | .581 |
| 141.50 | .854 | .471 | - | - |
| 142.00 | - | - | .855 | .570 |
| 143.00 | .875 | .471 | - | - |
| 144.00 | - | - | .873 | .558 |
| 145.00 | .896 | .471 | - | - |
| 145.50 | - | - | .873 | .523 |
| 146.50 | .917 | .457 | .891 | .500 |
| 147.50 | - | - | .909 | .500 |
| 148.00 | .917 | .443 | - | - |
| 148.50 | - | - | .927 | .488 |
| 149.50 | - | - | .927 | .453 |
| 150.50 | .917 | .429 | .927 | .430 |
| 151.50 | - | - | .927 | .419 |
| 152.50 | .938 | .429 | .945 | .419 |
| 153.50 | - | - | .964 | .395 |
| 154.50 | .938 | .414 | .964 | .384 |
| 156.00 | - | - | .964 | .372 |
| 157.50 | .958 | .386 | - | - |
| 158.50 | - | - | .964 | .360 |
| 159.50 | .958 | .371 | - | - |
| 160.50 | .979 | .357 | - | - |
| 161.00 | - | - | .982 | .337 |
| 161.50 | .979 | .329 | - | - |
| 162.50 | .979 | .286 | - | - |
| 164.00 | .979 | .271 | .982 | .326 |
| 165.50 | .979 | .257 | - | - |
| 166.50 | .979 | .243 | .982 | .314 |

**Grade 4**
**Spring PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 167.50 | .979 | .229 | - | - |
| 168.00 | - | - | 1.000 | .314 |
| 169.50 | .979 | .214 | 1.000 | .291 |
| 170.50 | - | - | 1.000 | .267 |
| 171.50 | 1.000 | .214 | 1.000 | .256 |
| 172.50 | 1.000 | .186 | - | - |
| 174.50 | 1.000 | .171 | 1.000 | .244 |
| 178.00 | 1.000 | .157 | 1.000 | .221 |
| 180.00 | - | - | 1.000 | .198 |
| 180.50 | 1.000 | .143 | - | - |
| 182.50 | 1.000 | .129 | 1.000 | .186 |
| 184.50 | - | - | 1.000 | .174 |
| 185.50 | 1.000 | .100 | 1.000 | .163 |
| 187.50 | 1.000 | .086 | 1.000 | .151 |
| 189.50 | 1.000 | .057 | - | - |
| 191.00 | - | - | 1.000 | .140 |
| 191.50 | 1.000 | .043 | - | - |
| 194.50 | - | - | 1.000 | .116 |
| 195.50 | 1.000 | .029 | - | - |
| 197.00 | - | - | 1.000 | .093 |
| 201.50 | - | - | 1.000 | .081 |
| 203.50 | 1.000 | .014 | - | - |
| 206.00 | - | - | 1.000 | .070 |
| 207.50 | - | - | 1.000 | .058 |
| 209.00 | 1.000 | .000 | - | - |
| 209.50 | - | - | 1.000 | .047 |
| 212.00 | - | - | 1.000 | .035 |
| 214.00 | - | - | 1.000 | .023 |
| 233.50 | - | - | 1.000 | .012 |
| 253.00 | - | - | 1.000 | .000 |

**Grade 4**
**Spring MCRC Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 82 |
| | Negative | 184 |
| | Missing | 361 |
| Group 2 | Positive[a] | 95 |
| | Negative | 178 |
| | Missing | 355 |

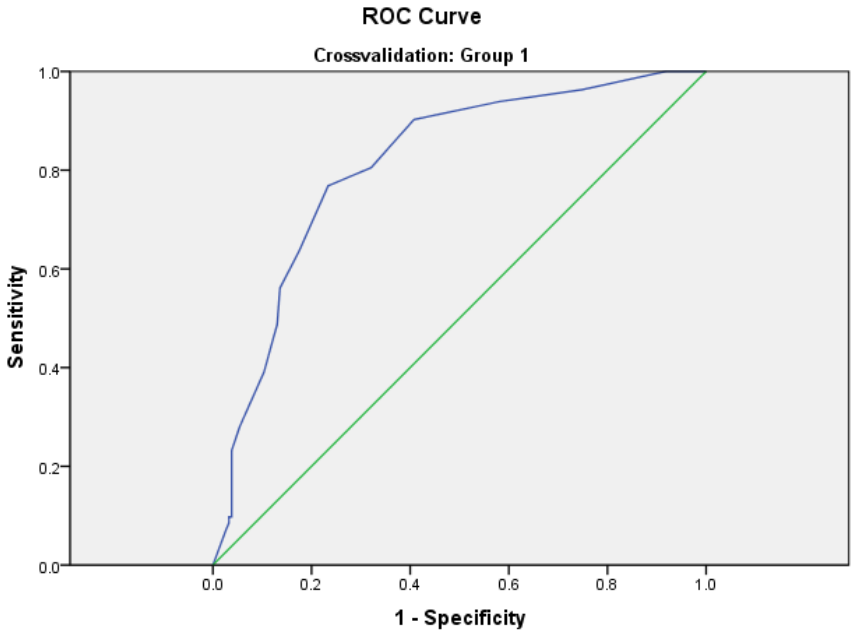
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Spr10MCRC has at least one tie between the positive actual state group and the negative actual state group.

**Area Under the Curve[c,d]**

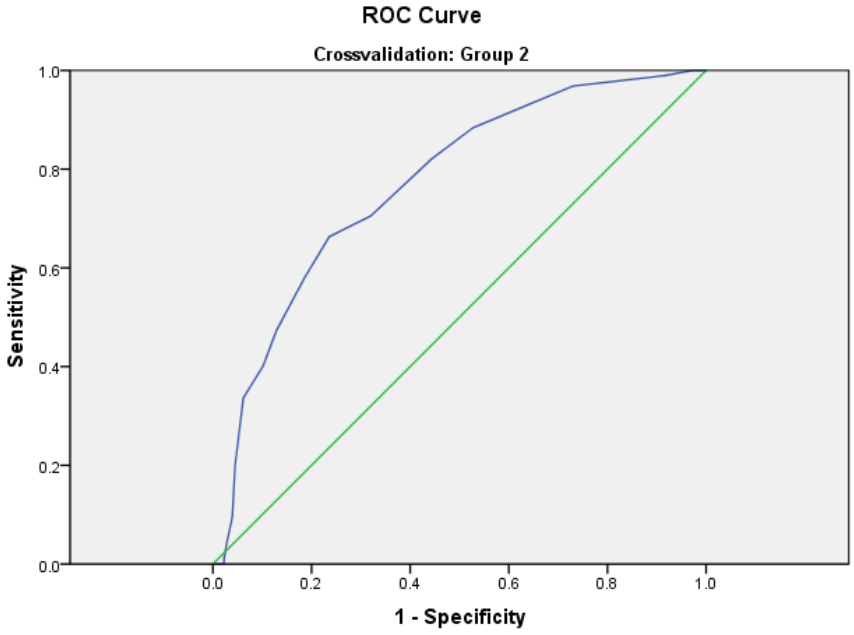
Test Result Variable(s):Spr10MCRC

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .812 | .028 | .000 | .757 | .866 |
| Group 2 | .771 | .029 | .000 | .713 | .828 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Spr10MCRC has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Spr10MCRC has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.




Diagonal segments are produced by ties.




Diagonal segments are produced by ties.

**Grade 4**
**Spring MCRC Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| -1.00 | .000 | 1.000 | .000 | 1.000 |
| .50 | .073 | .973 | - | - |
| 1.50 | .085 | .967 | - | - |
| 2.00 | - | - | .000 | .978 |
| 2.50 | .098 | .967 | - | - |
| 3.50 | .098 | .962 | - | - |
| 4.50 | .134 | .962 | - | - |
| 5.00 | - | - | .011 | .978 |
| 5.50 | .159 | .962 | - | - |
| 6.50 | .232 | .962 | .042 | .972 |
| 7.50 | .280 | .946 | .095 | .961 |
| 8.50 | .329 | .924 | .200 | .955 |
| 9.50 | .390 | .897 | .337 | .938 |
| 10.50 | .488 | .870 | .400 | .899 |
| 11.50 | .561 | .864 | .474 | .871 |
| 12.50 | .634 | .826 | .579 | .815 |
| **13.50** | **.768** | **.766** | .663 | .764 |
| **14.50** | .805 | .679 | **.705** | **.680** |
| 15.50 | .902 | .592 | .821 | .556 |
| 16.50 | .939 | .418 | .884 | .472 |
| 17.50 | .963 | .250 | .968 | .270 |
| 18.50 | 1.000 | .082 | .989 | .084 |
| 19.50 | 1.000 | .011 | 1.000 | .028 |
| 21.00 | 1.000 | .000 | 1.000 | .000 |

**Grade 4**
**Spring VOC Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 73 |
| | Negative | 148 |
| | Missing | 406 |
| Group 2 | Positive[a] | 82 |
| | Negative | 160 |
| | Missing | 386 |

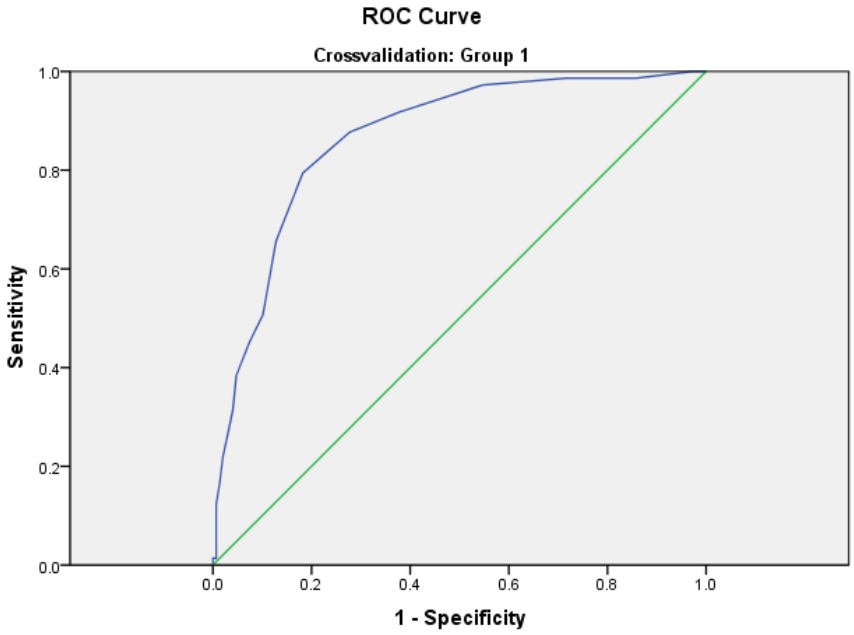
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Spr10Voc has at least one tie between the positive actual state group and the negative actual state group.

**Area Under the Curve[c,d]**

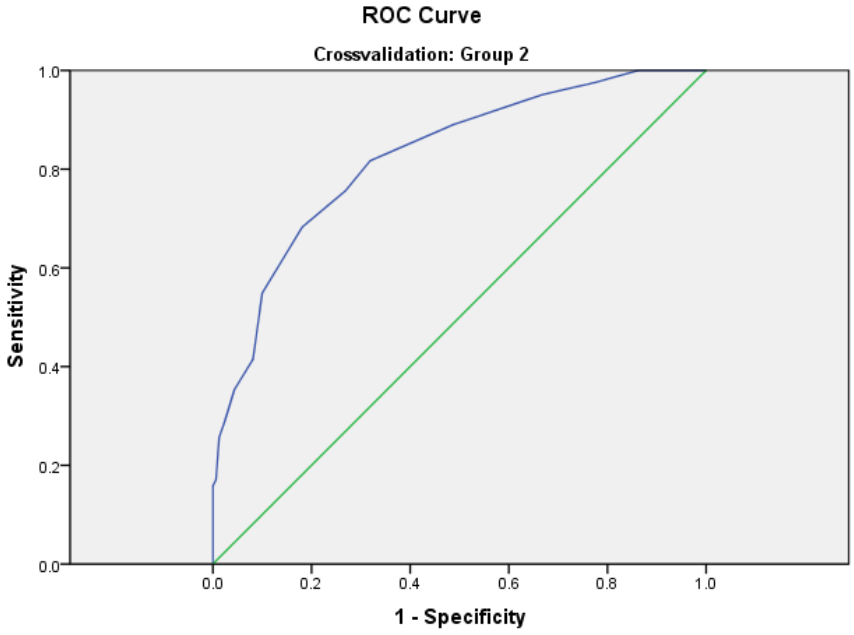
Test Result Variable(s):Spr10Voc

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .866 | .025 | .000 | .816 | .915 |
| Group 2 | .825 | .028 | .000 | .770 | .880 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Spr10Voc has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Spr10Voc has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.




Diagonal segments are produced by ties.




Diagonal segments are produced by ties.

**Grade 4**
**Spring VOC Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| -1.00 | .000 | 1.000 | .000 | 1.000 |
| 2.00 | .014 | 1.000 | - | - |
| 3.50 | - | - | .024 | 1.000 |
| 5.00 | .014 | .993 | - | - |
| 6.50 | .027 | .993 | - | - |
| 7.50 | - | - | .049 | 1.000 |
| 8.00 | .041 | .993 | - | - |
| 8.50 | - | - | .073 | 1.000 |
| 9.50 | .055 | .993 | .122 | 1.000 |
| 10.50 | .123 | .993 | .159 | 1.000 |
| 11.50 | .164 | .986 | .171 | .994 |
| 12.50 | .219 | .980 | .256 | .988 |
| 13.50 | .315 | .959 | .293 | .975 |
| 14.50 | .384 | .953 | .354 | .956 |
| 15.50 | .452 | .926 | .415 | .919 |
| 16.50 | .507 | .899 | .549 | .900 |
| 17.50 | .658 | .872 | .683 | .819 |
| **18.50** | .795 | .818 | **.756** | **.731** |
| **19.50** | **.877** | **.723** | .817 | .681 |
| 20.50 | .918 | .622 | .890 | .513 |
| 21.50 | .973 | .453 | .951 | .331 |
| 22.50 | .986 | .284 | .976 | .225 |
| 23.50 | .986 | .142 | 1.000 | .138 |
| 24.50 | 1.000 | .027 | 1.000 | .031 |
| 26.00 | 1.000 | .000 | 1.000 | .000 |

**Grade 5**
**Fall PRF Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 32 |
| | Negative | 37 |
| | Missing | 560 |
| Group 2 | Positive[a] | 30 |
| | Negative | 47 |
| | Missing | 552 |

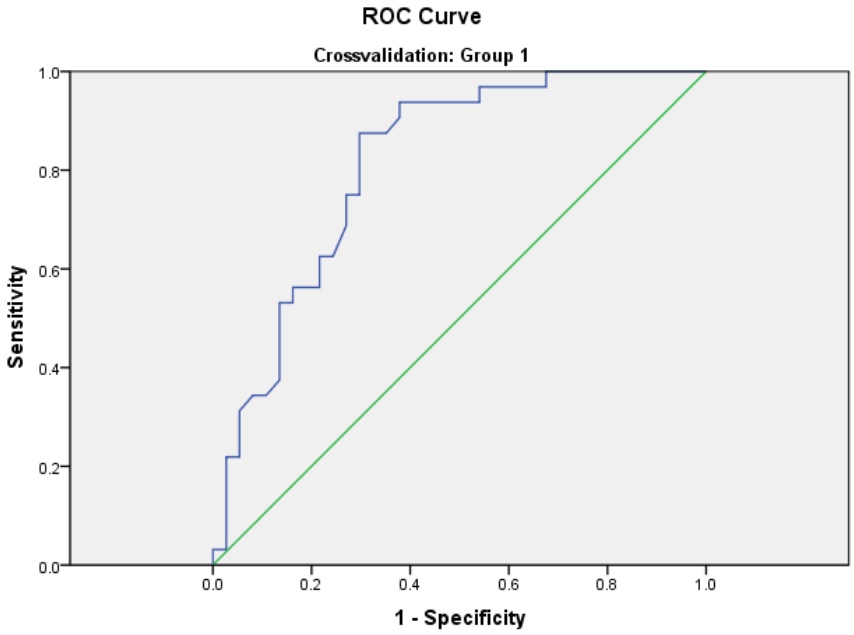
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Fall09PRF has at least one tie between the positive actual state group and the negative actual state group.

**Area Under the Curve[c,d]**

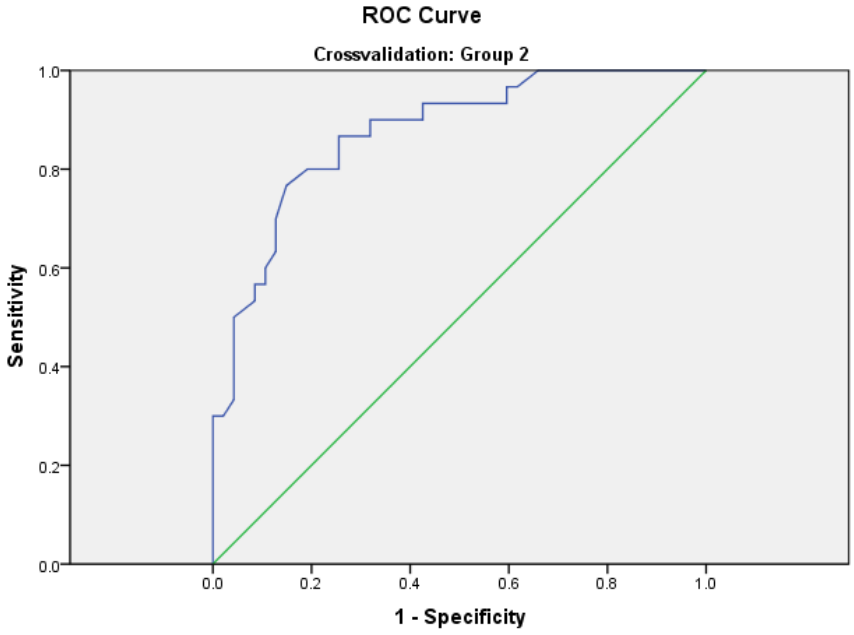
Test Result Variable(s):Fall09PRF

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .813 | .052 | .000 | .712 | .914 |
| Group 2 | .873 | .040 | .000 | .794 | .952 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Fall09PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Fall09PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.




Diagonal segments are produced by ties.




Diagonal segments are produced by ties.

**Grade 5**
**Fall PRF Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| -1.00 | .000 | 1.000 | - | - |
| 12.00 | - | - | .000 | 1.000 |
| 23.00 | - | - | .033 | 1.000 |
| 29.50 | .031 | 1.000 | - | - |
| 36.50 | - | - | .067 | 1.000 |
| 46.50 | - | - | .133 | 1.000 |
| 65.00 | .031 | .973 | .167 | 1.000 |
| 74.50 | .094 | .973 | - | - |
| 77.50 | - | - | .200 | 1.000 |
| 79.00 | - | - | .233 | 1.000 |
| 80.00 | .125 | .973 | - | - |
| 81.50 | - | - | .267 | 1.000 |
| 82.50 | .188 | .973 | - | - |
| 83.50 | - | - | .300 | 1.000 |
| 85.00 | .219 | .973 | .300 | .979 |
| 87.50 | .219 | .946 | - | - |
| 88.00 | - | - | .333 | .957 |
| 88.50 | .250 | .946 | - | - |
| 90.00 | .281 | .946 | - | - |
| 92.00 | - | - | .367 | .957 |
| 93.50 | .313 | .946 | - | - |
| 95.00 | - | - | .400 | .957 |
| 97.50 | .344 | .919 | - | - |
| 99.00 | - | - | .467 | .957 |
| 101.50 | .344 | .892 | - | - |
| 102.50 | - | - | .500 | .957 |
| 104.50 | .375 | .865 | .533 | .915 |
| 106.00 | .438 | .865 | - | - |
| 106.50 | - | - | .567 | .915 |
| 107.50 | .469 | .865 | .567 | .894 |
| 109.00 | .500 | .865 | .600 | .894 |
| 110.50 | .531 | .865 | - | - |
| 111.00 | - | - | .633 | .872 |

**Grade 5**
**Fall PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 111.50 | .531 | .838 | - | - |
| 113.00 | - | - | .667 | .872 |
| 114.00 | .563 | .838 | - | - |
| 114.50 | - | - | .700 | .872 |
| 115.50 | - | - | .767 | .851 |
| 116.50 | .563 | .811 | - | - |
| 117.00 | - | - | .800 | .809 |
| 118.50 | - | - | .800 | .745 |
| 120.00 | .563 | .784 | - | - |
| 121.50 | - | - | .833 | .745 |
| 123.50 | .625 | .784 | - | - |
| 124.50 | - | - | .867 | .745 |
| 125.50 | .625 | .757 | - | - |
| 126.50 | - | - | .867 | .702 |
| 127.50 | .688 | .730 | - | - |
| 128.50 | - | - | .867 | .681 |
| 129.50 | .750 | .730 | - | - |
| 131.00 | - | - | .900 | .681 |
| 132.00 | .750 | .703 | - | - |
| 133.50 | .781 | .703 | - | - |
| 134.50 | .813 | .703 | - | - |
| 135.00 | - | - | .900 | .638 |
| 137.00 | .844 | .703 | - | - |
| 138.00 | - | - | .900 | .617 |
| 139.50 | - | - | .900 | .574 |
| 140.50 | - | - | .933 | .574 |
| 141.50 | - | - | .933 | .553 |
| 142.00 | .875 | .703 | - | - |
| 143.00 | - | - | .933 | .532 |
| 145.00 | - | - | .933 | .511 |
| 145.50 | .875 | .649 | - | - |
| 146.50 | .906 | .622 | .933 | .447 |
| 147.50 | .938 | .622 | - | - |
| 148.00 | - | - | .933 | .426 |
| 149.00 | .938 | .595 | - | - |

**Grade 5**
**Fall PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 150.00 | - | - | .933 | .404 |
| 151.50 | - | - | .967 | .404 |
| 152.50 | .938 | .568 | - | - |
| 153.50 | - | - | .967 | .383 |
| 155.50 | - | - | 1.000 | .340 |
| 156.00 | .938 | .541 | - | - |
| 156.50 | - | - | 1.000 | .319 |
| 157.50 | .938 | .514 | - | - |
| 158.50 | - | - | 1.000 | .298 |
| 159.50 | .938 | .486 | - | - |
| 161.50 | .938 | .459 | - | - |
| 162.00 | - | - | 1.000 | .277 |
| 164.00 | .969 | .459 | - | - |
| 166.00 | - | - | 1.000 | .255 |
| 166.50 | .969 | .432 | - | - |
| 172.00 | .969 | .378 | - | - |
| 175.00 | - | - | 1.000 | .234 |
| 178.00 | .969 | .351 | - | - |
| 179.50 | .969 | .324 | - | - |
| 182.00 | 1.000 | .324 | - | - |
| 183.00 | - | - | 1.000 | .213 |
| 184.50 | 1.000 | .297 | - | - |
| 185.00 | - | - | 1.000 | .191 |
| 186.00 | 1.000 | .270 | - | - |
| 189.00 | 1.000 | .216 | - | - |
| 191.00 | - | - | 1.000 | .170 |
| 192.00 | 1.000 | .189 | - | - |
| 199.00 | - | - | 1.000 | .149 |
| 201.00 | 1.000 | .162 | - | - |
| 202.50 | - | - | 1.000 | .128 |
| 204.00 | - | - | 1.000 | .106 |
| 205.50 | - | - | 1.000 | .085 |
| 208.50 | - | - | 1.000 | .064 |
| 210.00 | 1.000 | .135 | - | - |
| 211.50 | 1.000 | .108 | - | - |

**Grade 5**
**Fall PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 216.00 | - | - | 1.000 | .043 |
| 219.50 | 1.000 | .081 | - | - |
| 228.50 | - | - | 1.000 | .021 |
| 230.00 | 1.000 | .054 | - | - |
| 236.50 | 1.000 | .027 | - | - |
| 237.00 | - | - | 1.000 | .000 |
| 241.00 | 1.000 | .000 | - | - |

**Grade 5**
**Fall MCRC Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 32 |
| | Negative | 37 |
| | Missing | 560 |
| Group 2 | Positive[a] | 30 |
| | Negative | 46 |
| | Missing | 553 |

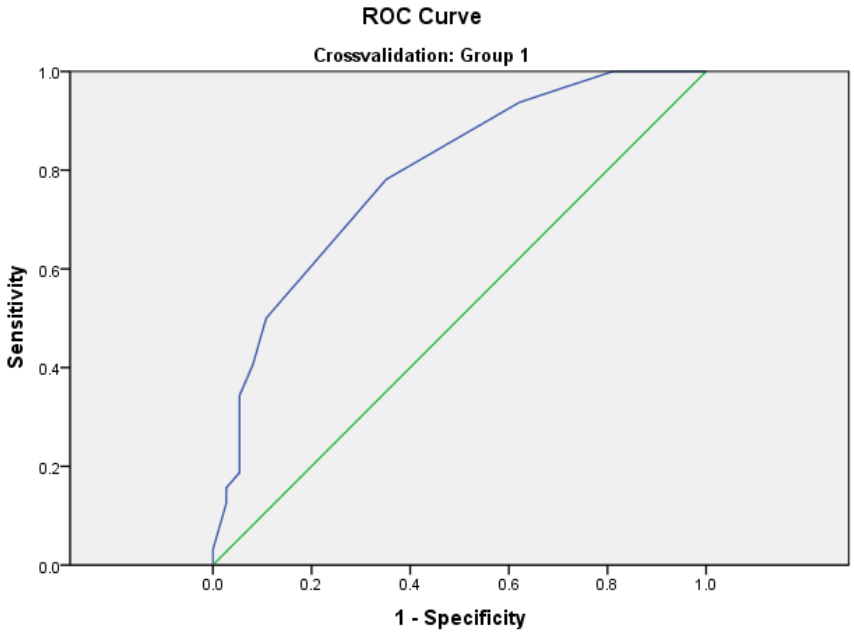
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Fall09MCRC has at least one tie between the positive actual state group and the negative actual state group.

**Area Under the Curve[c,d]**

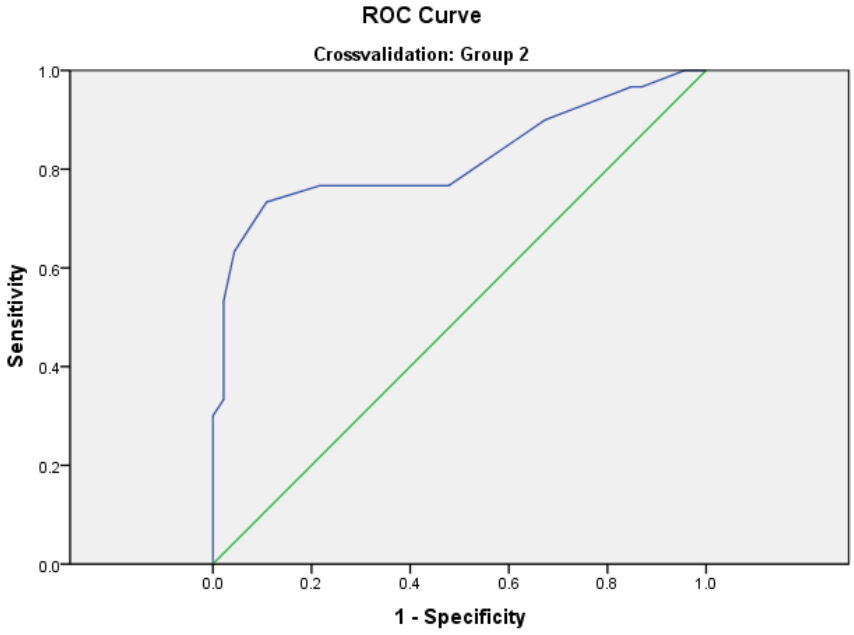
Test Result Variable(s):Fall09MCRC

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .790 | .054 | .000 | .684 | .896 |
| Group 2 | .821 | .056 | .000 | .712 | .930 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Fall09MCRC has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Fall09MCRC has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.




Diagonal segments are produced by ties.




Diagonal segments are produced by ties.

**Grade 5**
**Fall MCRC Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| -1.00 | - | - | .000 | 1.000 |
| 2.50 | - | - | .033 | 1.000 |
| 5.00 | .000 | 1.000 | - | - |
| 5.50 | - | - | .067 | 1.000 |
| 6.50 | .031 | 1.000 | .100 | 1.000 |
| 7.50 | .125 | .973 | .200 | 1.000 |
| 8.50 | .156 | .973 | .300 | 1.000 |
| 9.50 | .188 | .946 | .333 | .978 |
| 10.50 | .344 | .946 | .533 | .978 |
| 11.50 | .406 | .919 | .633 | .957 |
| 12.50 | .500 | .892 | .733 | .891 |
| **13.50** | .688 | .730 | **.767** | **.783** |
| **14.50** | **.781** | **.649** | .767 | .522 |
| 15.50 | .938 | .378 | .900 | .326 |
| 16.50 | 1.000 | .189 | .967 | .152 |
| 17.50 | 1.000 | .027 | .967 | .130 |
| 18.50 | - | - | 1.000 | .043 |
| 19.00 | 1.000 | .000 | - | - |
| 19.50 | - | - | 1.000 | .022 |
| 21.00 | - | - | 1.000 | .000 |

**Grade 5**
**Fall VOC Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 32 |
| | Negative | 37 |
| | Missing | 560 |
| Group 2 | Positive[a] | 30 |
| | Negative | 47 |
| | Missing | 552 |

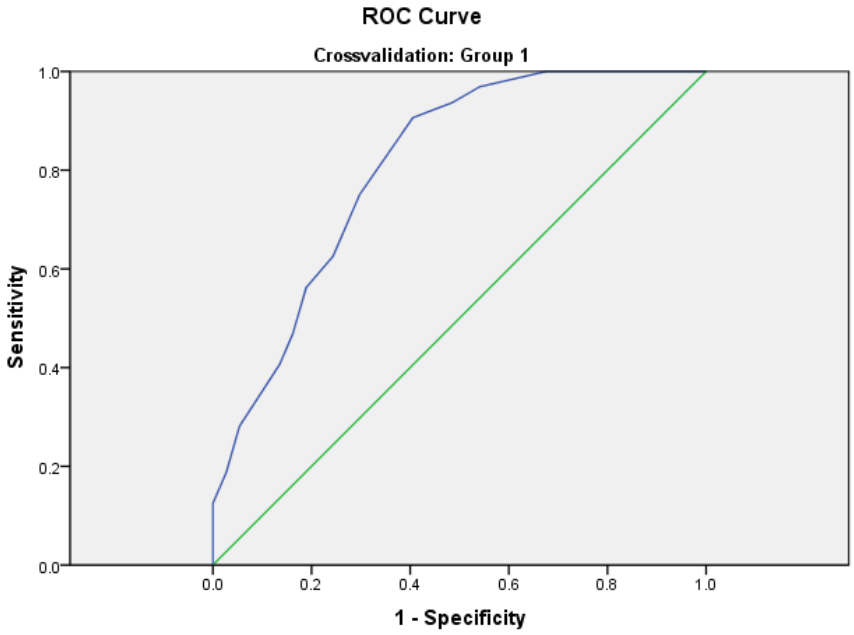
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Fall09Voc has at least one tie between the positive actual state group and the negative actual state group.

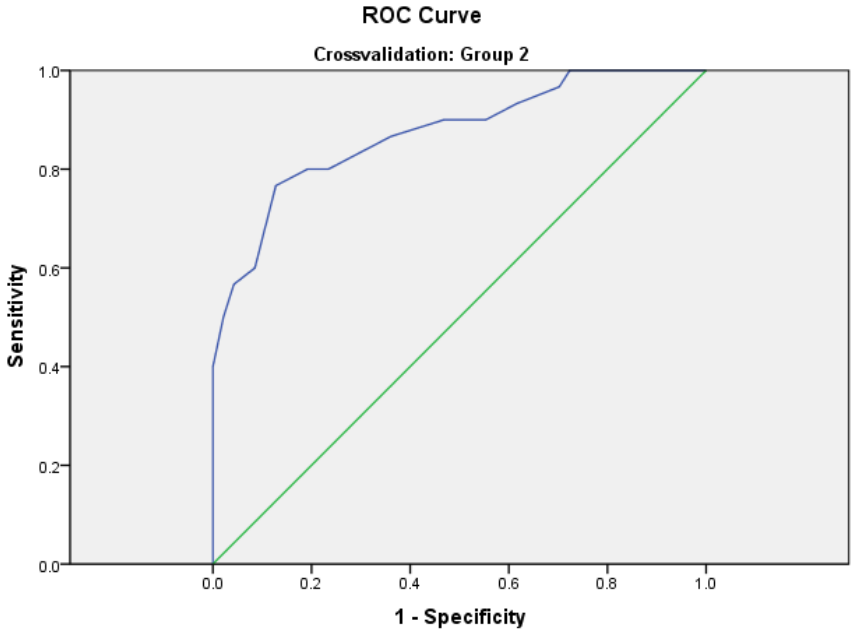
**Area Under the Curve[c,d]**

Test Result Variable(s):Fall09Voc

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .807 | .051 | .000 | .706 | .907 |
| Group 2 | .873 | .042 | .000 | .790 | .956 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Fall09Voc has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Fall09Voc has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.


ROC Curve
Crossvalidation: Group 1
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.


ROC Curve
Crossvalidation: Group 2
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.

**Grade 5**
**Fall VOC Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 5.00 | .000 | 1.000 | .000 | 1.000 |
| 6.50 | .031 | 1.000 | .100 | 1.000 |
| 7.50 | .063 | 1.000 | .133 | 1.000 |
| 8.50 | .125 | 1.000 | .267 | 1.000 |
| 9.50 | .188 | .973 | .400 | 1.000 |
| 10.50 | .281 | .946 | .500 | .979 |
| 11.50 | .406 | .865 | .567 | .957 |
| 12.50 | .469 | .838 | .600 | .915 |
| 13.50 | .563 | .811 | .767 | .872 |
| **14.50** | .625 | .757 | **.800** | **.809** |
| 15.50 | .688 | .730 | .800 | .766 |
| **16.50** | **.750** | **.703** | .867 | .638 |
| 17.50 | .906 | .595 | .900 | .532 |
| 18.50 | .938 | .514 | .900 | .447 |
| 19.50 | .969 | .459 | .933 | .383 |
| 20.50 | 1.000 | .324 | .967 | .298 |
| 21.50 | 1.000 | .216 | 1.000 | .277 |
| 22.50 | 1.000 | .108 | 1.000 | .149 |
| 23.50 | 1.000 | .054 | - | - |
| 24.00 | - | - | 1.000 | .000 |
| 25.00 | 1.000 | .000 | - | - |

**Grade 5**
**Winter PRF Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 55 |
| | Negative | 63 |
| | Missing | 511 |
| Group 2 | Positive[a] | 55 |
| | Negative | 75 |
| | Missing | 499 |

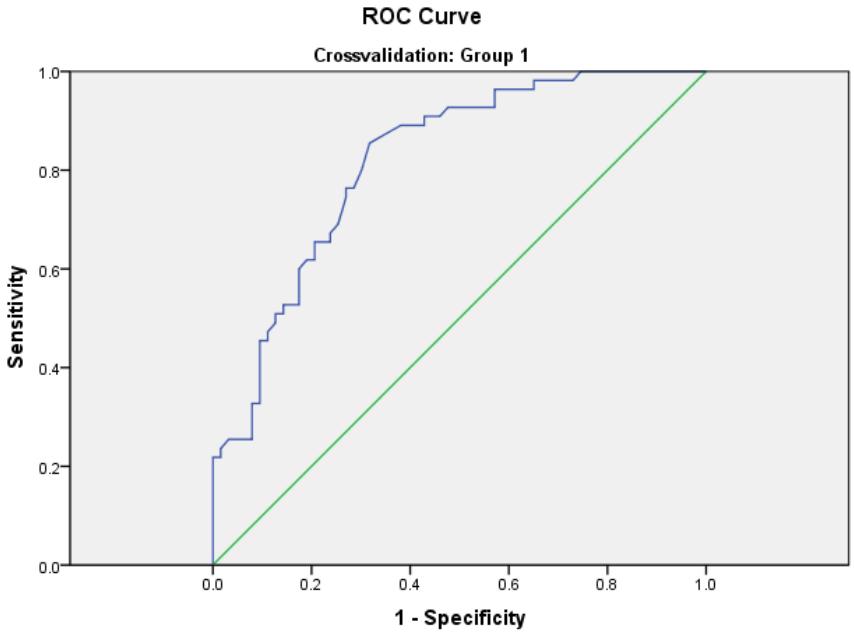
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Wint10PRF has at least one tie between the positive actual state group and the negative actual state group.

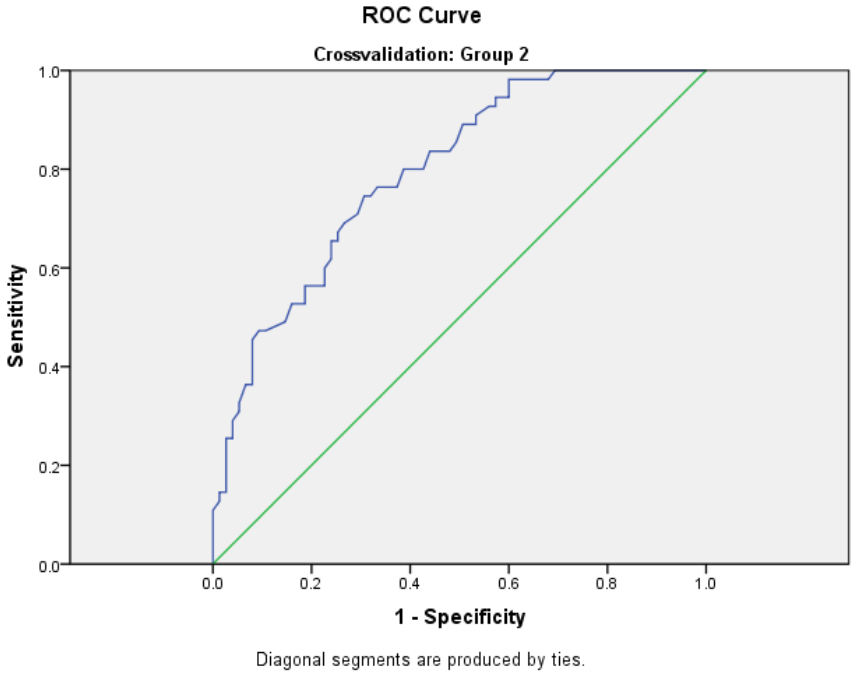
**Area Under the Curve[c,d]**

Test Result Variable(s):Wint10PRF

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .818 | .038 | .000 | .743 | .893 |
| Group 2 | .794 | .038 | .000 | .719 | .869 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Wint10PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Wint10PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.


ROC Curve
Crossvalidation: Group 1
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.


ROC Curve
Crossvalidation: Group 2
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.

**Grade 5**
**Winter PRF Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 8.00 | .000 | 1.000 | - | - |
| 20.00 | - | - | .000 | 1.000 |
| 24.00 | .018 | 1.000 | - | - |
| 30.50 | - | - | .018 | 1.000 |
| 40.50 | .036 | 1.000 | - | - |
| 44.50 | - | - | .036 | 1.000 |
| 56.50 | .055 | 1.000 | - | - |
| 59.00 | - | - | .055 | 1.000 |
| 72.00 | - | - | .073 | 1.000 |
| 77.00 | .073 | 1.000 | - | - |
| 79.00 | - | - | .091 | 1.000 |
| 84.50 | .091 | 1.000 | - | - |
| 85.00 | - | - | .109 | 1.000 |
| 86.50 | .127 | 1.000 | - | - |
| 88.00 | .200 | 1.000 | .127 | .987 |
| 89.50 | .218 | 1.000 | .145 | .987 |
| 90.50 | .218 | .984 | .145 | .973 |
| 92.50 | - | - | .164 | .973 |
| 93.00 | .236 | .984 | - | - |
| 94.50 | - | - | .182 | .973 |
| 95.50 | .255 | .968 | - | - |
| 96.00 | - | - | .200 | .973 |
| 97.00 | .255 | .952 | - | - |
| 97.50 | - | - | .218 | .973 |
| 98.50 | - | - | .255 | .973 |
| 100.00 | - | - | .255 | .960 |
| 101.00 | .255 | .921 | - | - |
| 101.50 | - | - | .273 | .960 |
| 102.50 | - | - | .291 | .960 |
| 104.00 | - | - | .309 | .947 |
| 105.00 | .273 | .921 | - | - |
| 105.50 | - | - | .327 | .947 |
| 106.50 | - | - | .364 | .933 |
| 107.00 | .291 | .921 | - | - |
| 107.50 | - | - | .364 | .920 |
| 109.00 | .327 | .921 | .382 | .920 |

**Grade 5**
**Winter PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 110.50 | - | - | .436 | .920 |
| 111.50 | .327 | .905 | .455 | .920 |
| 113.00 | - | - | .473 | .907 |
| 114.50 | .345 | .905 | .473 | .893 |
| 115.50 | - | - | .491 | .853 |
| 116.50 | .364 | .905 | .527 | .840 |
| 117.50 | - | - | .527 | .827 |
| 118.00 | .382 | .905 | - | - |
| 119.50 | .400 | .905 | .527 | .813 |
| 120.50 | .455 | .905 | - | - |
| 121.50 | .455 | .889 | .564 | .813 |
| 122.50 | - | - | .564 | .800 |
| 123.00 | .473 | .889 | - | - |
| 123.50 | - | - | .564 | .787 |
| 125.00 | - | - | .564 | .773 |
| 125.50 | .491 | .873 | - | - |
| 127.00 | - | - | .600 | .773 |
| 127.50 | .509 | .873 | - | - |
| 128.50 | - | - | .618 | .760 |
| 129.00 | .509 | .857 | - | - |
| 129.50 | - | - | .636 | .760 |
| 130.50 | .527 | .857 | .655 | .760 |
| 131.50 | .527 | .841 | .655 | .747 |
| 132.50 | .527 | .825 | .673 | .747 |
| 133.50 | - | - | .691 | .733 |
| 134.00 | .600 | .825 | - | - |
| **134.50** | - | - | **.709** | **.707** |
| 135.50 | .618 | .810 | - | - |
| 136.00 | - | - | .745 | .693 |
| 136.50 | .618 | .794 | - | - |
| 137.50 | - | - | .745 | .680 |
| 138.50 | - | - | .764 | .667 |
| 139.00 | .655 | .794 | .764 | .627 |
| 140.50 | - | - | .800 | .613 |
| 141.50 | .655 | .778 | .800 | .600 |

**Grade 5**
**Winter PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 142.50 | .655 | .762 | .800 | .573 |
| 143.50 | .673 | .762 | .836 | .560 |
| 144.50 | - | - | .836 | .520 |
| 145.00 | .691 | .746 | - | - |
| 145.50 | - | - | .855 | .507 |
| 146.50 | .745 | .730 | .891 | .493 |
| **147.50** | **.764** | **.730** | - | - |
| 148.00 | - | - | .891 | .480 |
| 148.50 | .764 | .714 | - | - |
| 149.50 | .800 | .698 | - | - |
| 150.00 | - | - | .891 | .467 |
| 150.50 | .855 | .683 | - | - |
| 151.50 | .873 | .651 | .909 | .467 |
| 152.50 | .891 | .619 | .927 | .440 |
| 153.50 | .891 | .603 | .927 | .427 |
| 154.50 | .891 | .587 | - | - |
| 156.00 | .891 | .571 | .945 | .427 |
| 159.00 | - | - | .945 | .413 |
| 159.50 | .909 | .571 | - | - |
| 160.50 | - | - | .945 | .400 |
| 162.00 | - | - | .982 | .400 |
| 162.50 | .909 | .540 | - | - |
| 164.00 | .927 | .524 | - | - |
| 165.00 | - | - | .982 | .373 |
| 165.50 | .927 | .508 | - | - |
| 166.50 | .927 | .476 | - | - |
| 167.50 | .927 | .429 | - | - |
| 168.50 | .945 | .429 | - | - |
| 169.00 | - | - | .982 | .360 |
| 171.00 | .964 | .429 | - | - |
| 171.50 | - | - | .982 | .320 |
| 172.50 | - | - | 1.000 | .307 |
| 174.50 | .964 | .413 | 1.000 | .293 |
| 176.50 | .964 | .397 | - | - |
| 177.00 | - | - | 1.000 | .280 |

**Grade 5**
**Winter PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 177.50 | .964 | .381 | - | - |
| 178.50 | .964 | .349 | 1.000 | .267 |
| 179.50 | .982 | .349 | 1.000 | .240 |
| 180.50 | .982 | .333 | - | - |
| 182.00 | .982 | .317 | 1.000 | .227 |
| 186.00 | .982 | .286 | - | - |
| 189.50 | .982 | .270 | - | - |
| 190.50 | 1.000 | .254 | - | - |
| 191.50 | 1.000 | .238 | - | - |
| 193.00 | 1.000 | .222 | - | - |
| 195.50 | 1.000 | .206 | - | - |
| 198.00 | 1.000 | .190 | - | - |
| 203.50 | 1.000 | .175 | - | - |
| 209.50 | 1.000 | .159 | 1.000 | .213 |
| 211.50 | 1.000 | .127 | 1.000 | .200 |
| 213.00 | 1.000 | .111 | 1.000 | .187 |
| 214.50 | 1.000 | .095 | 1.000 | .173 |
| 216.50 | 1.000 | .079 | 1.000 | .147 |
| 219.00 | 1.000 | .063 | 1.000 | .133 |
| 221.00 | 1.000 | .048 | 1.000 | .120 |
| 234.00 | 1.000 | .032 | 1.000 | .107 |
| 247.00 | 1.000 | .016 | 1.000 | .093 |
| 249.00 | 1.000 | .000 | 1.000 | .080 |
| 216.00 | - | - | 1.000 | .067 |
| 217.50 | - | - | 1.000 | .053 |
| 222.50 | - | - | 1.000 | .040 |
| 228.50 | - | - | 1.000 | .027 |
| 235.50 | - | - | 1.000 | .013 |
| 242.00 | - | - | 1.000 | .000 |

**Grade 5**
**Winter MCRC Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 57 |
| | Negative | 78 |
| | Missing | 494 |
| Group 2 | Positive[a] | 63 |
| | Negative | 95 |
| | Missing | 471 |

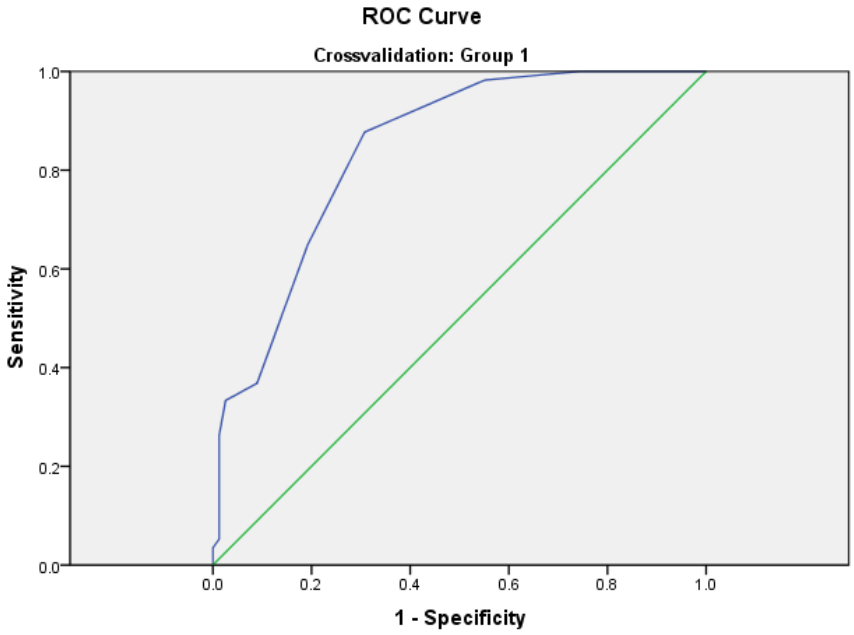
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Wint10MCRC has at least one tie between the positive actual state group and the negative actual state group.

**Area Under the Curve[c,d]**

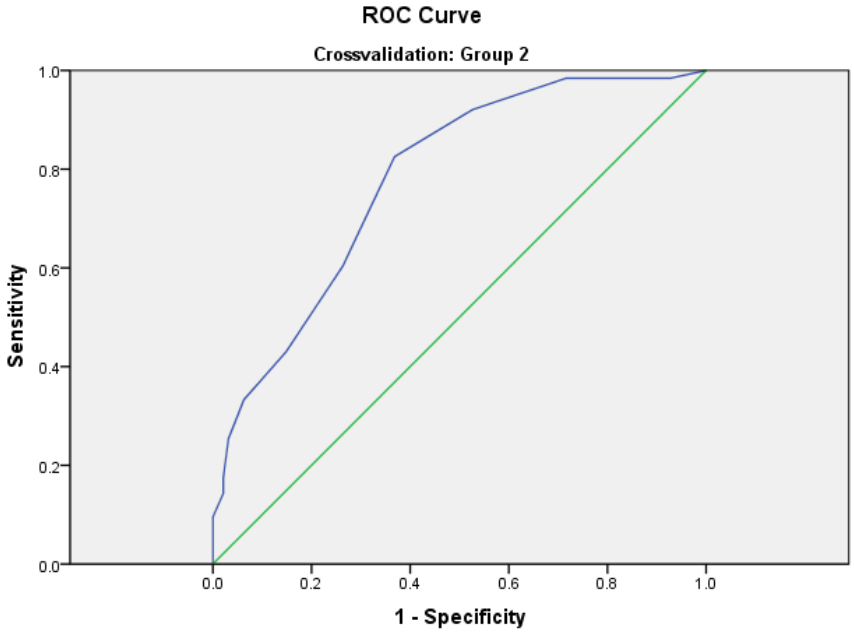
Test Result Variable(s):Wint10MCRC

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .841 | .033 | .000 | .776 | .905 |
| Group 2 | .780 | .036 | .000 | .708 | .851 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Wint10MCRC has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Wint10MCRC has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.




Diagonal segments are produced by ties.




Diagonal segments are produced by ties.

**Grade 5**
**Winter MCRC Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 3.00 | .000 | 1.000 | - | - |
| 5.00 | .035 | 1.000 | .000 | 1.000 |
| 6.50 | .053 | .987 | .016 | 1.000 |
| 7.50 | .088 | .987 | .048 | 1.000 |
| 8.50 | .105 | .987 | .063 | 1.000 |
| 9.50 | .158 | .987 | .095 | 1.000 |
| 10.50 | .211 | .987 | .143 | .979 |
| 11.50 | .263 | .987 | .175 | .979 |
| 12.50 | .333 | .974 | .254 | .968 |
| 13.50 | .368 | .910 | .333 | .937 |
| 14.50 | .509 | .859 | .429 | .853 |
| 15.50 | .649 | .808 | .603 | .737 |
| **16.50** | **.877** | **.692** | **.825** | **.632** |
| 17.50 | .982 | .449 | .921 | .474 |
| 18.50 | 1.000 | .256 | .984 | .284 |
| 19.50 | 1.000 | .064 | .984 | .074 |
| 21.00 | 1.000 | .000 | 1.000 | .000 |

**Grade 5**
**Spring PRF Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 47 |
| | Negative | 60 |
| | Missing | 522 |
| Group 2 | Positive[a] | 50 |
| | Negative | 71 |
| | Missing | 508 |

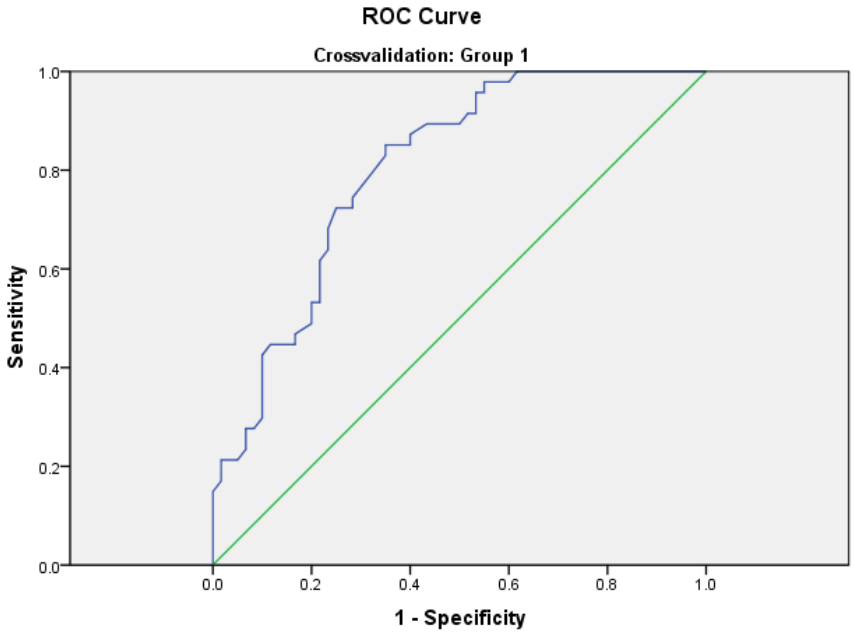
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Spr10PRF has at least one tie between the positive actual state group and the negative actual state group.

**Area Under the Curve[c,d]**

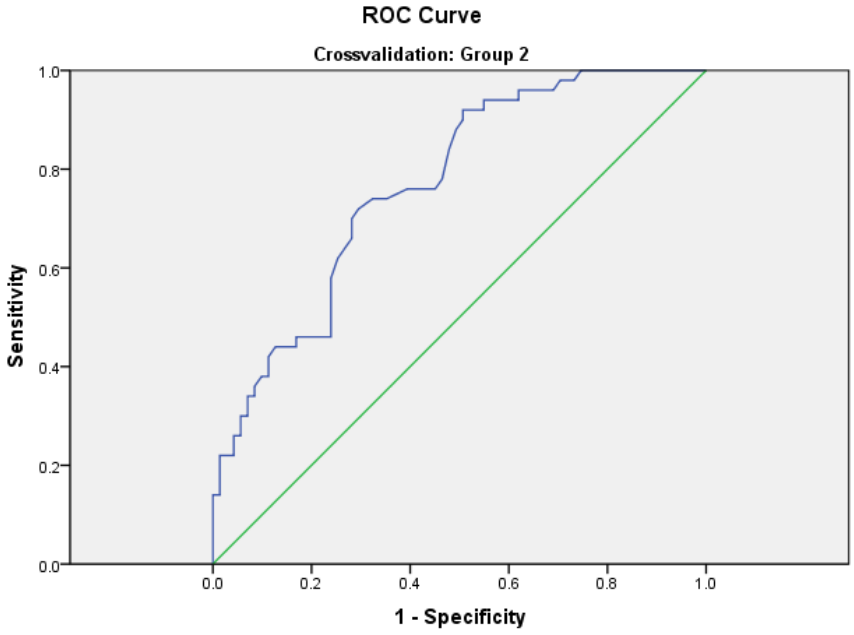
Test Result Variable(s):Spr10PRF

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .803 | .041 | .000 | .721 | .884 |
| Group 2 | .769 | .042 | .000 | .687 | .851 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Spr10PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Spr10PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.




Diagonal segments are produced by ties.




Diagonal segments are produced by ties.

**Grade 5**
**Spring PRF Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 23.00 | - | - | .000 | 1.000 |
| 27.50 | - | - | .020 | 1.000 |
| 28.00 | .000 | 1.000 | - | - |
| 49.00 | .021 | 1.000 | - | - |
| 51.00 | - | - | .040 | 1.000 |
| 75.00 | - | - | .060 | 1.000 |
| 76.00 | .043 | 1.000 | - | - |
| 80.50 | - | - | .080 | 1.000 |
| 83.00 | - | - | .100 | 1.000 |
| 83.50 | .064 | 1.000 | - | - |
| 84.50 | - | - | .120 | 1.000 |
| 86.00 | - | - | .140 | 1.000 |
| 87.50 | - | - | .140 | .986 |
| 88.00 | .085 | 1.000 | - | - |
| 89.50 | - | - | .160 | .986 |
| 92.50 | .106 | 1.000 | - | - |
| 93.00 | - | - | .180 | .986 |
| 93.50 | .128 | 1.000 | - | - |
| 95.50 | .149 | 1.000 | - | - |
| 98.50 | .170 | .983 | .220 | .986 |
| 102.00 | .213 | .983 | - | - |
| 103.00 | - | - | .220 | .972 |
| 104.50 | .213 | .967 | .220 | .958 |
| 106.00 | .213 | .950 | .240 | .958 |
| 107.50 | - | - | .260 | .958 |
| 108.50 | - | - | .260 | .944 |
| 109.50 | - | - | .280 | .944 |
| 110.50 | .234 | .933 | - | - |
| 111.50 | - | - | .300 | .944 |
| 114.00 | - | - | .300 | .930 |
| 115.50 | .255 | .933 | - | - |
| 117.50 | - | - | .320 | .930 |
| 118.50 | .277 | .933 | - | - |
| 120.50 | .277 | .917 | .340 | .930 |
| 122.00 | - | - | .340 | .915 |

**Grade 5**
**Spring PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 122.50 | .298 | .900 | - | - |
| 124.00 | - | - | .360 | .915 |
| 124.50 | .319 | .900 | - | - |
| 126.00 | - | - | .380 | .901 |
| 127.00 | .340 | .900 | - | - |
| 127.50 | - | - | .380 | .887 |
| 128.50 | - | - | .420 | .887 |
| 129.50 | .362 | .900 | .440 | .873 |
| 130.50 | .404 | .900 | .440 | .859 |
| 131.50 | - | - | .440 | .831 |
| 132.00 | .426 | .900 | - | - |
| 132.50 | - | - | .460 | .831 |
| 133.50 | .447 | .883 | .460 | .817 |
| 135.00 | .447 | .867 | .460 | .803 |
| 136.50 | .447 | .850 | .460 | .789 |
| 137.50 | .447 | .833 | .460 | .775 |
| 138.50 | .468 | .833 | .460 | .761 |
| 139.50 | .489 | .800 | .500 | .761 |
| 140.50 | - | - | .560 | .761 |
| 141.50 | .532 | .800 | - | - |
| 142.00 | - | - | .580 | .761 |
| 144.00 | - | - | .620 | .746 |
| 144.50 | .532 | .783 | - | - |
| 145.50 | - | - | .660 | .718 |
| 146.50 | - | - | .700 | .718 |
| 147.00 | .553 | .783 | - | - |
| **148.00** | - | - | **.720** | **.704** |
| 148.50 | .574 | .783 | - | - |
| 149.50 | .596 | .783 | .740 | .676 |
| 150.50 | .617 | .783 | .740 | .662 |
| 151.50 | .638 | .767 | .740 | .648 |
| 152.50 | - | - | .760 | .606 |
| 153.50 | - | - | .760 | .592 |
| 154.50 | .681 | .767 | .760 | .563 |
| 156.00 | - | - | .760 | .549 |

**Grade 5**
**Spring PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 157.50 | .723 | .750 | .780 | .535 |
| 158.50 | .723 | .733 | - | - |
| 159.00 | - | - | .840 | .521 |
| 159.50 | .723 | .717 | - | - |
| 160.50 | - | - | .880 | .507 |
| **161.00** | **.745** | **.717** | - | - |
| 161.50 | - | - | .900 | .493 |
| 162.50 | .787 | .683 | .920 | .493 |
| 163.50 | .830 | .650 | - | - |
| 164.00 | - | - | .920 | .479 |
| 164.50 | .851 | .650 | - | - |
| 165.50 | - | - | .920 | .465 |
| 167.00 | .851 | .600 | - | - |
| 167.50 | - | - | .920 | .451 |
| 170.00 | - | - | .940 | .451 |
| 170.50 | .872 | .600 | - | - |
| 171.50 | - | - | .940 | .437 |
| 172.50 | .894 | .567 | .940 | .423 |
| 173.50 | .894 | .550 | - | - |
| 174.50 | .894 | .517 | .940 | .408 |
| 176.00 | .894 | .500 | - | - |
| 177.00 | - | - | .940 | .380 |
| 177.50 | .915 | .483 | - | - |
| 179.00 | - | - | .960 | .380 |
| 179.50 | .915 | .467 | - | - |
| 180.50 | - | - | .960 | .324 |
| 181.50 | .957 | .467 | .960 | .310 |
| 182.50 | .957 | .450 | - | - |
| 183.50 | - | - | .980 | .296 |
| 184.00 | .979 | .450 | - | - |
| 185.50 | - | - | .980 | .268 |
| 186.00 | .979 | .433 | - | - |
| 186.50 | - | - | 1.000 | .254 |
| 187.50 | .979 | .400 | - | - |
| 188.50 | - | - | 1.000 | .239 |

**Grade 5**
**Spring PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 190.00 | 1.000 | .383 | - | - |
| 191.50 | - | - | 1.000 | .225 |
| 192.50 | 1.000 | .367 | - | - |
| 193.50 | 1.000 | .333 | - | - |
| 194.50 | 1.000 | .317 | - | - |
| 195.50 | - | - | 1.000 | .169 |
| 197.00 | 1.000 | .267 | - | - |
| 198.50 | - | - | 1.000 | .155 |
| 199.50 | 1.000 | .233 | 1.000 | .141 |
| 200.50 | 1.000 | .217 | 1.000 | .113 |
| 201.50 | 1.000 | .183 | - | - |
| 204.50 | 1.000 | .150 | - | - |
| 207.00 | - | - | 1.000 | .085 |
| 210.00 | 1.000 | .133 | - | - |
| 214.00 | - | - | 1.000 | .070 |
| 216.00 | 1.000 | .117 | 1.000 | .056 |
| 222.00 | 1.000 | .100 | - | - |
| 222.50 | - | - | 1.000 | .042 |
| 226.00 | 1.000 | .083 | - | - |
| 228.00 | 1.000 | .067 | - | - |
| 229.50 | 1.000 | .050 | - | - |
| 233.50 | 1.000 | .033 | - | - |
| 238.50 | - | - | 1.000 | .028 |
| 246.50 | 1.000 | .017 | - | - |
| 252.50 | - | - | 1.000 | .014 |
| 257.00 | 1.000 | .000 | 1.000 | .000 |

**Grade 5**
**Spring MCRC Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 105 |
| | Negative | 235 |
| | Missing | 289 |
| Group 2 | Positive[a] | 113 |
| | Negative | 223 |
| | Missing | 293 |

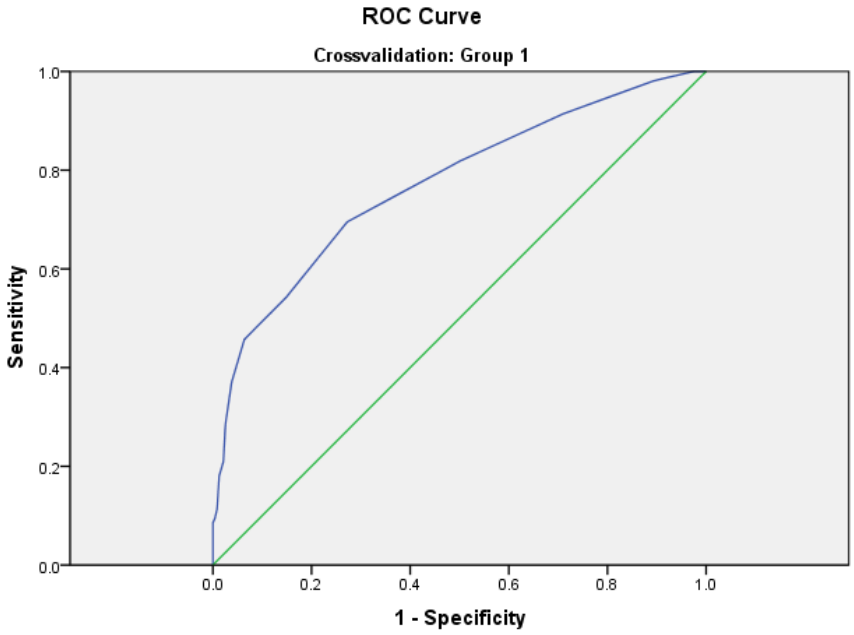
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Spr10MCRC has at least one tie between the positive actual state group and the negative actual state group.

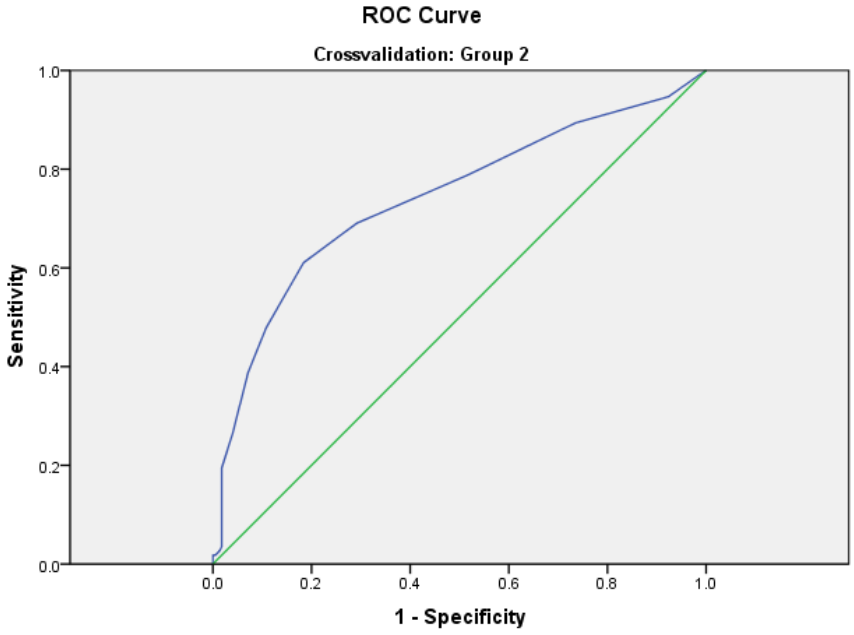
**Area Under the Curve[c,d]**

Test Result Variable(s):Spr10MCRC

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .772 | .029 | .000 | .715 | .828 |
| Group 2 | .741 | .031 | .000 | .681 | .801 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Spr10MCRC has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Spr10MCRC has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.


ROC Curve
Crossvalidation: Group 1
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.


ROC Curve
Crossvalidation: Group 2
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.

**Grade 5**
**Spring MCRC Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| -1.00 | .000 | 1.000 | .000 | 1.000 |
| 1.00 | - | - | .018 | 1.000 |
| 2.00 | .048 | 1.000 | - | - |
| 3.00 | - | - | .018 | .996 |
| 4.50 | .057 | 1.000 | .027 | .987 |
| 5.50 | .086 | 1.000 | .035 | .982 |
| 6.50 | .095 | .996 | .062 | .982 |
| 7.50 | .114 | .991 | .115 | .982 |
| 8.50 | .181 | .987 | .159 | .982 |
| 9.50 | .210 | .979 | .195 | .982 |
| 10.50 | .286 | .974 | .265 | .960 |
| 11.50 | .371 | .962 | .389 | .928 |
| 12.50 | .457 | .936 | .478 | .892 |
| 13.50 | .543 | .851 | .611 | .816 |
| 14.50 | .695 | .728 | .690 | .709 |
| **15.50** | **.819** | **.498** | **.788** | **.484** |
| 16.50 | .914 | .289 | .894 | .265 |
| 17.50 | .981 | .106 | .947 | .076 |
| 18.50 | 1.000 | .026 | .991 | .013 |
| 19.50 | 1.000 | .004 | - | - |
| 20.00 | - | - | 1.000 | .000 |
| 21.00 | 1.000 | .000 | - | - |

**Grade 5**
**Spring VOC Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 94 |
| | Negative | 195 |
| | Missing | 340 |
| Group 2 | Positive[a] | 99 |
| | Negative | 183 |
| | Missing | 347 |

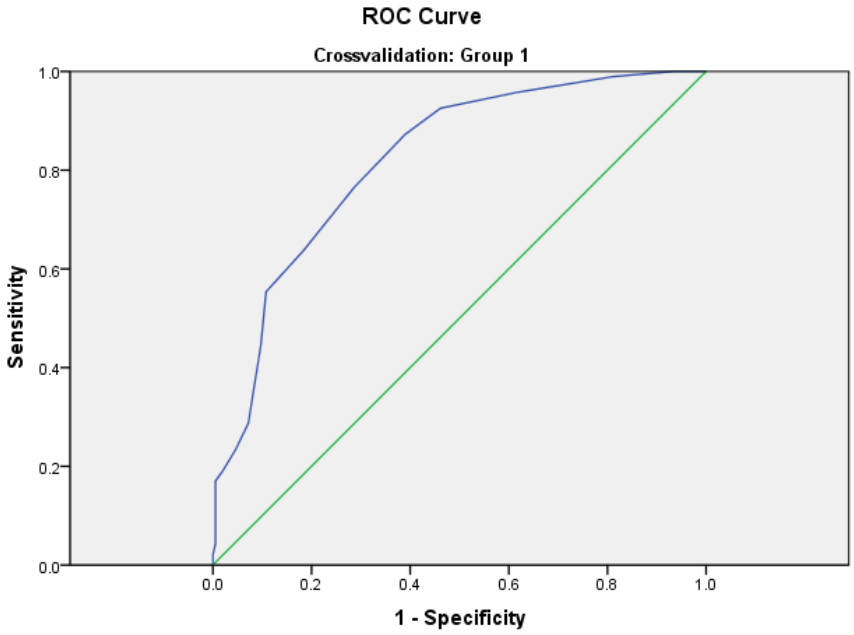
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Spr10Voc has at least one tie between the positive actual state group and the negative actual state group.

**Area Under the Curve[c,d]**

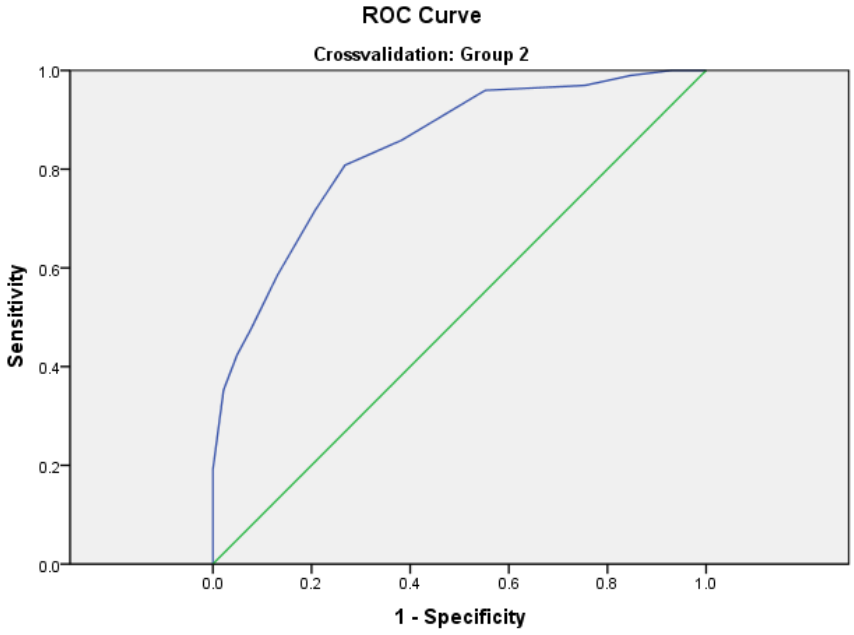
Test Result Variable(s):Spr10Voc

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .820 | .025 | .000 | .770 | .869 |
| Group 2 | .842 | .024 | .000 | .794 | .889 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Spr10Voc has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Spr10Voc has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.




Diagonal segments are produced by ties.




Diagonal segments are produced by ties.

**Grade 5**
**Spring VOC Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| -1.00 | - | - | .000 | 1.000 |
| 3.50 | - | - | .020 | 1.000 |
| 4.00 | .000 | 1.000 | - | - |
| 5.50 | .011 | 1.000 | - | - |
| 6.50 | .021 | 1.000 | - | - |
| 7.50 | - | - | .051 | 1.000 |
| 8.00 | .043 | .995 | - | - |
| 8.50 | - | - | .061 | 1.000 |
| 9.50 | .053 | .995 | .121 | 1.000 |
| 10.50 | .085 | .995 | .162 | 1.000 |
| 11.50 | .096 | .995 | .192 | 1.000 |
| 12.50 | .170 | .995 | .232 | .995 |
| 13.50 | .191 | .979 | .273 | .989 |
| 14.50 | .234 | .954 | .354 | .978 |
| 15.50 | .287 | .928 | .424 | .951 |
| 16.50 | .447 | .903 | .475 | .923 |
| 17.50 | .553 | .892 | .586 | .869 |
| **18.50** | .638 | .815 | **.717** | **.792** |
| **19.50** | **.766** | **.713** | .808 | .732 |
| 20.50 | .872 | .610 | .859 | .617 |
| 21.50 | .926 | .538 | .960 | .448 |
| 22.50 | .957 | .385 | .970 | .246 |
| 23.50 | .989 | .190 | .990 | .153 |
| 24.50 | 1.000 | .067 | 1.000 | .071 |
| 26.00 | 1.000 | .000 | 1.000 | .000 |

**Grade 6**
**Fall PRF Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 52 |
| | Negative | 71 |
| | Missing | 470 |
| Group 2 | Positive[a] | 50 |
| | Negative | 58 |
| | Missing | 484 |

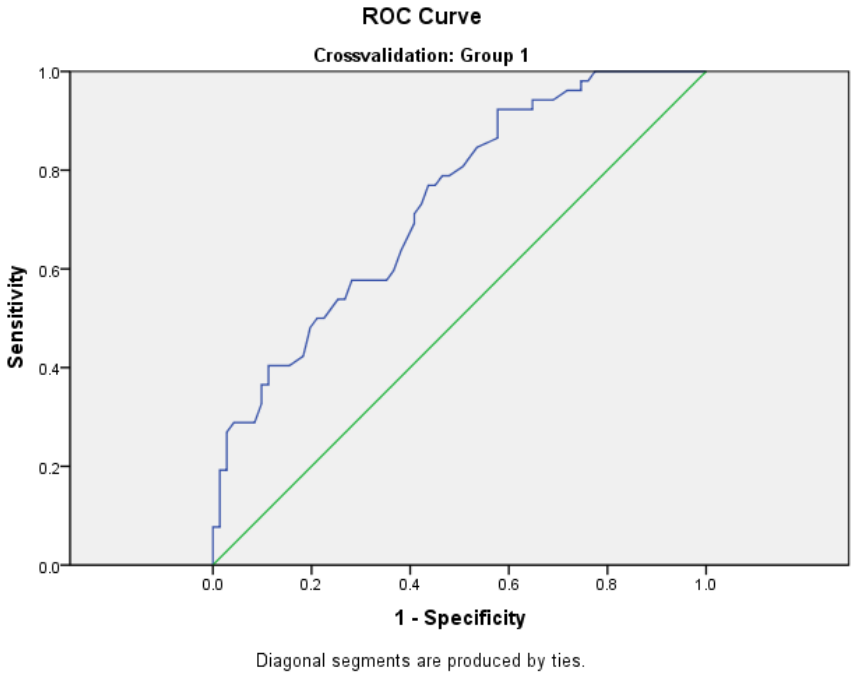
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Fall09PRF has at least one tie between the positive actual state group and the negative actual state group.

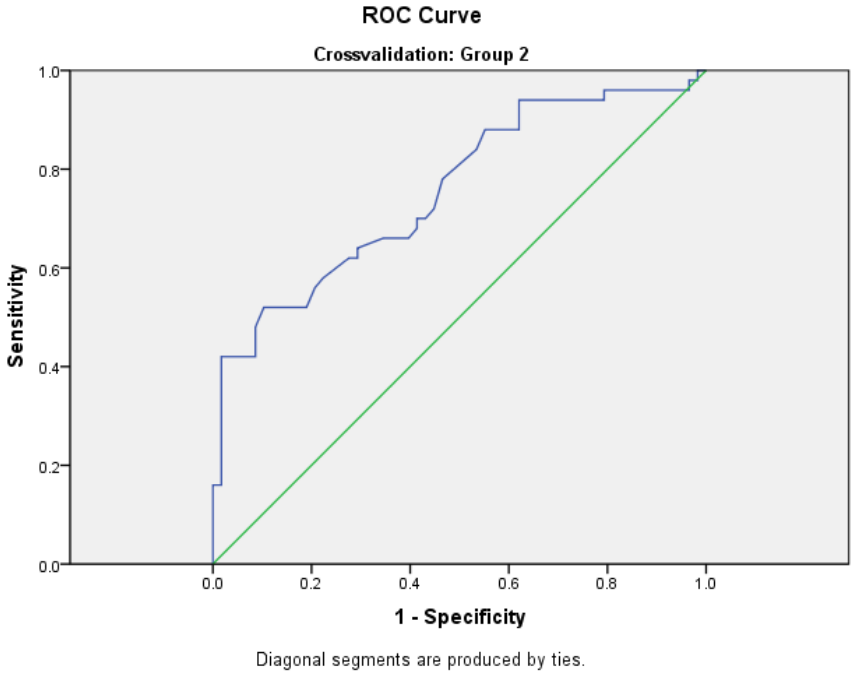
**Area Under the Curve[c,d]**

Test Result Variable(s):Fall09PRF

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .732 | .044 | .000 | .645 | .819 |
| Group 2 | .756 | .047 | .000 | .664 | .847 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Fall09PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Fall09PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.


ROC Curve
Crossvalidation: Group 1
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.


ROC Curve
Crossvalidation: Group 2
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.

**Grade 6**
**Fall PRF Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 73.00 | .000 | 1.000 | - | - |
| 74.00 | - | - | .000 | 1.000 |
| 79.00 | - | - | .020 | 1.000 |
| 79.50 | .019 | 1.000 | - | - |
| 84.00 | - | - | .040 | 1.000 |
| 86.50 | .038 | 1.000 | - | - |
| 88.50 | .058 | 1.000 | - | - |
| 89.00 | - | - | .060 | 1.000 |
| 90.00 | .077 | 1.000 | - | - |
| 94.50 | .077 | .986 | - | - |
| 96.00 | - | - | .080 | 1.000 |
| 100.50 | .115 | .986 | - | - |
| 102.00 | - | - | .100 | 1.000 |
| 104.00 | .154 | .986 | - | - |
| 105.50 | .173 | .986 | - | - |
| 106.50 | .192 | .986 | .140 | 1.000 |
| 108.00 | .192 | .972 | - | - |
| 108.50 | - | - | .160 | 1.000 |
| 109.50 | .212 | .972 | - | - |
| 110.00 | - | - | .160 | .983 |
| 110.50 | .231 | .972 | - | - |
| 111.50 | .269 | .972 | .200 | .983 |
| 112.50 | .288 | .958 | - | - |
| 113.00 | - | - | .260 | .983 |
| 114.00 | .288 | .915 | - | - |
| 115.00 | - | - | .280 | .983 |
| 115.50 | .327 | .901 | - | - |
| 116.50 | .346 | .901 | .360 | .983 |
| 117.50 | .365 | .901 | .420 | .983 |
| 118.50 | .365 | .887 | .420 | .966 |
| 119.50 | .404 | .887 | .420 | .914 |
| 120.50 | .404 | .845 | .440 | .914 |
| 121.50 | .423 | .817 | .460 | .914 |
| 122.50 | .481 | .803 | - | - |
| 123.00 | - | - | .480 | .914 |

**Grade 6**
**Fall PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 123.50 | .500 | .789 | - | - |
| 124.50 | .500 | .775 | - | - |
| 125.00 | - | - | .520 | .897 |
| 125.50 | .519 | .761 | - | - |
| 126.50 | .538 | .746 | - | - |
| 127.50 | .538 | .732 | .520 | .879 |
| 128.50 | .577 | .718 | - | - |
| 129.50 | .577 | .704 | - | - |
| 130.50 | - | - | .520 | .862 |
| 131.50 | .577 | .690 | - | - |
| 133.00 | - | - | .520 | .845 |
| 134.00 | .577 | .662 | | |
| 135.00 | - | - | .520 | .828 |
| 135.50 | .577 | .648 | - | - |
| 136.50 | .596 | .634 | .520 | .810 |
| 137.50 | .635 | .620 | .560 | .793 |
| 138.50 | - | - | .580 | .776 |
| 139.00 | .692 | .592 | - | - |
| 140.50 | - | - | .620 | .724 |
| 142.00 | .712 | .592 | - | - |
| 142.50 | - | - | .620 | .707 |
| 143.50 | - | - | .640 | .707 |
| 145.00 | - | - | .660 | .655 |
| 145.50 | .731 | .577 | - | - |
| 147.00 | - | - | .660 | .603 |
| 147.50 | .769 | .563 | - | - |
| 149.50 | .769 | .549 | - | - |
| 150.00 | - | - | .680 | .586 |
| **153.00** | **.788** | **.535** | - | - |
| 153.50 | - | - | .700 | .586 |
| 155.50 | .788 | .521 | .700 | .569 |
| 156.50 | .808 | .493 | .720 | .552 |
| 157.50 | .846 | .465 | **.780** | **.534** |
| 158.50 | .865 | .423 | .840 | .466 |
| 159.50 | .923 | .423 | - | - |

**Grade 6**
**Fall PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 160.00 | - | - | .880 | .448 |
| 160.50 | .923 | .408 | - | - |
| 161.50 | .923 | .394 | .880 | .414 |
| 162.50 | .923 | .380 | .880 | .397 |
| 163.50 | .923 | .352 | .880 | .379 |
| 164.50 | - | - | .920 | .379 |
| 165.50 | .942 | .352 | - | - |
| 166.00 | - | - | .940 | .379 |
| 167.50 | .942 | .338 | - | - |
| 168.00 | - | - | .940 | .362 |
| 169.00 | .942 | .324 | - | - |
| 170.00 | - | - | .940 | .345 |
| 170.50 | .942 | .310 | - | - |
| 171.50 | .962 | .282 | .940 | .328 |
| 172.50 | - | - | .940 | .293 |
| 175.00 | - | - | .940 | .241 |
| 177.50 | .962 | .254 | - | - |
| 180.00 | - | - | .940 | .224 |
| 184.00 | .981 | .254 | .940 | .207 |
| 185.50 | .981 | .239 | .960 | .207 |
| 186.50 | 1.000 | .225 | .960 | .172 |
| 187.50 | 1.000 | .197 | .960 | .121 |
| 188.50 | 1.000 | .169 | - | - |
| 193.50 | 1.000 | .155 | .960 | .103 |
| 198.50 | 1.000 | .141 | - | - |
| 199.50 | 1.000 | .127 | .960 | .086 |
| 200.50 | 1.000 | .113 | .960 | .069 |
| 201.50 | 1.000 | .085 | - | - |
| 203.50 | 1.000 | .070 | .960 | .034 |
| 206.00 | 1.000 | .056 | - | - |
| 206.50 | - | - | .980 | .034 |
| 209.50 | 1.000 | .042 | - | - |
| 210.00 | - | - | .980 | .017 |
| 215.50 | 1.000 | .028 | - | - |
| 227.50 | 1.000 | .014 | - | - |

**Grade 6**
**Fall PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 230.00 | - | - | 1.000 | .017 |
| 237.00 | 1.000 | .000 | - | - |
| 248.00 | - | - | 1.000 | .000 |

**Grade 6**
**Fall MCRC Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 52 |
| | Negative | 72 |
| | Missing | 469 |
| Group 2 | Positive[a] | 51 |
| | Negative | 58 |
| | Missing | 483 |

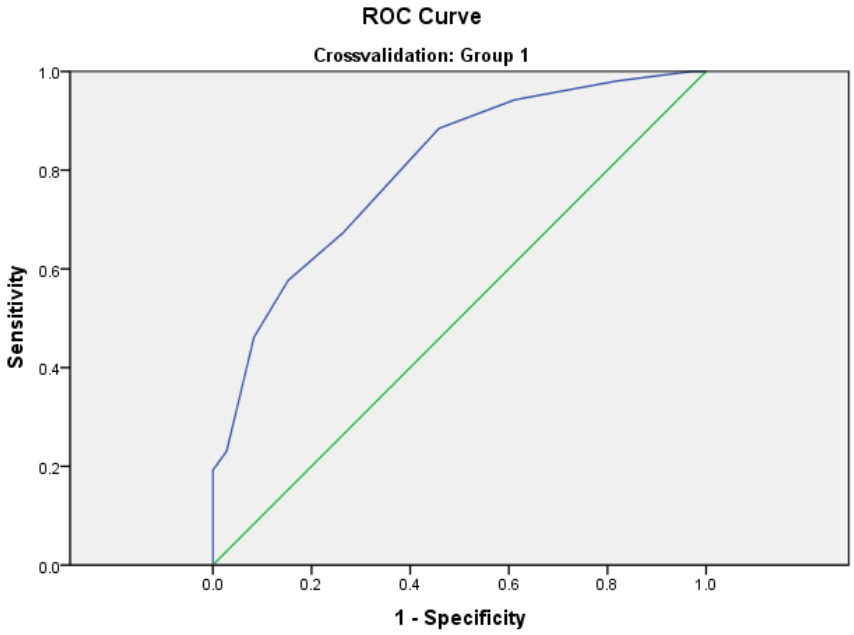
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Fall09MCRC has at least one tie between the positive actual state group and the negative actual state group.

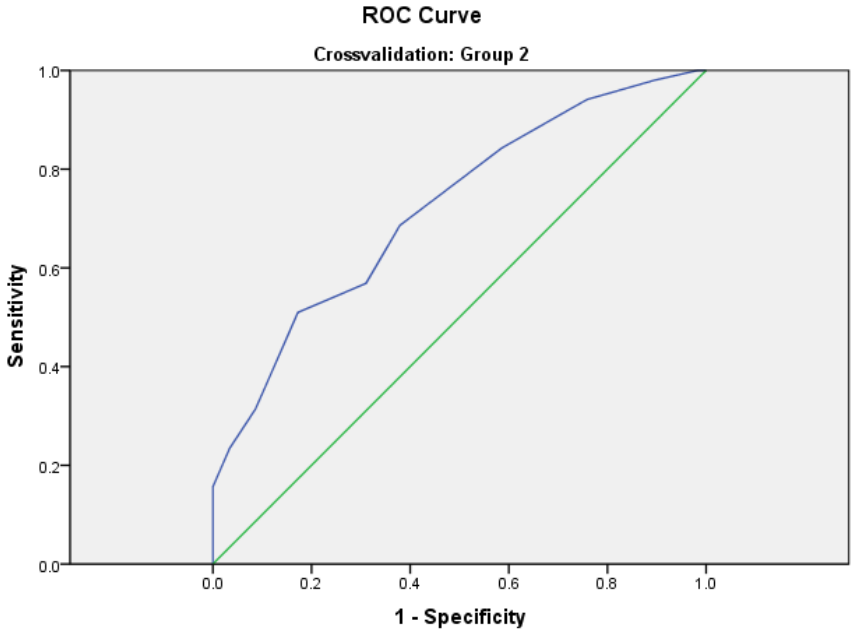
**Area Under the Curve[c,d]**

Test Result Variable(s):Fall09MCRC

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .801 | .039 | .000 | .724 | .878 |
| Group 2 | .721 | .048 | .000 | .626 | .816 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Fall09MCRC has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Fall09MCRC has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.


ROC Curve
Crossvalidation: Group 1
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.


ROC Curve
Crossvalidation: Group 2
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.

**Grade 6**
**Fall MCRC Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| .00 | - | - | .000 | 1.000 |
| 4.00 | - | - | .020 | 1.000 |
| 5.00 | .000 | 1.000 | - | - |
| 6.50 | .019 | 1.000 | - | - |
| 7.50 | .096 | 1.000 | .039 | 1.000 |
| 8.50 | .135 | 1.000 | .098 | 1.000 |
| 9.50 | .192 | 1.000 | .157 | 1.000 |
| 10.50 | .231 | .972 | .235 | .966 |
| 11.50 | .346 | .944 | .314 | .914 |
| 12.50 | .462 | .917 | .510 | .828 |
| 13.50 | .577 | .847 | .569 | .690 |
| 14.50 | .673 | .736 | .686 | .621 |
| **15.50** | **.885** | **.542** | **.843** | **.414** |
| 16.50 | .942 | .389 | .941 | .241 |
| 17.50 | .981 | .181 | .980 | .103 |
| 18.50 | 1.000 | .028 | 1.000 | .017 |
| 20.00 | 1.000 | .000 | 1.000 | .000 |

**Grade 6**
**Fall VOC Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 52 |
| | Negative | 72 |
| | Missing | 469 |
| Group 2 | Positive[a] | 51 |
| | Negative | 57 |
| | Missing | 484 |

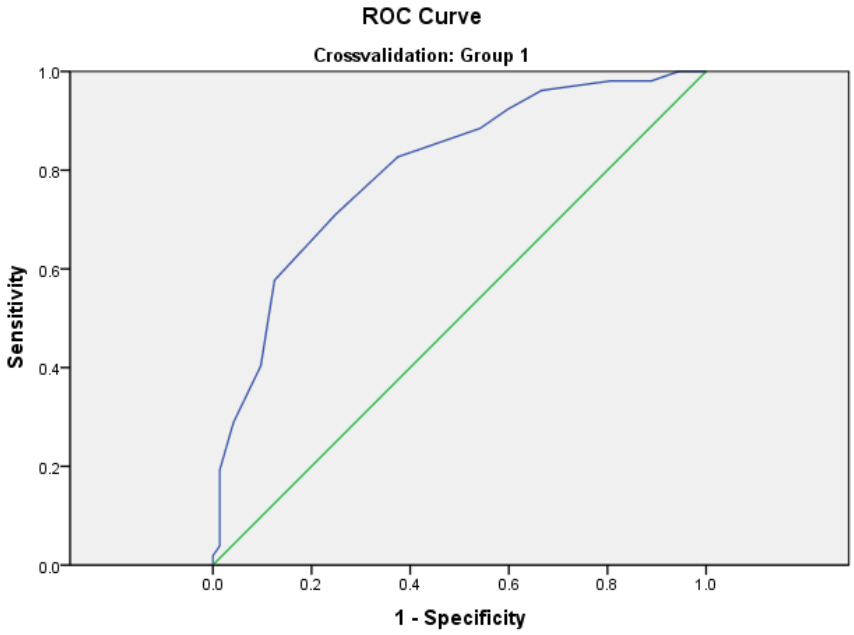
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Fall09Voc has at least one tie between the positive actual state group and the negative actual state group.

**Area Under the Curve[c,d]**

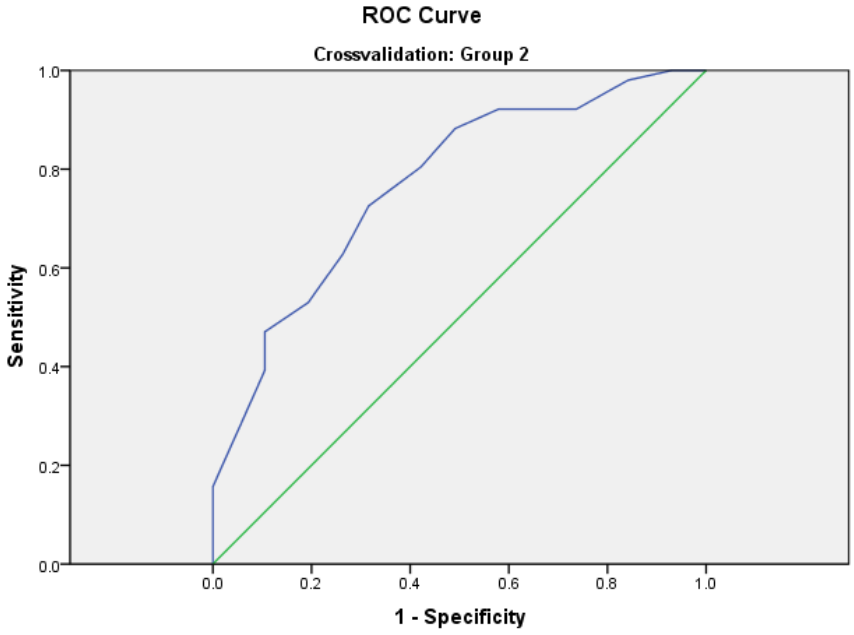
Test Result Variable(s):Fall09Voc

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .802 | .040 | .000 | .724 | .880 |
| Group 2 | .770 | .045 | .000 | .682 | .858 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Fall09Voc has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Fall09Voc has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.




Diagonal segments are produced by ties.




Diagonal segments are produced by ties.

**Grade 6**
**Fall VOC Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 1.00 | - | - | .000 | 1.000 |
| 3.50 | - | - | .020 | 1.000 |
| 5.00 | .000 | 1.000 | - | - |
| 5.50 | - | - | .039 | 1.000 |
| 6.50 | .019 | 1.000 | .098 | 1.000 |
| 7.50 | .038 | .986 | .137 | 1.000 |
| 8.50 | .135 | .986 | .157 | 1.000 |
| 9.50 | .192 | .986 | .314 | .930 |
| 10.50 | .288 | .958 | .392 | .895 |
| 11.50 | .404 | .903 | .471 | .895 |
| 12.50 | .577 | .875 | .529 | .807 |
| 13.50 | .712 | .750 | .627 | .737 |
| **14.50** | **.750** | **.708** | **.725** | **.684** |
| 15.50 | .827 | .625 | .804 | .579 |
| 16.50 | .885 | .458 | .882 | .509 |
| 17.50 | .923 | .403 | .922 | .421 |
| 18.50 | .962 | .333 | .922 | .263 |
| 19.50 | .981 | .194 | .961 | .193 |
| 20.50 | .981 | .111 | .980 | .158 |
| 21.50 | 1.000 | .056 | 1.000 | .070 |
| 22.50 | 1.000 | .014 | 1.000 | .035 |
| 24.00 | 1.000 | .000 | 1.000 | .000 |

**Grade 6**
**Winter PRF Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 54 |
| | Negative | 73 |
| | Missing | 466 |
| Group 2 | Positive[a] | 54 |
| | Negative | 60 |
| | Missing | 478 |

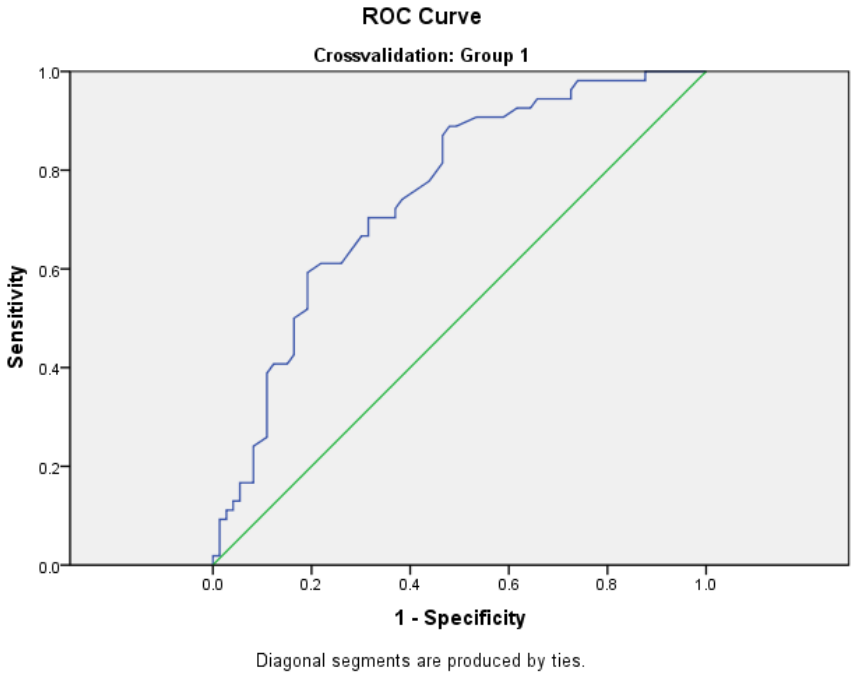
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Wint10PRF has at least one tie between the positive actual state group and the negative actual state group.

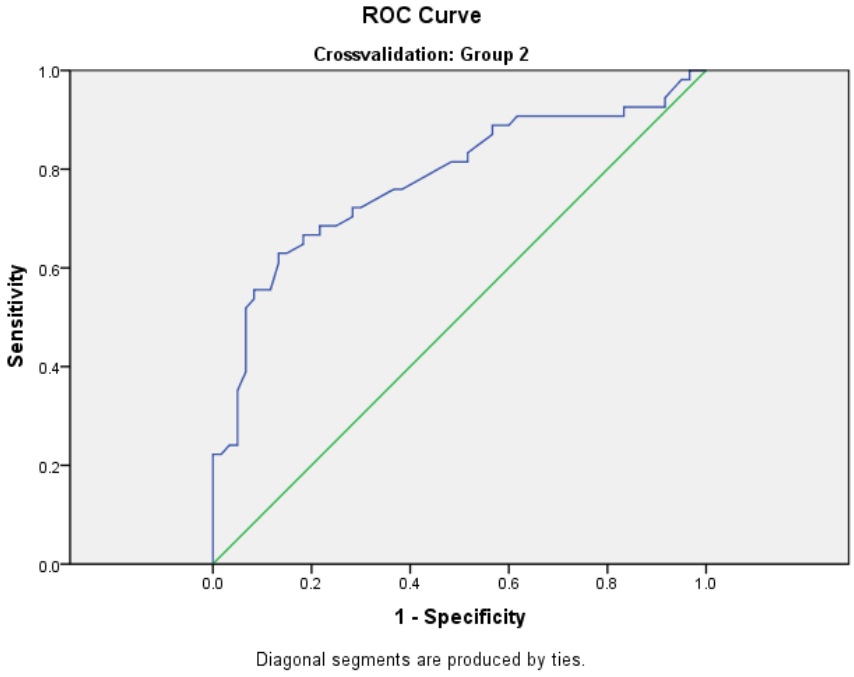
**Area Under the Curve[c,d]**

Test Result Variable(s):Wint10PRF

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .751 | .043 | .000 | .667 | .836 |
| Group 2 | .777 | .045 | .000 | .689 | .866 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Wint10PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Wint10PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.


ROC Curve
Crossvalidation: Group 1
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.


ROC Curve
Crossvalidation: Group 2
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.

**Grade 6**
**Winter PRF Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 64.00 | - | - | .000 | 1.000 |
| 75.50 | - | - | .019 | 1.000 |
| 86.00 | .000 | 1.000 | - | - |
| 90.00 | - | - | .037 | 1.000 |
| 91.50 | .019 | 1.000 | - | - |
| 95.00 | - | - | .056 | 1.000 |
| 96.50 | - | - | .074 | 1.000 |
| 98.00 | .019 | .986 | - | - |
| 102.00 | .056 | .986 | .093 | 1.000 |
| 105.00 | .093 | .986 | - | - |
| 106.50 | .093 | .973 | - | - |
| 108.00 | .111 | .973 | - | - |
| 108.50 | - | - | .111 | 1.000 |
| 109.50 | .111 | .959 | - | - |
| 111.50 | .130 | .959 | .130 | 1.000 |
| 113.50 | .130 | .945 | - | - |
| 114.00 | - | - | .148 | 1.000 |
| 115.00 | .167 | .945 | - | - |
| 116.00 | - | - | .185 | 1.000 |
| 117.50 | .167 | .932 | - | - |
| 118.00 | - | - | .204 | 1.000 |
| 119.50 | - | - | .222 | 1.000 |
| 121.00 | .167 | .918 | .222 | .983 |
| 122.50 | - | - | .241 | .967 |
| 124.00 | .185 | .918 | - | - |
| 124.50 | - | - | .241 | .950 |
| 127.00 | .204 | .918 | - | - |
| 128.50 | - | - | .259 | .950 |
| 130.50 | .241 | .918 | - | - |
| 131.50 | - | - | .278 | .950 |
| 133.00 | - | - | .296 | .950 |
| 134.00 | .259 | .890 | - | - |
| 135.00 | - | - | .315 | .950 |
| 137.00 | - | - | .352 | .950 |
| 138.00 | .315 | .890 | - | - |
| 138.50 | - | - | .389 | .933 |

**Grade 6**
**Winter PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 139.50 | - | - | .407 | .933 |
| 140.50 | - | - | .444 | .933 |
| 141.00 | .333 | .890 | - | - |
| 143.00 | .389 | .890 | - | - |
| 143.50 | - | - | .463 | .933 |
| 145.00 | .407 | .877 | - | - |
| 146.50 | - | - | .519 | .933 |
| 147.00 | .407 | .849 | - | - |
| 148.50 | .426 | .836 | .537 | .917 |
| 149.50 | .444 | .836 | - | - |
| 151.00 | .463 | .836 | - | - |
| 152.50 | .481 | .836 | - | - |
| 153.00 | - | - | .556 | .917 |
| 153.50 | .500 | .836 | - | - |
| 155.00 | .519 | .808 | - | - |
| 156.50 | .593 | .808 | .556 | .883 |
| 157.50 | .611 | .781 | .611 | .867 |
| 158.50 | .611 | .740 | - | - |
| 159.00 | - | - | .630 | .867 |
| 159.50 | .630 | .726 | - | - |
| 160.50 | - | - | .630 | .850 |
| 161.50 | - | - | .648 | .817 |
| 162.50 | - | - | .667 | .817 |
| 163.50 | .667 | .699 | - | - |
| 164.00 | - | - | .667 | .800 |
| 165.50 | - | - | .667 | .783 |
| 166.50 | - | - | .685 | .783 |
| 167.50 | - | - | .685 | .767 |
| 168.00 | .667 | .685 | - | - |
| 169.00 | - | - | .685 | .750 |
| 169.50 | .704 | .685 | - | - |
| 170.50 | .704 | .671 | - | - |
| 171.00 | - | - | .704 | .717 |
| 172.50 | .704 | .630 | **.722** | **.717** |
| 174.00 | - | - | .722 | .700 |

**Grade 6**
**Winter PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 174.50 | .722 | .630 | - | - |
| **175.50** | **.741** | **.616** | - | - |
| 176.00 | - | - | .759 | .633 |
| 176.50 | .778 | .562 | - | - |
| 177.50 | .815 | .534 | .759 | .617 |
| 178.50 | .852 | .534 | .796 | .550 |
| 179.50 | .870 | .534 | - | - |
| 180.00 | - | - | .815 | .517 |
| 180.50 | .889 | .521 | - | - |
| 181.50 | - | - | .815 | .483 |
| 182.50 | - | - | .833 | .483 |
| 183.50 | .889 | .507 | .870 | .433 |
| 184.50 | - | - | .889 | .433 |
| 185.50 | - | - | .889 | .417 |
| 186.50 | .907 | .466 | .889 | .400 |
| 187.50 | .907 | .452 | - | - |
| 188.00 | - | - | .907 | .383 |
| 188.50 | .907 | .425 | - | - |
| 189.50 | .907 | .411 | .907 | .367 |
| 190.50 | - | - | .907 | .333 |
| 191.50 | .926 | .384 | .907 | .317 |
| 192.50 | - | - | .907 | .283 |
| 193.50 | - | - | .907 | .267 |
| 194.50 | - | - | .907 | .250 |
| 193.50 | .926 | .356 | - | - |
| 194.50 | .944 | .342 | - | - |
| 196.00 | - | - | .907 | .233 |
| 196.50 | .944 | .329 | - | - |
| 197.50 | - | - | .907 | .217 |
| 199.00 | .944 | .301 | - | - |
| 199.50 | - | - | .907 | .183 |
| 201.00 | .944 | .288 | - | - |
| 202.50 | .944 | .274 | - | - |
| 204.00 | - | - | .907 | .167 |
| 204.50 | .963 | .274 | - | - |

**Grade 6**
**Winter PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 207.00 | .981 | .260 | - | - |
| 208.00 | - | - | .926 | .167 |
| 209.50 | .981 | .247 | .926 | .150 |
| 210.50 | - | - | .926 | .133 |
| 211.50 | .981 | .233 | - | - |
| 212.00 | - | - | .926 | .100 |
| 213.00 | .981 | .219 | - | - |
| 214.00 | - | - | .926 | .083 |
| 215.00 | .981 | .205 | - | - |
| 216.50 | .981 | .192 | - | - |
| 217.00 | - | - | .944 | .083 |
| 218.00 | .981 | .178 | - | - |
| 219.50 | .981 | .151 | - | - |
| 220.50 | .981 | .123 | - | - |
| 221.00 | - | - | .963 | .067 |
| 223.00 | 1.000 | .123 | - | - |
| 225.00 | - | - | .981 | .050 |
| 225.50 | 1.000 | .110 | - | - |
| 227.00 | 1.000 | .096 | - | - |
| 228.00 | - | - | .981 | .033 |
| 231.00 | - | - | 1.000 | .033 |
| 231.50 | 1.000 | .082 | - | - |
| 235.50 | 1.000 | .068 | - | - |
| 239.00 | 1.000 | .055 | - | - |
| 240.00 | - | - | 1.000 | .017 |
| 248.00 | - | - | 1.000 | .000 |
| 249.50 | 1.000 | .041 | - | - |
| 258.00 | 1.000 | .027 | - | - |
| 260.00 | 1.000 | .000 | - | - |

**Grade 6**
**Winter MCRC Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 58 |
| | Negative | 80 |
| | Missing | 455 |
| Group 2 | Positive[a] | 59 |
| | Negative | 63 |
| | Missing | 470 |

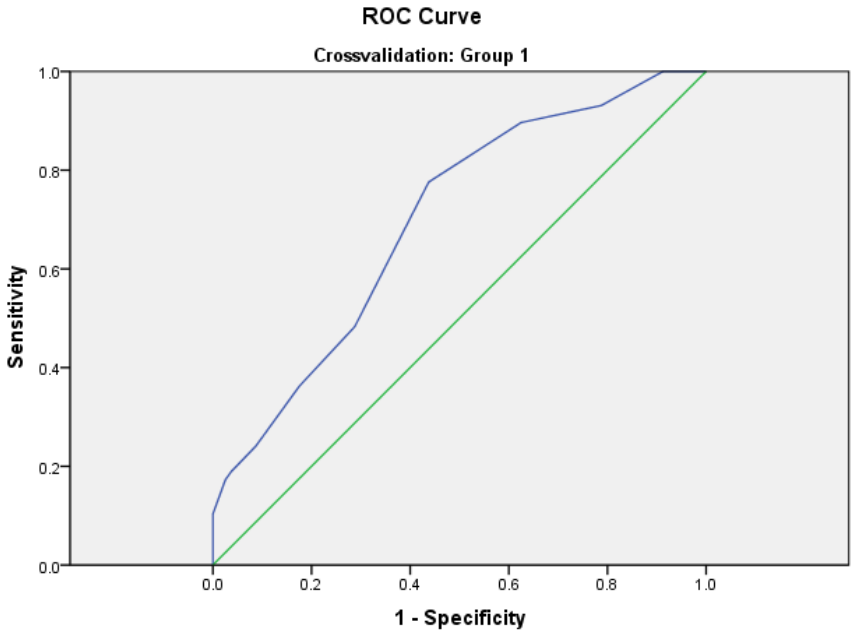
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Wint10MCRC has at least one tie between the positive actual state group and the negative actual state group.

**Area Under the Curve[c,d]**

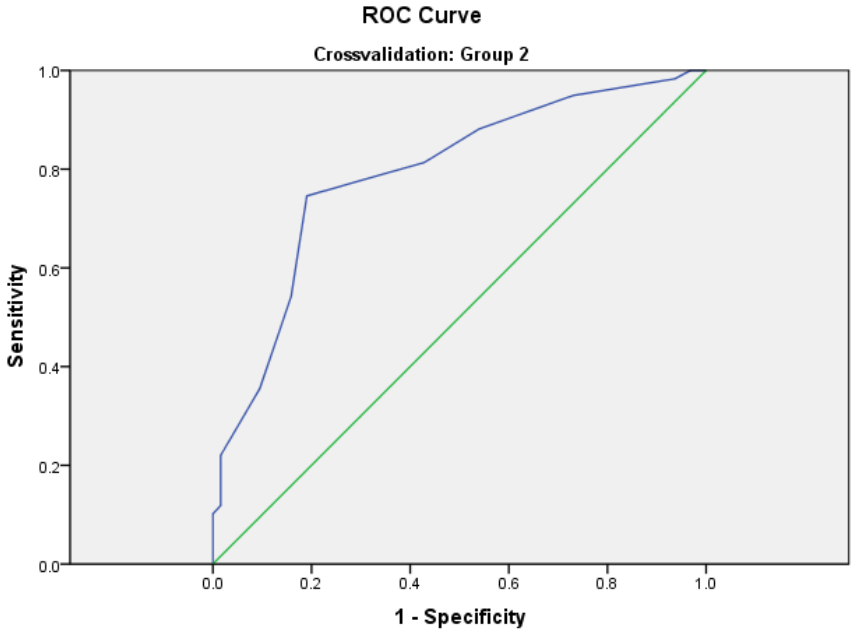
Test Result Variable(s):Wint10MCRC

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .698 | .044 | .000 | .611 | .785 |
| Group 2 | .790 | .041 | .000 | .709 | .872 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Wint10MCRC has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Wint10MCRC has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.




Diagonal segments are produced by ties.




Diagonal segments are produced by ties.

**Grade 6**
**Winter MCRC Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| -1.00 | .000 | 1.000 | .000 | 1.000 |
| 2.50 | - | - | .017 | 1.000 |
| 3.00 | .017 | 1.000 | - | - |
| 5.50 | - | - | .051 | 1.000 |
| 6.50 | .069 | 1.000 | .085 | 1.000 |
| 7.50 | .086 | 1.000 | .102 | 1.000 |
| 8.50 | .103 | 1.000 | .119 | .984 |
| 9.50 | .172 | .975 | .153 | .984 |
| 10.50 | .190 | .963 | .220 | .984 |
| 11.50 | .241 | .913 | .356 | .905 |
| 12.50 | .362 | .825 | .542 | .841 |
| **13.50** | .483 | .713 | **.746** | **.810** |
| **14.50** | **.776** | **.563** | .814 | .571 |
| 15.50 | .897 | .375 | .881 | .460 |
| 16.50 | .931 | .213 | .949 | .270 |
| 17.50 | 1.000 | .088 | .983 | .063 |
| 18.50 | 1.000 | .038 | 1.000 | .032 |
| 20.00 | 1.000 | .000 | 1.000 | .000 |

**Grade 6**
**Spring PRF Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 15 |
| | Negative | 13 |
| | Missing | 565 |
| Group 2 | Positive[a] | 20 |
| | Negative | 13 |
| | Missing | 559 |

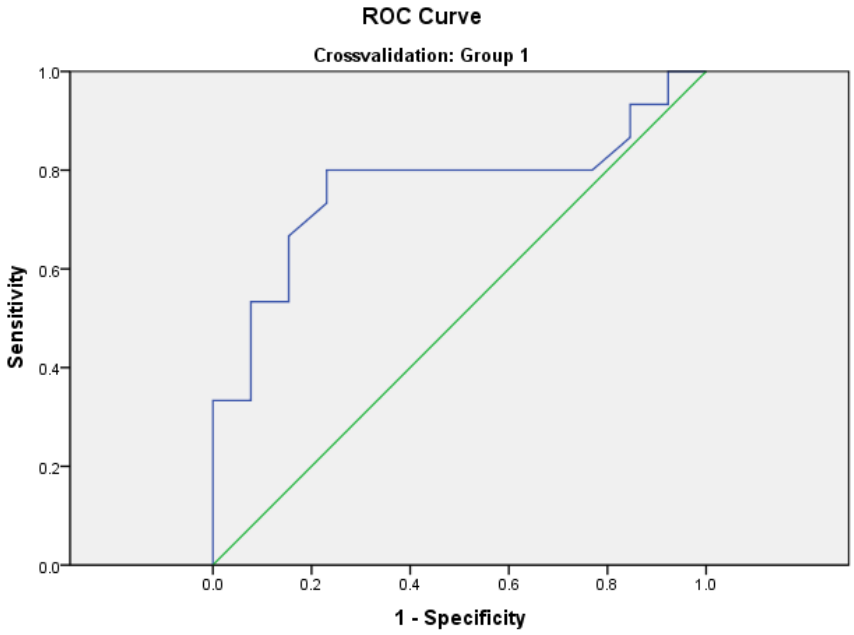
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Spr10PRF has at least one tie between the positive actual state group and the negative actual state group.

**Area Under the Curve[c,d]**

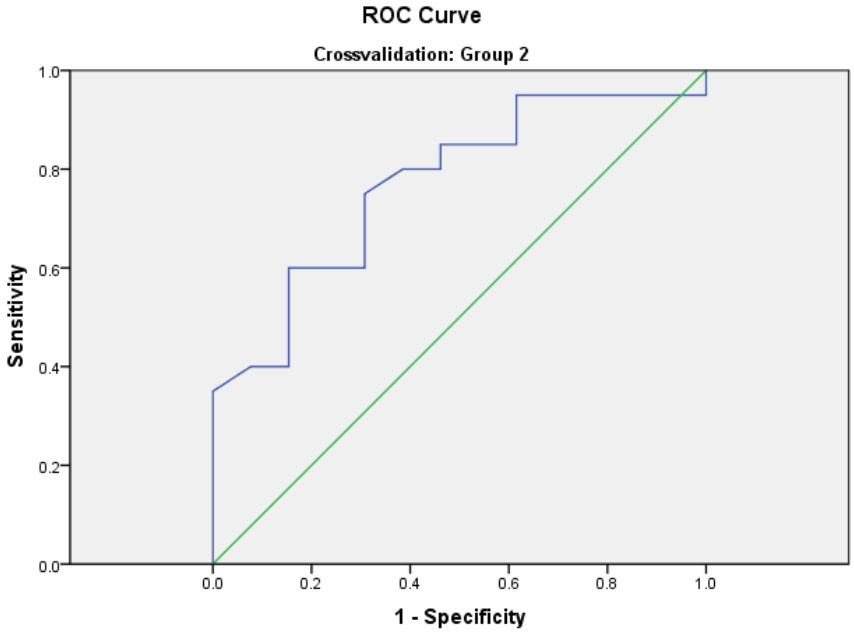
Test Result Variable(s):Spr10PRF

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .764 | .096 | .018 | .577 | .951 |
| Group 2 | .769 | .083 | .010 | .607 | .932 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Spr10PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Spr10PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.




Diagonal segments are produced by ties.




Diagonal segments are produced by ties.

**Grade 6**
**Spring PRF Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 79.00 | .000 | 1.000 | - | - |
| 84.50 | .067 | 1.000 | - | - |
| 93.50 | .133 | 1.000 | - | - |
| 94.00 | - | - | .000 | 1.000 |
| 100.50 | .200 | 1.000 | - | - |
| 101.00 | - | - | .050 | 1.000 |
| 104.00 | .267 | 1.000 | - | - |
| 106.00 | .333 | 1.000 | - | - |
| 108.00 | - | - | .100 | 1.000 |
| 110.00 | .333 | .923 | - | - |
| 111.50 | - | - | .150 | 1.000 |
| 116.50 | - | - | .200 | 1.000 |
| 119.50 | - | - | .250 | 1.000 |
| 122.00 | .467 | .923 | - | - |
| 125.00 | - | - | .300 | 1.000 |
| 138.00 | .533 | .923 | - | - |
| 141.00 | - | - | .350 | 1.000 |
| 148.00 | .533 | .846 | - | - |
| 153.00 | - | - | .400 | .923 |
| 155.00 | - | - | .400 | .846 |
| 155.50 | .600 | .846 | - | - |
| 158.50 | - | - | .450 | .846 |
| 161.00 | .667 | .846 | - | - |
| 161.50 | - | - | .500 | .846 |
| 163.50 | .733 | .769 | .550 | .846 |
| 166.00 | - | - | .600 | .846 |
| **167.50** | **.800** | **.769** | - | - |
| 169.00 | - | - | .600 | .769 |
| 172.50 | .800 | .615 | .600 | .692 |
| 177.00 | .800 | .538 | - | - |
| 180.00 | .800 | .462 | - | - |
| 180.50 | - | - | .650 | .692 |
| 181.50 | .800 | .385 | - | - |
| 186.00 | .800 | .308 | - | - |
| 187.50 | - | - | .700 | .692 |

**Grade 6**
**Spring PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| **191.00** | | | **.750** | **.692** |
| 192.00 | .800 | .231 | - | - |
| 195.50 | .867 | .154 | - | - |
| 196.50 | - | - | .800 | .615 |
| 200.00 | - | - | .800 | .538 |
| 202.50 | - | - | .850 | .538 |
| 205.50 | - | - | .850 | .462 |
| 214.00 | - | - | .850 | .385 |
| 222.50 | .933 | .154 | - | - |
| 226.00 | - | - | .900 | .385 |
| 232.50 | - | - | .950 | .385 |
| 241.00 | - | - | .950 | .231 |
| 251.50 | .933 | .077 | - | - |
| 257.00 | - | - | .950 | .154 |
| 269.00 | - | - | .950 | .077 |
| 276.00 | - | - | .950 | .000 |
| 277.00 | 1.000 | .077 | - | - |
| 281.00 | - | - | 1.000 | .000 |
| 300.00 | 1.000 | .000 | - | - |

**Grade 6**
**Spring MCRC Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 168 |
| | Negative | 289 |
| | Missing | 136 |
| Group 2 | Positive[a] | 182 |
| | Negative | 258 |
| | Missing | 152 |

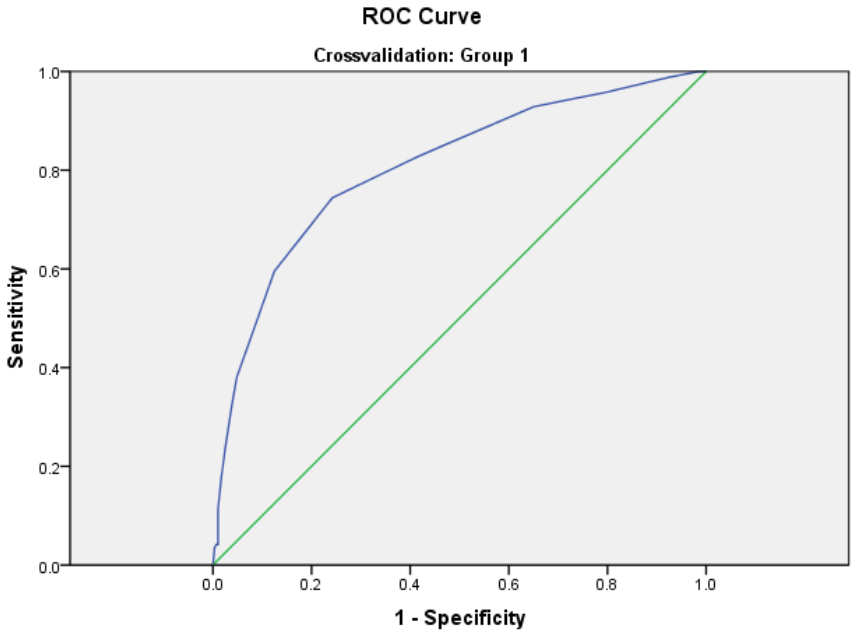
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Spr10MCRC has at least one tie between the positive actual state group and the negative actual state group.

**Area Under the Curve[c,d]**

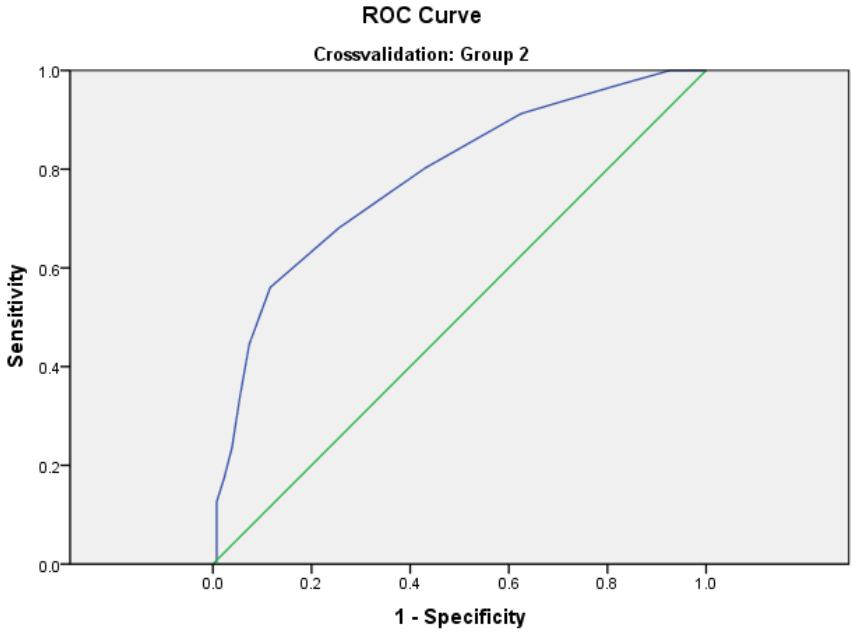
Test Result Variable(s):Spr10MCRC

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .806 | .022 | .000 | .763 | .849 |
| Group 2 | .784 | .022 | .000 | .740 | .828 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Spr10MCRC has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Spr10MCRC has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.




Diagonal segments are produced by ties.




Diagonal segments are produced by ties.

**Grade 6**
**Spring MCRC Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| -1.00 | .000 | 1.000 | .000 | 1.000 |
| 1.50 | - | - | .005 | .992 |
| 2.00 | .036 | .997 | - | - |
| 3.50 | - | - | .016 | .992 |
| 4.50 | .042 | .993 | .027 | .992 |
| 5.50 | .042 | .990 | .055 | .992 |
| 6.50 | .065 | .990 | .060 | .992 |
| 7.50 | .113 | .990 | .104 | .992 |
| 8.50 | .179 | .983 | .126 | .992 |
| 9.50 | .232 | .976 | .176 | .977 |
| 10.50 | .321 | .962 | .236 | .961 |
| 11.50 | .381 | .952 | .335 | .946 |
| 12.50 | .458 | .924 | .445 | .926 |
| 13.50 | .595 | .875 | .560 | .884 |
| **14.50** | **.744** | **.758** | .681 | .744 |
| **15.50** | .827 | .585 | **.802** | **.570** |
| 16.50 | .929 | .349 | .912 | .376 |
| 17.50 | .958 | .201 | .962 | .209 |
| 18.50 | .988 | .076 | 1.000 | .074 |
| 19.50 | 1.000 | .014 | 1.000 | .016 |
| 21.00 | 1.000 | .000 | 1.000 | .000 |

**Grade 6**
**Spring VOC Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 146 |
| | Negative | 267 |
| | Missing | 180 |
| Group 2 | Positive[a] | 172 |
| | Negative | 219 |
| | Missing | 201 |

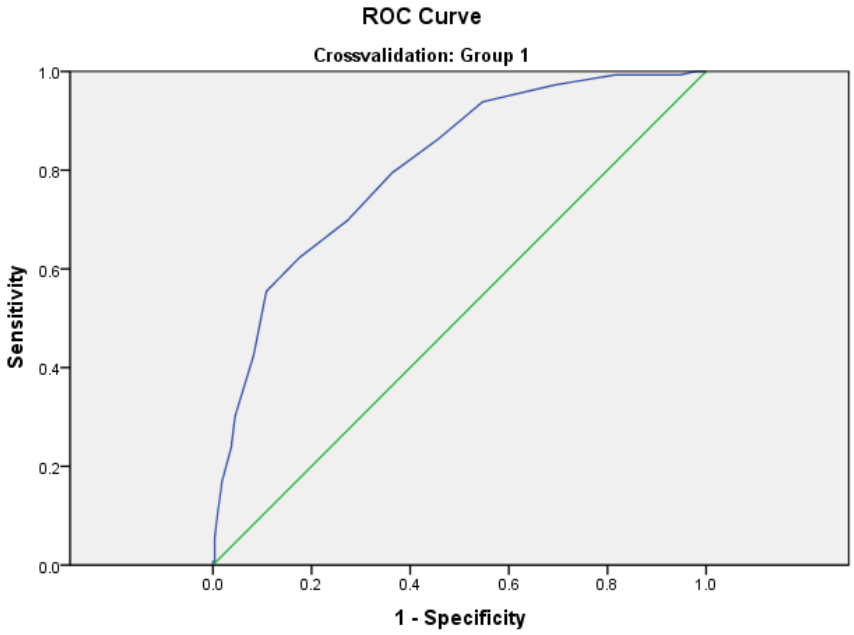
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Spr10Voc has at least one tie between the positive actual state group and the negative actual state group.

**Area Under the Curve[c,d]**

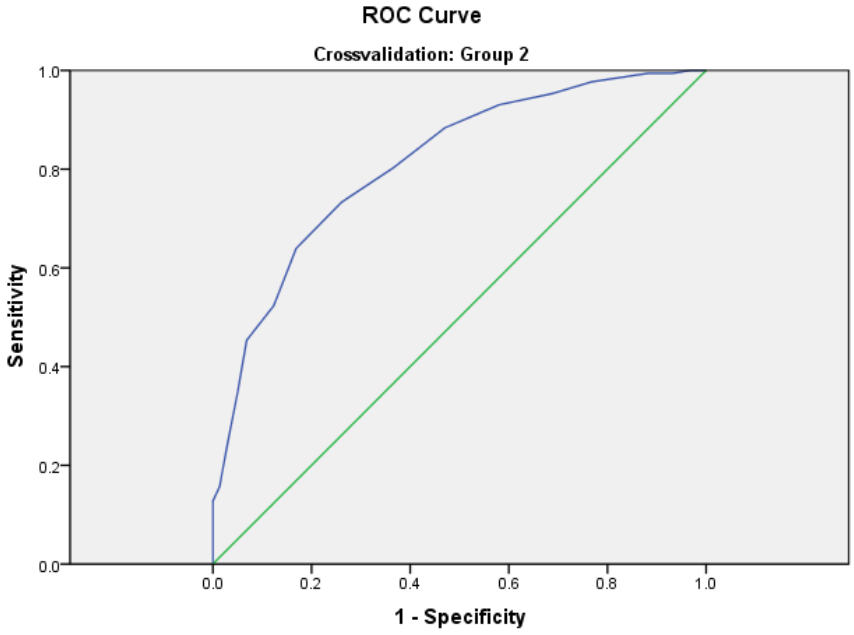
Test Result Variable(s):Spr10Voc

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .807 | .022 | .000 | .765 | .850 |
| Group 2 | .812 | .022 | .000 | .770 | .854 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Spr10Voc has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Spr10Voc has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.




Diagonal segments are produced by ties.




Diagonal segments are produced by ties.

**Grade 6**
**Spring VOC Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| -1.00 | - | - | .000 | 1.000 |
| .00 | .000 | 1.000 | - | - |
| 1.50 | .007 | 1.000 | - | - |
| 2.00 | - | - | .006 | 1.000 |
| 3.50 | .007 | .996 | - | - |
| 4.50 | - | - | .023 | 1.000 |
| 5.50 | .014 | .996 | - | - |
| 6.00 | - | - | .035 | 1.000 |
| 6.50 | .027 | .996 | - | - |
| 7.50 | .055 | .996 | .070 | 1.000 |
| 8.50 | .089 | .993 | .128 | 1.000 |
| 9.50 | .171 | .981 | .157 | .986 |
| 10.50 | .240 | .963 | .233 | .973 |
| 11.50 | .301 | .955 | .349 | .950 |
| 12.50 | .425 | .918 | .453 | .932 |
| 13.50 | .555 | .891 | .523 | .877 |
| 14.50 | .623 | .824 | .640 | .831 |
| **15.50** | .699 | .727 | **.733** | **.740** |
| **16.50** | **.795** | **.637** | .802 | .635 |
| 17.50 | .863 | .543 | .884 | .530 |
| 18.50 | .938 | .453 | .930 | .420 |
| 19.50 | .973 | .307 | .953 | .311 |
| 20.50 | .993 | .184 | .977 | .233 |
| 21.50 | .993 | .101 | .994 | .119 |
| 22.50 | .993 | .052 | .994 | .068 |
| 23.50 | 1.000 | .022 | 1.000 | .032 |
| 24.50 | 1.000 | .011 | 1.000 | .009 |
| 26.00 | 1.000 | .000 | 1.000 | .000 |

**Grade 7**
**Fall PRF Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 38 |
| | Negative | 60 |
| | Missing | 506 |
| Group 2 | Positive[a] | 33 |
| | Negative | 67 |
| | Missing | 503 |

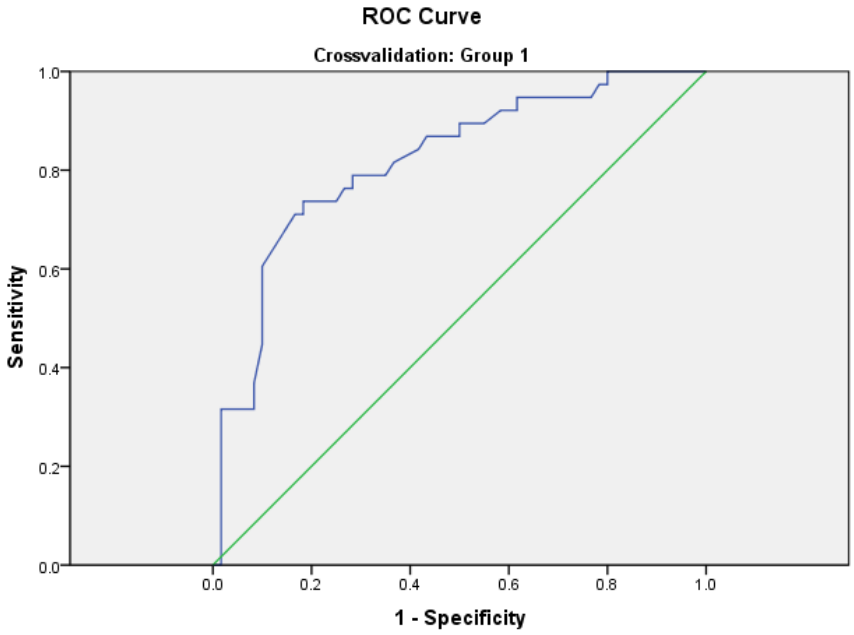
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Fall09PRF has at least one tie between the positive actual state group and the negative actual state group.

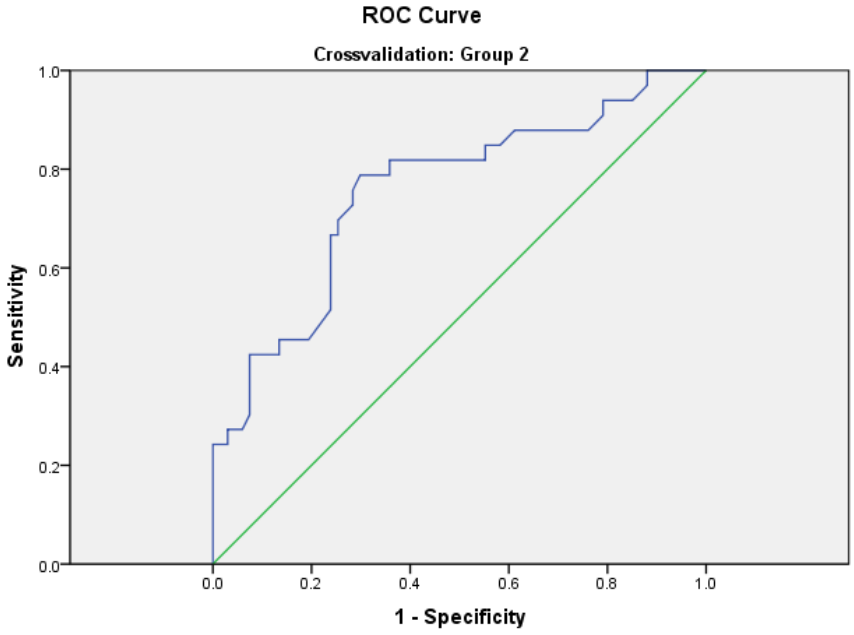
**Area Under the Curve[c,d]**

Test Result Variable(s):Fall09PRF

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .818 | .044 | .000 | .730 | .905 |
| Group 2 | .755 | .053 | .000 | .651 | .860 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Fall09PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Fall09PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.


ROC Curve
Crossvalidation: Group 1
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.


ROC Curve
Crossvalidation: Group 2
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.

**Grade 7**
**Fall PRF Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 71.00 | - | - | .000 | 1.000 |
| 72.50 | - | - | .030 | 1.000 |
| 75.50 | - | - | .061 | 1.000 |
| 85.50 | - | - | .091 | 1.000 |
| 90.00 | .000 | 1.000 | - | - |
| 91.50 | .000 | .983 | - | - |
| 93.50 | .026 | .983 | - | - |
| 95.50 | - | - | .121 | 1.000 |
| 99.50 | .053 | .983 | .152 | 1.000 |
| 101.50 | - | - | .182 | 1.000 |
| 102.50 | - | - | .212 | 1.000 |
| 104.50 | .079 | .983 | - | - |
| 105.50 | .105 | .983 | - | - |
| 106.00 | - | - | .242 | 1.000 |
| 109.00 | .132 | .983 | - | - |
| 111.50 | - | - | .242 | .985 |
| 113.50 | .158 | .983 | - | - |
| 114.50 | - | - | .242 | .970 |
| 115.50 | .184 | .983 | - | - |
| 116.00 | - | - | .273 | .970 |
| 116.50 | .237 | .983 | - | - |
| 117.50 | - | - | .273 | .955 |
| 119.00 | .263 | .983 | - | - |
| 119.50 | - | - | .273 | .940 |
| 121.50 | .316 | .983 | .303 | .925 |
| 122.50 | .316 | .967 | .394 | .925 |
| 123.50 | .316 | .950 | - | - |
| 124.00 | - | - | .424 | .925 |
| 124.50 | .316 | .933 | - | - |
| 125.50 | .316 | .917 | .424 | .866 |
| 126.50 | .368 | .917 | .455 | .866 |
| 128.00 | .447 | .900 | .455 | .836 |
| 129.50 | .474 | .900 | - | - |
| 130.00 | - | - | .455 | .806 |
| 130.50 | .526 | .900 | - | - |

**Grade 7**
**Fall PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 131.50 | .605 | .900 | .515 | .761 |
| 132.50 | .711 | .833 | .545 | .761 |
| 133.50 | .711 | .817 | .667 | .761 |
| 134.50 | .737 | .817 | .667 | .746 |
| 135.50 | .737 | .800 | .697 | .746 |
| 136.50 | - | - | .727 | .716 |
| 137.00 | .737 | .783 | - | - |
| 137.50 | - | - | .758 | .716 |
| **138.50** | - | - | **.788** | **.701** |
| 139.50 | .737 | .767 | .788 | .687 |
| 141.50 | - | - | .788 | .672 |
| 143.00 | .737 | .750 | - | - |
| 143.50 | - | - | .788 | .657 |
| 144.50 | - | - | .788 | .642 |
| 145.50 | - | - | .818 | .642 |
| 146.00 | .763 | .733 | - | - |
| 146.50 | - | - | .818 | .612 |
| 147.50 | .763 | .717 | .818 | .582 |
| **148.50** | **.789** | **.717** | .818 | .567 |
| 149.50 | .789 | .700 | .818 | .522 |
| 150.50 | .789 | .650 | - | - |
| 151.50 | .816 | .633 | .818 | .493 |
| 152.50 | .842 | .583 | - | - |
| 153.50 | - | - | .818 | .478 |
| 154.00 | .868 | .567 | - | - |
| 154.50 | - | - | .818 | .448 |
| 155.50 | .868 | .533 | .848 | .448 |
| 156.50 | - | - | .848 | .418 |
| 157.00 | .868 | .517 | - | - |
| 158.00 | - | - | .879 | .388 |
| 158.50 | .868 | .500 | - | - |
| 159.50 | .895 | .500 | - | - |
| 160.50 | - | - | .879 | .358 |
| 161.00 | .895 | .483 | - | - |
| 163.50 | .895 | .467 | - | - |

**Grade 7**
**Fall PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 164.00 | - | - | .879 | .343 |
| 165.50 | .895 | .450 | - | - |
| 166.50 | - | - | .879 | .328 |
| 167.00 | .921 | .417 | - | - |
| 167.50 | - | - | .879 | .313 |
| 168.50 | - | - | .879 | .299 |
| 169.00 | .921 | .400 | - | - |
| 169.50 | - | - | .879 | .284 |
| 170.50 | .921 | .383 | .879 | .269 |
| 171.50 | .947 | .383 | .879 | .239 |
| 172.50 | .947 | .367 | .909 | .209 |
| 173.50 | .947 | .317 | .939 | .209 |
| 174.50 | .947 | .283 | .939 | .179 |
| 175.50 | .947 | .267 | .939 | .164 |
| 177.50 | .947 | .250 | - | - |
| 178.50 | - | - | .939 | .149 |
| 179.50 | .947 | .233 | - | - |
| 181.00 | .974 | .217 | - | - |
| 181.50 | - | - | .970 | .119 |
| 182.50 | - | - | 1.000 | .119 |
| 183.00 | .974 | .200 | - | - |
| 185.00 | - | - | 1.000 | .104 |
| 188.00 | 1.000 | .200 | - | - |
| 189.00 | - | - | 1.000 | .075 |
| 191.50 | - | - | 1.000 | .060 |
| 192.50 | 1.000 | .183 | - | - |
| 193.00 | - | - | 1.000 | .045 |
| 195.00 | 1.000 | .167 | - | - |
| 198.00 | 1.000 | .133 | - | - |
| 199.50 | 1.000 | .117 | - | - |
| 201.00 | 1.000 | .083 | 1.000 | .030 |
| 202.50 | 1.000 | .067 | - | - |
| 204.00 | 1.000 | .050 | - | - |
| 223.00 | 1.000 | .033 | - | - |
| 224.00 | - | - | 1.000 | .015 |
| 241.00 | - | - | 1.000 | .000 |
| 249.00 | 1.000 | .017 | - | - |
| 258.00 | 1.000 | .000 | - | - |

**Grade 7**
**Fall MCRC Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 37 |
| | Negative | 64 |
| | Missing | 503 |
| Group 2 | Positive[a] | 39 |
| | Negative | 71 |
| | Missing | 493 |

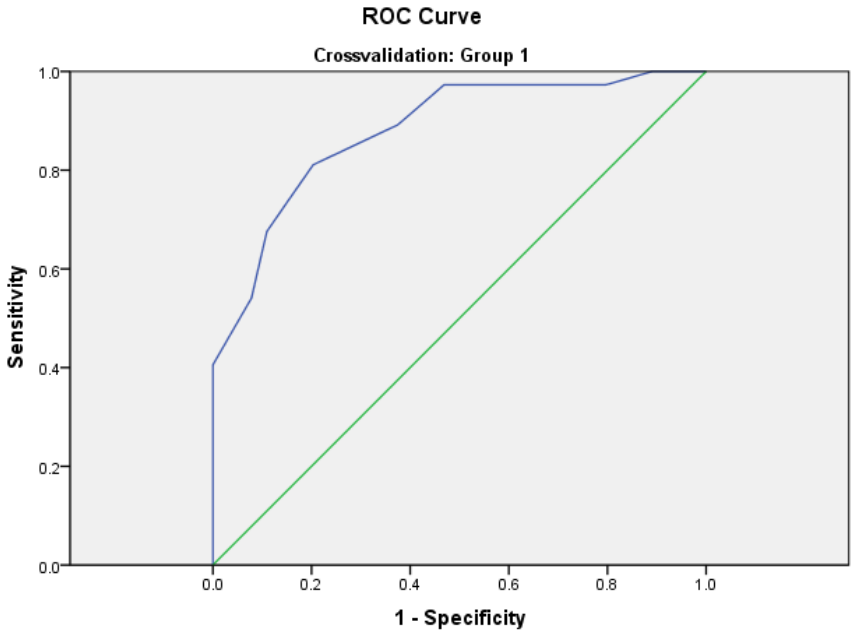
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Fall09MCRC has at least one tie between the positive actual state group and the negative actual state group.

**Area Under the Curve[c,d]**

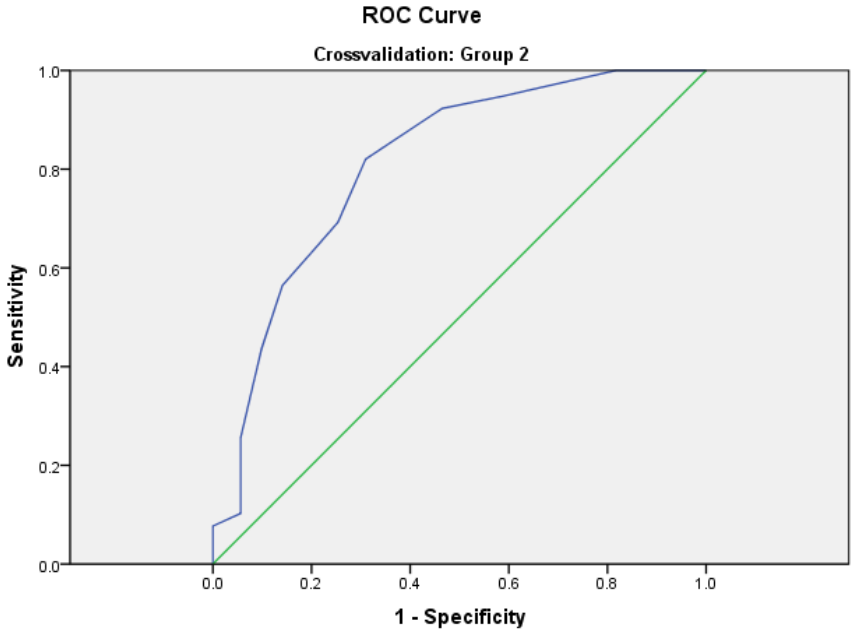
Test Result Variable(s):Fall09MCRC

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .880 | .035 | .000 | .812 | .949 |
| Group 2 | .811 | .041 | .000 | .730 | .891 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Fall09MCRC has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Fall09MCRC has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.




Diagonal segments are produced by ties.




Diagonal segments are produced by ties.

**Grade 7**
**Fall MCRC Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| -1.00 | .000 | 1.000 | - | - |
| 2.50 | .027 | 1.000 | - | - |
| 5.00 | - | - | .000 | 1.000 |
| 5.50 | .054 | 1.000 | - | - |
| 6.50 | .108 | 1.000 | .026 | 1.000 |
| 7.50 | .135 | 1.000 | .077 | 1.000 |
| 8.50 | .216 | 1.000 | .103 | .944 |
| 9.50 | .297 | 1.000 | .256 | .944 |
| 10.50 | .405 | 1.000 | .436 | .901 |
| 11.50 | .541 | .922 | .564 | .859 |
| 12.50 | .676 | .891 | .692 | .746 |
| **13.50** | **.811** | **.797** | **.821** | **.690** |
| 14.50 | .892 | .625 | .923 | .535 |
| 15.50 | .973 | .531 | .949 | .408 |
| 16.50 | .973 | .359 | 1.000 | .183 |
| 17.50 | .973 | .203 | 1.000 | .085 |
| 18.50 | 1.000 | .109 | - | - |
| 19.00 | - | - | 1.000 | .000 |
| 19.50 | 1.000 | .031 | - | - |
| 21.00 | 1.000 | .000 | - | - |

**Grade 7**
**Fall VOC Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 38 |
| | Negative | 64 |
| | Missing | 502 |
| Group 2 | Positive[a] | 38 |
| | Negative | 70 |
| | Missing | 495 |

Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.

a. The positive actual state is .00.

b. For split file Crossvalidation = Group 2, the test variable(s): Fall09Voc has at least one tie between the positive actual state group and the negative actual state group.

**Area Under the Curve[c,d]**

Test Result Variable(s):Fall09Voc

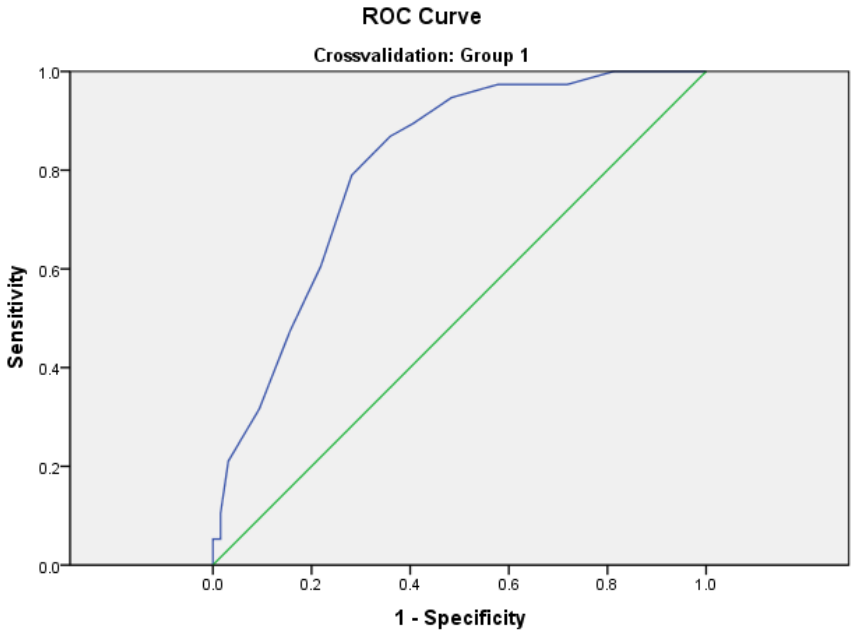
| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .807 | .042 | .000 | .724 | .890 |
| Group 2 | .783 | .043 | .000 | .698 | .868 |

a. Under the nonparametric assumption

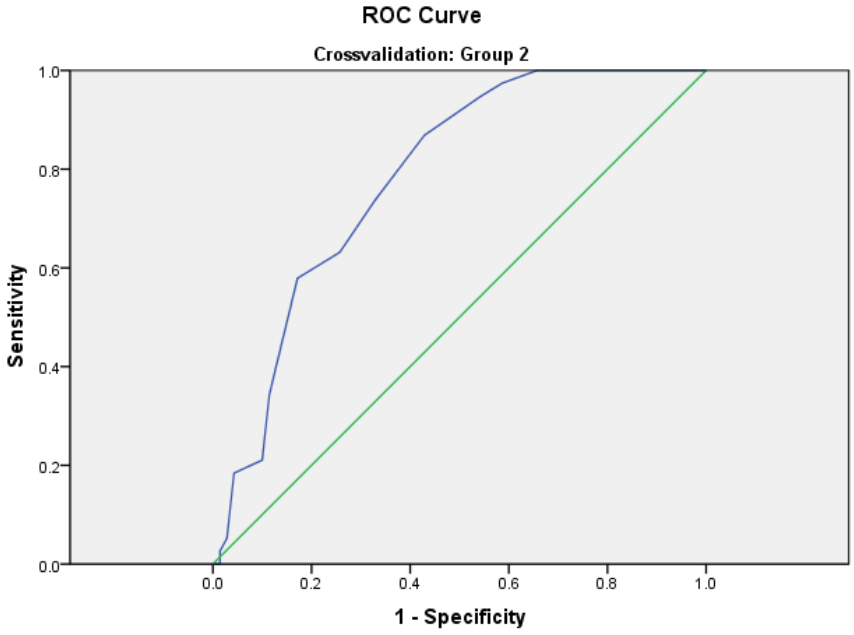
b. Null hypothesis: true area = 0.5

c. For split file Crossvalidation = Group 1, the test result variable(s): Fall09Voc has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.

d. For split file Crossvalidation = Group 2, the test result variable(s): Fall09Voc has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.




Diagonal segments are produced by ties.




Diagonal segments are produced by ties.

**Grade 7**
**Fall VOC Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 2.00 | - | - | .000 | 1.000 |
| 3.00 | .000 | 1.000 | - | - |
| 4.00 | - | - | .000 | .986 |
| 4.50 | .026 | 1.000 | - | - |
| 5.50 | .053 | 1.000 | .026 | .986 |
| 6.50 | .053 | .984 | .053 | .971 |
| 7.50 | .105 | .984 | .184 | .957 |
| 8.50 | .211 | .969 | .211 | .900 |
| 9.50 | .316 | .906 | .342 | .886 |
| 10.50 | .474 | .844 | .579 | .829 |
| 11.50 | .605 | .781 | .632 | .743 |
| **12.50** | **.789** | **.719** | **.737** | **.671** |
| 13.50 | .868 | .641 | .868 | .571 |
| 14.50 | .895 | .594 | .947 | .457 |
| 15.50 | .947 | .516 | .974 | .414 |
| 16.50 | .974 | .422 | 1.000 | .343 |
| 17.50 | .974 | .281 | 1.000 | .229 |
| 18.50 | 1.000 | .188 | 1.000 | .171 |
| 19.50 | 1.000 | .141 | 1.000 | .129 |
| 20.50 | 1.000 | .125 | 1.000 | .100 |
| 21.50 | 1.000 | .109 | 1.000 | .029 |
| 22.50 | 1.000 | .078 | - | - |
| 23.00 | - | - | 1.000 | .014 |
| 23.50 | 1.000 | .047 | - | - |
| 25.00 | 1.000 | .000 | 1.000 | .000 |

**Grade 7**
**Winter PRF Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 90 |
| | Negative | 124 |
| | Missing | 390 |
| Group 2 | Positive[a] | 85 |
| | Negative | 129 |
| | Missing | 389 |

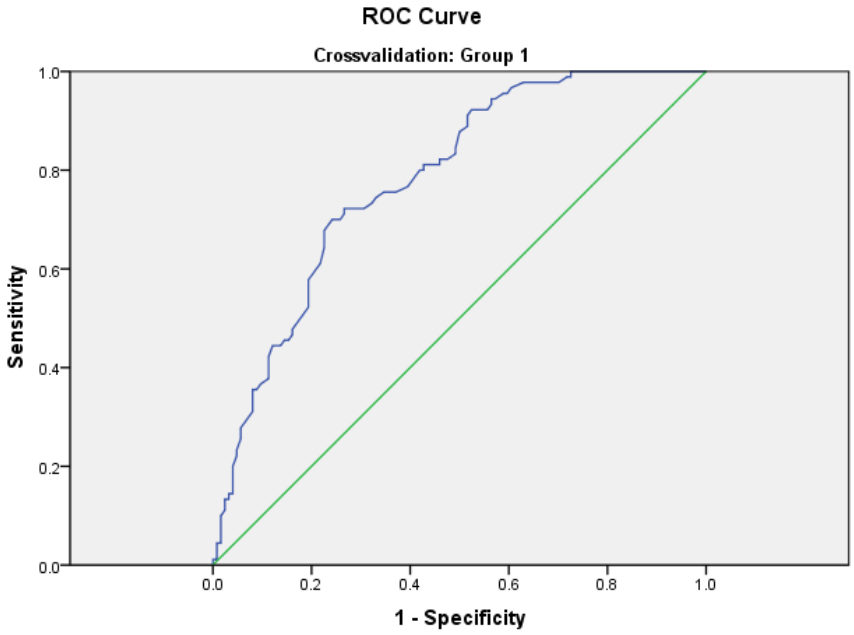
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Wint10PRF has at least one tie between the positive actual state group and the negative actual state group.

**Area Under the Curve[c,d]**

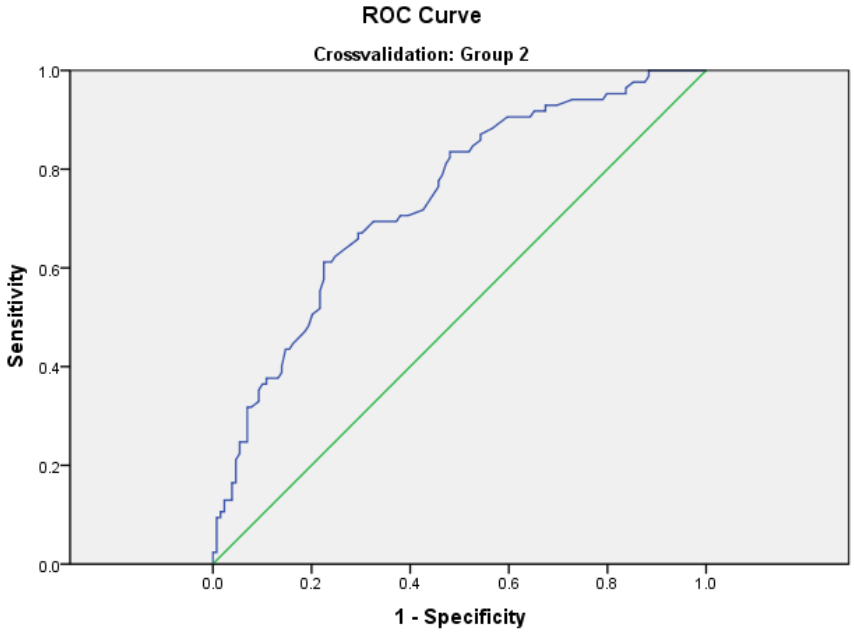
Test Result Variable(s):Wint10PRF

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .782 | .031 | .000 | .722 | .842 |
| Group 2 | .739 | .034 | .000 | .672 | .806 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Wint10PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Wint10PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.




Diagonal segments are produced by ties.




Diagonal segments are produced by ties.

**Grade 7**
**Winter PRF Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 71.00 | .000 | 1.000 | - | - |
| 72.50 | .011 | 1.000 | - | - |
| 78.00 | - | - | .000 | 1.000 |
| 78.50 | .011 | .992 | - | - |
| 84.50 | - | - | .012 | 1.000 |
| 88.00 | .022 | .992 | - | - |
| 91.50 | - | - | .024 | 1.000 |
| 93.50 | - | - | .024 | .992 |
| 95.00 | .033 | .992 | - | - |
| 96.00 | - | - | .035 | .992 |
| 99.00 | .044 | .992 | .059 | .992 |
| 100.50 | - | - | .071 | .992 |
| 101.50 | .044 | .984 | .094 | .992 |
| 102.50 | - | - | .094 | .984 |
| 103.50 | .056 | .984 | .106 | .984 |
| 104.50 | .067 | .984 | .106 | .977 |
| 105.50 | .078 | .984 | .118 | .977 |
| 106.50 | .100 | .984 | - | - |
| 107.50 | - | - | .129 | .977 |
| 108.00 | .111 | .976 | - | - |
| 109.50 | .122 | .976 | .129 | .969 |
| 110.50 | - | - | .129 | .961 |
| 111.50 | - | - | .165 | .961 |
| 112.00 | .133 | .976 | - | - |
| 112.50 | - | - | .165 | .953 |
| 113.50 | - | - | .176 | .953 |
| 115.00 | .133 | .968 | - | - |
| 116.00 | - | - | .188 | .953 |
| 117.50 | .144 | .968 | - | - |
| 118.50 | - | - | .212 | .953 |
| 119.50 | .144 | .960 | .224 | .946 |
| 121.00 | .156 | .960 | .235 | .946 |
| 122.50 | .167 | .960 | .247 | .946 |
| 123.50 | - | - | .247 | .930 |
| 124.00 | .178 | .960 | - | - |

**Grade 7**
**Winter PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 125.00 | - | - | .259 | .930 |
| 125.50 | .189 | .960 | - | - |
| 126.50 | .200 | .960 | .282 | .930 |
| 127.50 | - | - | .294 | .930 |
| 128.00 | .222 | .952 | - | - |
| 128.50 | - | - | .318 | .930 |
| 129.50 | .233 | .952 | .318 | .922 |
| 130.50 | .256 | .944 | .329 | .907 |
| 131.50 | .278 | .944 | .353 | .907 |
| 132.50 | .311 | .919 | .365 | .899 |
| 133.50 | .322 | .919 | .365 | .891 |
| 134.50 | - | - | .376 | .891 |
| 135.00 | .333 | .919 | - | - |
| 136.50 | .344 | .919 | .376 | .884 |
| 137.50 | .356 | .919 | - | - |
| 138.50 | - | - | .376 | .876 |
| 139.50 | .356 | .911 | .376 | .868 |
| 140.50 | - | - | .388 | .860 |
| 141.50 | .367 | .903 | .400 | .860 |
| 142.50 | .378 | .887 | .435 | .853 |
| 143.50 | - | - | .435 | .845 |
| 144.00 | .422 | .887 | - | - |
| 144.50 | - | - | .447 | .837 |
| 145.50 | .444 | .879 | .471 | .814 |
| 146.50 | .444 | .863 | .482 | .806 |
| 147.50 | .456 | .855 | .506 | .798 |
| 148.50 | .456 | .847 | .518 | .783 |
| 149.50 | - | - | .529 | .783 |
| 150.00 | .467 | .839 | - | - |
| 150.50 | - | - | .553 | .783 |
| 151.50 | .478 | .839 | .576 | .775 |
| 152.50 | - | - | .612 | .775 |
| 153.00 | .500 | .823 | - | - |
| 153.50 | - | - | .612 | .760 |
| 155.00 | .511 | .815 | .624 | .752 |

**Grade 7**
**Winter PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 156.50 | .522 | .806 | .647 | .721 |
| 157.50 | .578 | .806 | .659 | .705 |
| 158.50 | .611 | .782 | .671 | .705 |
| 159.50 | .644 | .774 | .671 | .698 |
| 161.00 | .678 | .774 | .694 | .674 |
| 162.50 | .700 | .758 | .694 | .667 |
| 163.50 | .700 | .742 | - | - |
| 164.00 | - | - | .694 | .659 |
| 165.00 | .711 | .734 | - | - |
| 165.50 | - | - | .694 | .636 |
| **166.50** | **.722** | **.734** | - | - |
| 167.00 | - | - | .694 | .628 |
| 167.50 | .722 | .710 | - | - |
| 168.50 | .722 | .694 | **.706** | **.620** |
| 169.50 | .733 | .677 | .706 | .605 |
| 170.50 | - | - | .718 | .574 |
| 171.00 | .744 | .669 | - | - |
| 171.50 | - | - | .729 | .566 |
| 172.50 | .756 | .653 | .741 | .558 |
| 173.50 | .756 | .629 | .753 | .550 |
| 174.50 | .767 | .605 | .765 | .543 |
| 175.50 | .800 | .581 | .776 | .543 |
| 176.50 | - | - | .788 | .535 |
| 177.00 | .800 | .573 | - | - |
| 177.50 | - | - | .812 | .527 |
| 178.50 | .811 | .573 | .824 | .519 |
| 179.50 | .811 | .548 | .835 | .519 |
| 180.50 | .811 | .540 | .835 | .496 |
| 181.50 | .822 | .540 | .835 | .481 |
| 182.50 | .822 | .532 | .847 | .473 |
| 183.50 | .822 | .524 | .859 | .457 |
| 185.00 | .833 | .508 | .871 | .457 |
| 186.50 | .844 | .508 | .882 | .434 |
| 187.50 | .878 | .500 | .894 | .419 |
| 188.50 | .889 | .484 | .906 | .403 |

**Grade 7**
**Winter PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 189.50 | .911 | .484 | .906 | .395 |
| 191.00 | .922 | .476 | .906 | .372 |
| 192.50 | .922 | .468 | .906 | .357 |
| 193.50 | .922 | .460 | .918 | .349 |
| 194.50 | .922 | .444 | .918 | .341 |
| 195.50 | - | - | .918 | .333 |
| 196.00 | .933 | .435 | - | - |
| 196.50 | - | - | .918 | .326 |
| 198.00 | - | - | .929 | .326 |
| 198.50 | .944 | .435 | - | - |
| 199.50 | - | - | .929 | .318 |
| 200.50 | .944 | .427 | .929 | .310 |
| 201.50 | .956 | .411 | .929 | .302 |
| 202.50 | .956 | .403 | .941 | .271 |
| 203.50 | .967 | .395 | .941 | .264 |
| 204.50 | .978 | .371 | .941 | .248 |
| 205.50 | .978 | .347 | .941 | .225 |
| 206.50 | .978 | .339 | - | - |
| 207.00 | - | - | .941 | .217 |
| 207.50 | .978 | .331 | - | - |
| 208.50 | - | - | .941 | .209 |
| 209.00 | .978 | .323 | - | - |
| 209.50 | - | - | .953 | .202 |
| 210.50 | .978 | .298 | .953 | .194 |
| 211.50 | .989 | .282 | .953 | .186 |
| 212.50 | - | - | .953 | .163 |
| 213.00 | .989 | .274 | - | - |
| 213.50 | - | - | .965 | .163 |
| 214.50 | 1.000 | .274 | .976 | .147 |
| 215.50 | 1.000 | .266 | - | - |
| 216.00 | - | - | .976 | .140 |
| 216.50 | 1.000 | .258 | - | - |
| 217.50 | 1.000 | .250 | .976 | .132 |
| 219.00 | 1.000 | .226 | .976 | .124 |
| 220.50 | 1.000 | .194 | .988 | .116 |

**Grade 7**
**Winter PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 221.50 | 1.000 | .177 | - | - |
| 222.50 | 1.000 | .169 | 1.000 | .116 |
| 223.50 | 1.000 | .153 | - | - |
| 225.00 | 1.000 | .145 | - | - |
| 227.00 | 1.000 | .137 | - | - |
| 228.00 | - | - | 1.000 | .109 |
| 228.50 | 1.000 | .121 | - | - |
| 230.50 | 1.000 | .105 | - | - |
| 233.50 | 1.000 | .097 | 1.000 | .093 |
| 236.00 | - | - | 1.000 | .085 |
| 236.50 | 1.000 | .089 | - | - |
| 238.00 | - | - | 1.000 | .078 |
| 238.50 | 1.000 | .081 | - | - |
| 242.00 | 1.000 | .073 | - | - |
| 242.50 | - | - | 1.000 | .062 |
| 245.50 | 1.000 | .065 | - | - |
| 249.50 | - | - | 1.000 | .039 |
| 251.00 | 1.000 | .056 | - | - |
| 254.00 | - | - | 1.000 | .031 |
| 256.50 | 1.000 | .048 | - | - |
| 257.00 | - | - | 1.000 | .023 |
| 258.00 | 1.000 | .040 | - | - |
| 260.00 | - | - | 1.000 | .016 |
| 263.00 | - | - | 1.000 | .008 |
| 266.00 | - | - | 1.000 | .000 |
| 270.50 | 1.000 | .016 | - | - |
| 293.00 | 1.000 | .008 | - | - |
| 305.00 | 1.000 | .000 | - | - |

**Grade 7**
**Winter MCRC Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 66 |
| | Negative | 113 |
| | Missing | 425 |
| Group 2 | Positive[a] | 58 |
| | Negative | 102 |
| | Missing | 443 |

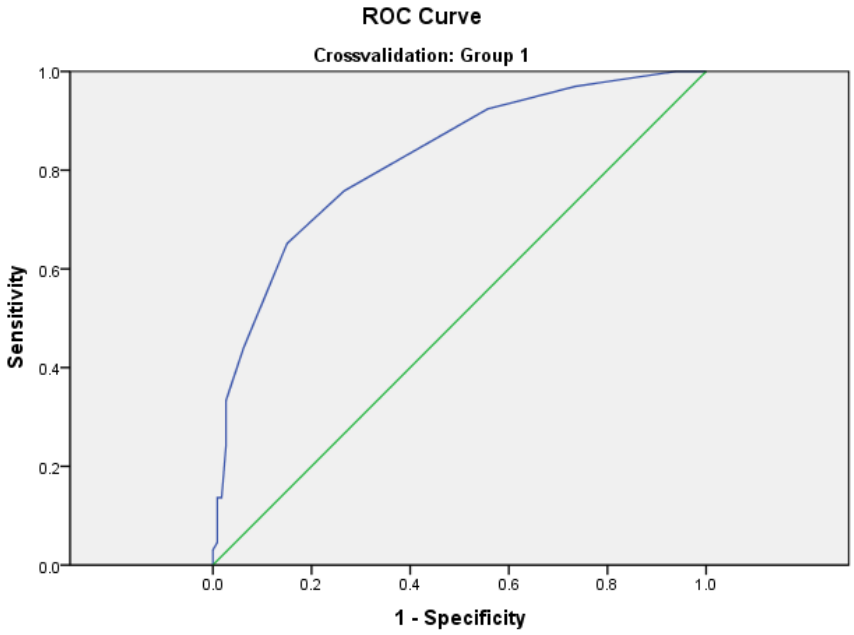
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Wint10MCRC has at least one tie between the positive actual state group and the negative actual state group.

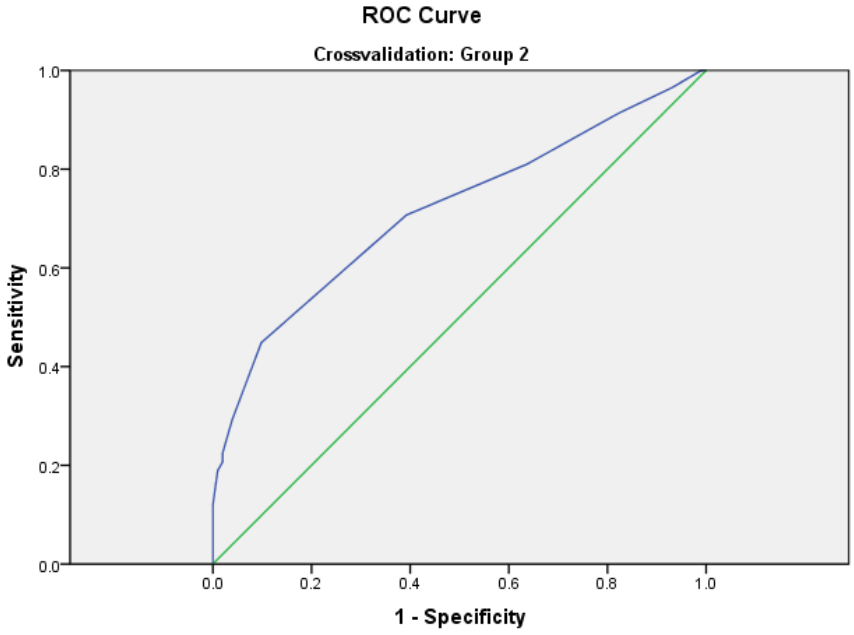
**Area Under the Curve[c,d]**

Test Result Variable(s):Wint10MCRC

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .822 | .032 | .000 | .758 | .885 |
| Group 2 | .716 | .045 | .000 | .628 | .803 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Wint10MCRC has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Wint10MCRC has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.


ROC Curve
Crossvalidation: Group 1
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.


ROC Curve
Crossvalidation: Group 2
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.

**Grade 7**
**Winter MCRC Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| -1.00 | .000 | 1.000 | - | - |
| 2.00 | - | - | .000 | 1.000 |
| 2.50 | .015 | 1.000 | - | - |
| 4.50 | - | - | .017 | 1.000 |
| 5.50 | .030 | 1.000 | - | - |
| 6.50 | .045 | .991 | - | - |
| 7.00 | - | - | .069 | 1.000 |
| 7.50 | .076 | .991 | - | - |
| 8.50 | .091 | .991 | .121 | 1.000 |
| 9.50 | .136 | .991 | .190 | .990 |
| 10.50 | .136 | .982 | .207 | .980 |
| 11.50 | .242 | .973 | .224 | .980 |
| 12.50 | .333 | .973 | .293 | .961 |
| 13.50 | .439 | .938 | .448 | .902 |
| 14.50 | .652 | .850 | .552 | .784 |
| **15.50** | **.758** | **.735** | **.707** | **.608** |
| 16.50 | .924 | .442 | .810 | .363 |
| 17.50 | .970 | .265 | .914 | .176 |
| 18.50 | 1.000 | .062 | .966 | .069 |
| 19.50 | - | - | 1.000 | .010 |
| 20.00 | 1.000 | .000 | - | - |
| 21.00 | - | - | 1.000 | .000 |

**Grade 7**
**Spring PRF Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 51 |
| | Negative | 74 |
| | Missing | 479 |
| Group 2 | Positive[a] | 47 |
| | Negative | 87 |
| | Missing | 469 |

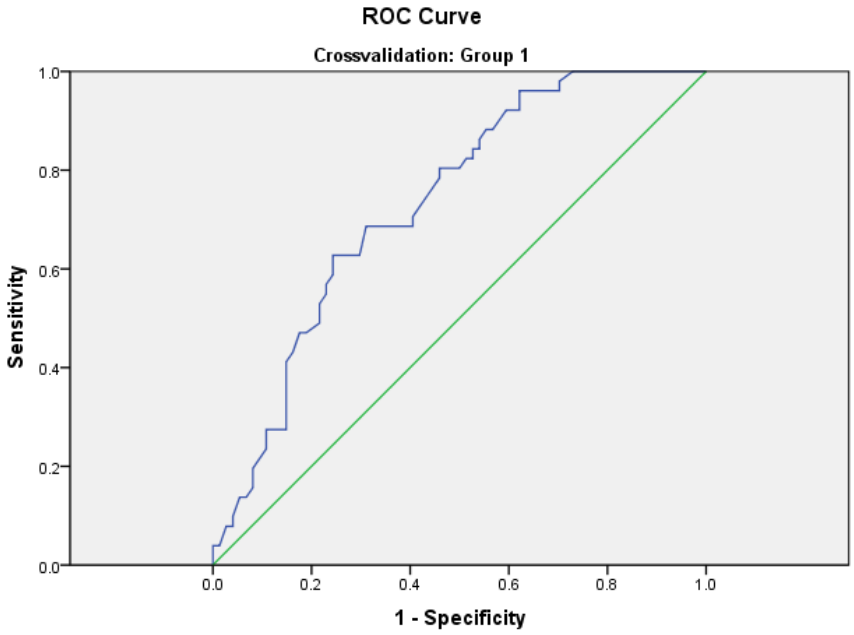
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Spr10PRF has at least one tie between the positive actual state group and the negative actual state group.

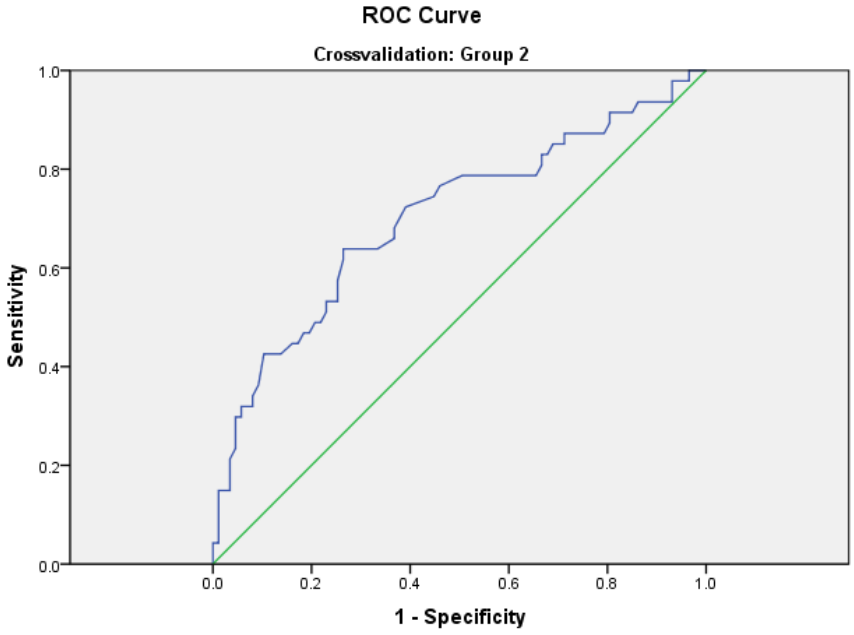
**Area Under the Curve[c,d]**

Test Result Variable(s):Spr10PRF

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .733 | .044 | .000 | .647 | .819 |
| Group 2 | .703 | .050 | .000 | .606 | .800 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Spr10PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Spr10PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.


ROC Curve
Crossvalidation: Group 1
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.


ROC Curve
Crossvalidation: Group 2
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.

**Grade 7**
**Spring PRF Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 71.00 | - | - | .000 | 1.000 |
| 77.00 | - | - | .021 | 1.000 |
| 85.00 | - | - | .043 | 1.000 |
| 87.00 | .000 | 1.000 | - | - |
| 90.50 | - | - | .043 | .989 |
| 92.00 | .020 | 1.000 | - | - |
| 93.50 | - | - | .064 | .989 |
| 94.50 | - | - | .085 | .989 |
| 96.50 | .039 | 1.000 | - | - |
| 97.00 | - | - | .106 | .989 |
| 98.00 | .039 | .986 | - | - |
| 100.00 | .078 | .973 | .128 | .989 |
| 101.50 | .078 | .959 | .149 | .989 |
| 102.50 | .098 | .959 | - | - |
| 103.00 | - | - | .149 | .977 |
| 103.50 | .137 | .946 | - | - |
| 104.50 | - | - | .149 | .966 |
| 105.00 | .137 | .932 | - | - |
| 105.50 | - | - | .170 | .966 |
| 106.50 | .157 | .919 | .213 | .966 |
| 107.50 | .196 | .919 | - | - |
| 109.00 | .235 | .892 | .234 | .954 |
| 110.50 | .255 | .892 | - | - |
| 113.00 | .275 | .892 | .277 | .954 |
| 115.50 | .275 | .878 | .298 | .954 |
| 116.50 | .275 | .851 | .298 | .943 |
| 117.50 | .294 | .851 | .319 | .943 |
| 118.50 | .333 | .851 | .319 | .920 |
| 119.50 | - | - | .340 | .920 |
| 120.50 | .373 | .851 | .362 | .908 |
| 121.50 | - | - | .426 | .897 |
| 122.50 | .412 | .851 | - | - |
| 123.00 | - | - | .426 | .885 |
| 123.50 | .431 | .838 | - | - |
| 124.50 | .471 | .824 | - | - |

**Grade 7**
**Spring PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 125.00 | - | - | .426 | .862 |
| 126.50 | - | - | .447 | .839 |
| 127.00 | .471 | .811 | - | - |
| 128.50 | - | - | .447 | .828 |
| 130.00 | .490 | .784 | - | - |
| 131.00 | - | - | .468 | .816 |
| 131.50 | .510 | .784 | - | - |
| 132.50 | - | - | .468 | .805 |
| 133.00 | .529 | .784 | - | - |
| 133.50 | - | - | .489 | .793 |
| 134.50 | .549 | .770 | .489 | .782 |
| 135.50 | .569 | .770 | .511 | .770 |
| 136.50 | .588 | .757 | .532 | .770 |
| 137.50 | .608 | .757 | .532 | .747 |
| 138.50 | .627 | .757 | - | - |
| 139.00 | - | - | .574 | .747 |
| 139.50 | .627 | .743 | - | - |
| 140.50 | - | - | .617 | .736 |
| 141.00 | .627 | .703 | - | - |
| 141.50 | - | - | .638 | .736 |
| 142.50 | - | - | .638 | .724 |
| 143.00 | .686 | .689 | - | - |
| 143.50 | - | - | .638 | .701 |
| 144.50 | .686 | .662 | - | - |
| 145.00 | - | - | .638 | .678 |
| 147.00 | .686 | .635 | .638 | .667 |
| 148.50 | - | - | .660 | .632 |
| 149.50 | .686 | .608 | .681 | .632 |
| 150.50 | .686 | .595 | .702 | .621 |
| 151.50 | .706 | .595 | **.723** | **.609** |
| 152.50 | - | - | .745 | .552 |
| 153.50 | .745 | .568 | .766 | .540 |
| 155.00 | - | - | .787 | .494 |
| 155.50 | .784 | .541 | - | - |
| **156.50** | **.804** | **.541** | .787 | .483 |

**Grade 7**
**Spring PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 157.50 | .804 | .527 | .787 | .471 |
| 159.00 | - | - | .787 | .460 |
| 159.50 | .804 | .500 | - | - |
| 160.50 | - | - | .787 | .425 |
| 161.50 | - | - | .787 | .414 |
| 162.00 | .824 | .486 | - | - |
| 162.50 | - | - | .787 | .402 |
| 163.50 | .824 | .473 | .787 | .391 |
| 164.50 | .843 | .473 | .787 | .379 |
| 165.50 | .843 | .459 | .787 | .345 |
| 166.50 | .863 | .459 | - | - |
| 167.00 | - | - | .809 | .333 |
| 168.00 | .882 | .446 | - | - |
| 168.50 | - | - | .830 | .333 |
| 169.50 | .882 | .432 | - | - |
| 170.50 | .902 | .419 | .830 | .322 |
| 172.50 | - | - | .851 | .310 |
| 173.50 | - | - | .851 | .287 |
| 174.50 | .922 | .405 | .872 | .287 |
| 177.00 | - | - | .872 | .253 |
| 178.50 | .922 | .392 | - | - |
| 180.00 | - | - | .872 | .230 |
| 180.50 | .922 | .378 | - | - |
| 182.50 | .961 | .378 | .872 | .218 |
| 184.00 | .961 | .365 | - | - |
| 185.50 | - | - | .872 | .207 |
| 186.00 | .961 | .351 | - | - |
| 187.50 | .961 | .338 | - | - |
| 188.00 | - | - | .894 | .195 |
| 188.50 | .961 | .324 | - | - |
| 189.50 | .961 | .297 | .915 | .195 |
| 190.50 | .980 | .297 | .915 | .172 |
| 192.50 | 1.000 | .270 | .915 | .161 |
| 194.50 | - | - | .915 | .149 |
| 195.00 | 1.000 | .257 | - | - |

**Grade 7**
**Spring PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 195.50 | - | - | .936 | .138 |
| 197.00 | 1.000 | .243 | .936 | .103 |
| 198.50 | 1.000 | .230 | .936 | .092 |
| 199.50 | 1.000 | .216 | .936 | .069 |
| 200.50 | - | - | .957 | .069 |
| 202.00 | 1.000 | .203 | .979 | .069 |
| 204.50 | 1.000 | .189 | - | - |
| 205.00 | - | - | .979 | .057 |
| 205.50 | 1.000 | .176 | - | - |
| 206.50 | 1.000 | .162 | - | - |
| 207.50 | - | - | .979 | .034 |
| 209.50 | 1.000 | .122 | - | - |
| 211.00 | - | - | 1.000 | .034 |
| 215.00 | - | - | 1.000 | .023 |
| 216.00 | 1.000 | .108 | - | - |
| 220.00 | - | - | 1.000 | .011 |
| 221.00 | 1.000 | .095 | - | - |
| 223.00 | 1.000 | .081 | - | - |
| 224.50 | 1.000 | .068 | - | - |
| 225.00 | - | - | 1.000 | .000 |
| 227.00 | 1.000 | .054 | - | - |
| 231.00 | 1.000 | .041 | - | - |
| 234.00 | 1.000 | .027 | - | - |
| 245.00 | 1.000 | .014 | - | - |
| 256.00 | 1.000 | .000 | - | - |

**Grade 7**
**Spring MCRC Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 197 |
| | Negative | 340 |
| | Missing | 67 |
| Group 2 | Positive[a] | 176 |
| | Negative | 350 |
| | Missing | 77 |

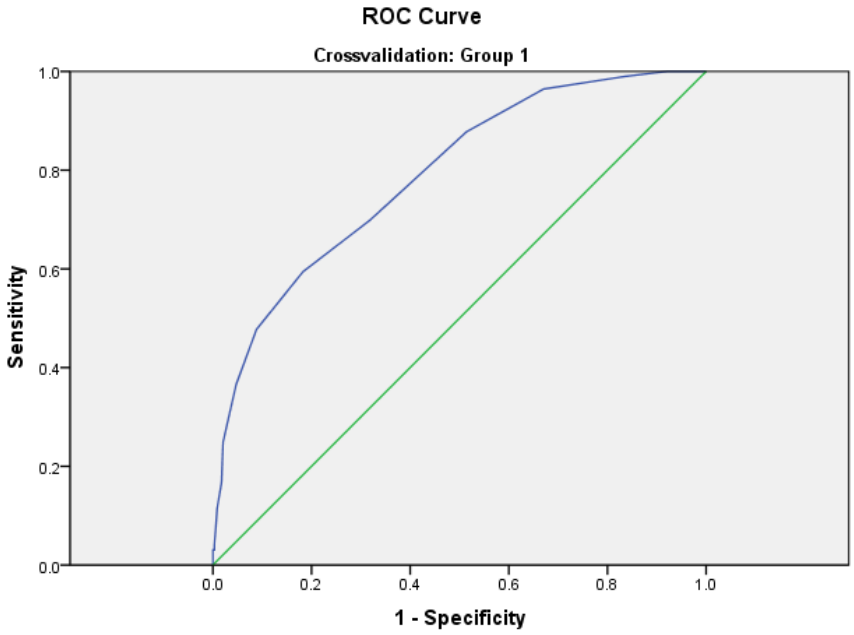
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Spr10MCRC has at least one tie between the positive actual state group and the negative actual state group.

**Area Under the Curve[c,d]**

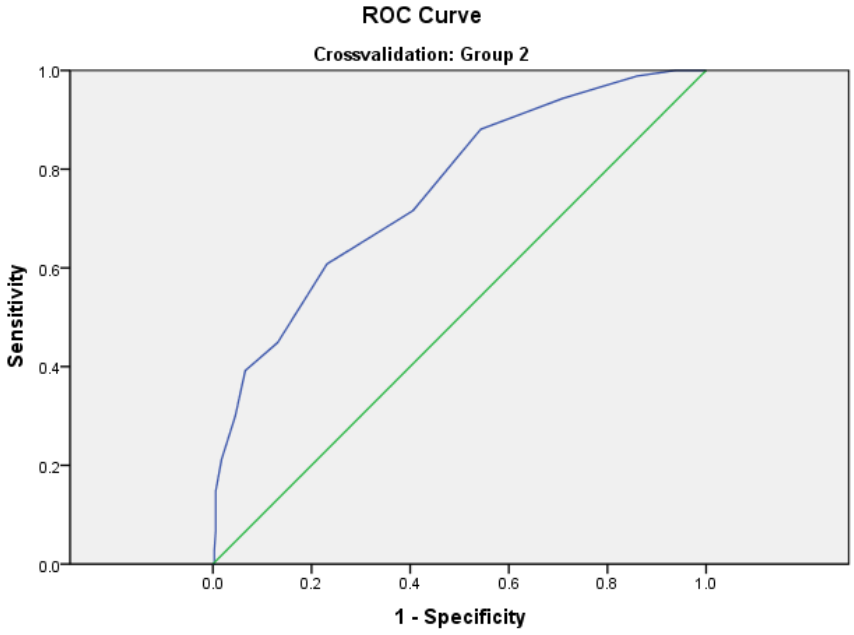
Test Result Variable(s):Spr10MCRC

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .790 | .020 | .000 | .751 | .829 |
| Group 2 | .759 | .022 | .000 | .716 | .802 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Spr10MCRC has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Spr10MCRC has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.




Diagonal segments are produced by ties.




Diagonal segments are produced by ties.

**Grade 7**
**Spring MCRC Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| -1.00 | .000 | 1.000 | .000 | 1.000 |
| 1.00 | - | - | .000 | .997 |
| 1.50 | .030 | 1.000 | - | - |
| 2.50 | - | - | .006 | .997 |
| 3.50 | .030 | .997 | .023 | .997 |
| 4.50 | .041 | .997 | .028 | .997 |
| 5.50 | .076 | .994 | .068 | .994 |
| 6.50 | .117 | .991 | .148 | .994 |
| 7.50 | .168 | .982 | .210 | .983 |
| 8.50 | .249 | .979 | .301 | .954 |
| 9.50 | .365 | .953 | .392 | .934 |
| 10.50 | .477 | .912 | .449 | .869 |
| 11.50 | .594 | .818 | .608 | .769 |
| **12.50** | **.701** | **.679** | **.716** | **.594** |
| 13.50 | .878 | .485 | .881 | .457 |
| 14.50 | .964 | .329 | .943 | .291 |
| 15.50 | .990 | .165 | .989 | .140 |
| 16.50 | 1.000 | .079 | 1.000 | .063 |
| 17.50 | 1.000 | .026 | 1.000 | .011 |
| 18.50 | 1.000 | .003 | 1.000 | .003 |
| 20.00 | 1.000 | .000 | 1.000 | .000 |

**Grade 7**
**Spring VOC Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 155 |
| | Negative | 246 |
| | Missing | 203 |
| Group 2 | Positive[a] | 143 |
| | Negative | 265 |
| | Missing | 195 |

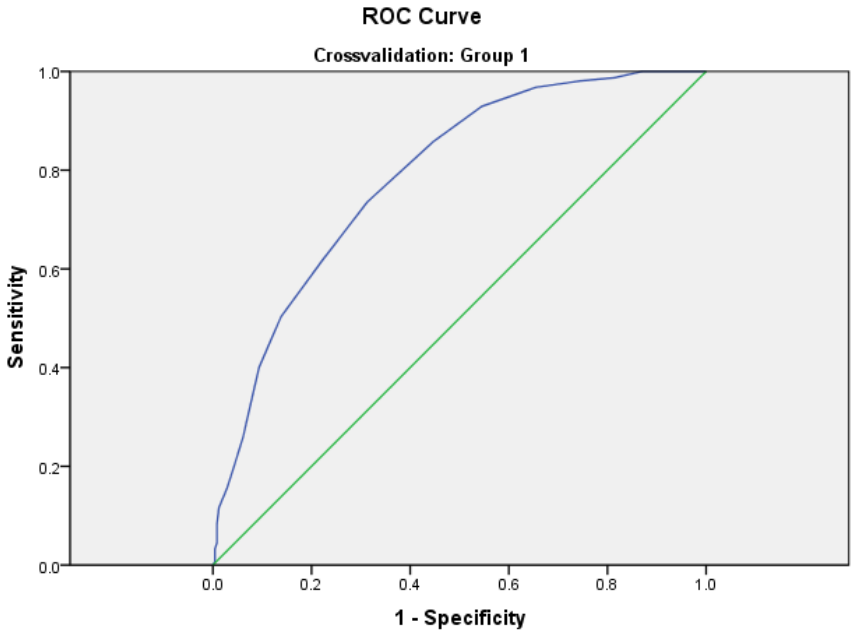
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Spr10Voc has at least one tie between the positive actual state group and the negative actual state group.

**Area Under the Curve[c,d]**

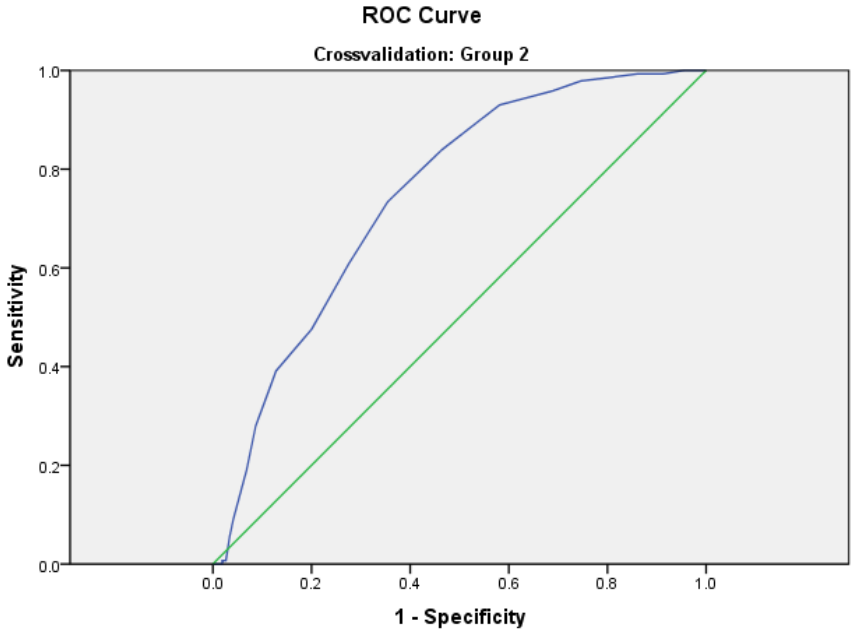
Test Result Variable(s):Spr10Voc

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .789 | .022 | .000 | .745 | .833 |
| Group 2 | .747 | .024 | .000 | .699 | .794 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Spr10Voc has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Spr10Voc has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.




Diagonal segments are produced by ties.




Diagonal segments are produced by ties.

**Grade 7**
**Spring VOC Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| -1.00 | .000 | 1.000 | .000 | 1.000 |
| .50 | - | - | .000 | .992 |
| 1.00 | .006 | .996 | - | - |
| 1.50 | - | - | .000 | .985 |
| 3.00 | .013 | .996 | - | - |
| 3.50 | - | - | .000 | .981 |
| 4.50 | .019 | .996 | - | - |
| 5.50 | .032 | .996 | .007 | .981 |
| 6.50 | .045 | .992 | .007 | .974 |
| 7.50 | .084 | .992 | .056 | .966 |
| 8.50 | .116 | .988 | .091 | .958 |
| 9.50 | .155 | .972 | .189 | .932 |
| 10.50 | .258 | .939 | .280 | .913 |
| 11.50 | .400 | .907 | .392 | .872 |
| 12.50 | .503 | .862 | .476 | .800 |
| 13.50 | .619 | .776 | .608 | .725 |
| **14.50** | **.735** | **.687** | **.734** | **.645** |
| 15.50 | .858 | .553 | .839 | .536 |
| 16.50 | .929 | .455 | .930 | .419 |
| 17.50 | .968 | .346 | .958 | .313 |
| 18.50 | .981 | .256 | .979 | .253 |
| 19.50 | .987 | .187 | .986 | .192 |
| 20.50 | 1.000 | .130 | .993 | .140 |
| 21.50 | 1.000 | .077 | .993 | .087 |
| 22.50 | 1.000 | .045 | 1.000 | .045 |
| 23.50 | 1.000 | .024 | 1.000 | .019 |
| 24.50 | 1.000 | .008 | - | - |
| 25.00 | - | - | 1.000 | .000 |
| 26.00 | 1.000 | .000 | - | - |

**Grade 8**
**Fall PRF Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 90 |
| | Negative | 148 |
| | Missing | 662 |
| Group 2 | Positive[a] | 98 |
| | Negative | 150 |
| | Missing | 652 |

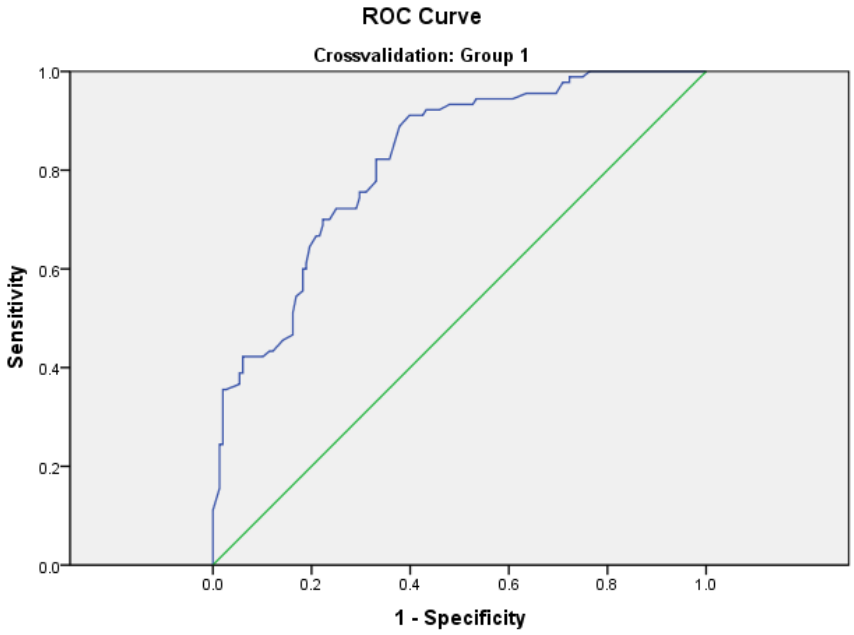
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Fall09PRF has at least one tie between the positive actual state group and the negative actual state group.

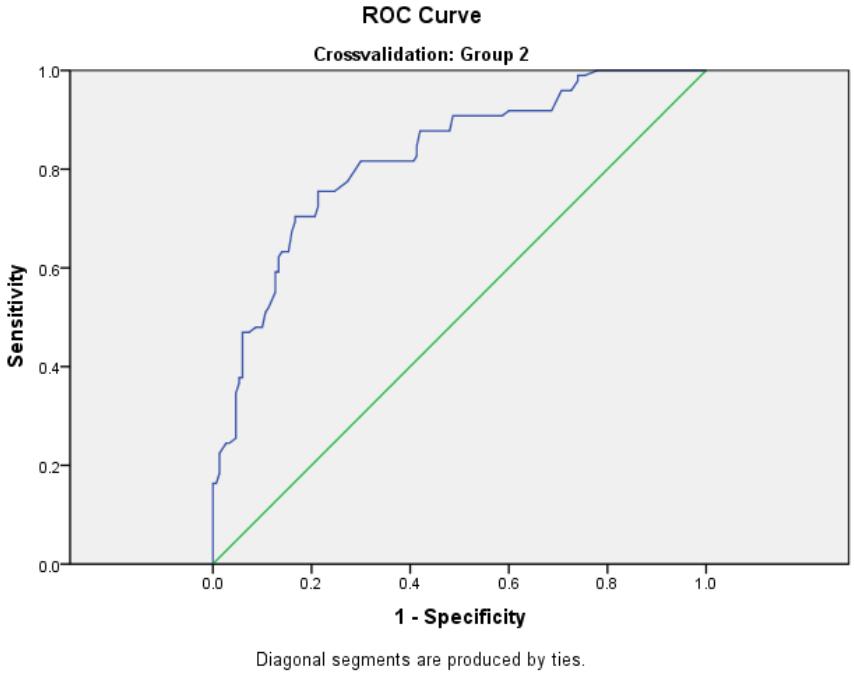
**Area Under the Curve[c,d]**

Test Result Variable(s):Fall09PRF

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .818 | .027 | .000 | .766 | .871 |
| Group 2 | .823 | .027 | .000 | .771 | .876 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Fall09PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Fall09PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.


ROC Curve
Crossvalidation: Group 1
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.


ROC Curve
Crossvalidation: Group 2
Sensitivity
1 - Specificity
0.0
0.2
0.4
0.6
0.8
1.0
Diagonal segments are produced by ties.

**Grade 8**
**Fall PRF Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 14.00 | .000 | 1.000 | .000 | 1.000 |
| 24.00 | .011 | 1.000 | - | - |
| 25.00 | - | - | .010 | 1.000 |
| 34.00 | .033 | 1.000 | - | - |
| 41.00 | .044 | 1.000 | .020 | 1.000 |
| 51.00 | - | - | .031 | 1.000 |
| 51.00 | .056 | 1.000 | - | - |
| 56.50 | .067 | 1.000 | - | - |
| 60.00 | - | - | .061 | 1.000 |
| 65.00 | .089 | 1.000 | - | - |
| 68.00 | - | - | .082 | 1.000 |
| 71.50 | - | - | .122 | 1.000 |
| 74.00 | .111 | 1.000 | .163 | 1.000 |
| 76.50 | .133 | .993 | .163 | .993 |
| 77.50 | .156 | .986 | .184 | .987 |
| 80.50 | .167 | .986 | .194 | .987 |
| 84.00 | .189 | .986 | .214 | .987 |
| 87.50 | .200 | .986 | .224 | .987 |
| 92.00 | .244 | .986 | .245 | .973 |
| 94.50 | .244 | .980 | .245 | .967 |
| 96.00 | .300 | .980 | .255 | .953 |
| 97.50 | .322 | .980 | .276 | .953 |
| 99.00 | - | - | .327 | .953 |
| 100.00 | .333 | .980 | - | - |
| 101.50 | - | - | .347 | .953 |
| 102.50 | .356 | .980 | - | - |
| 103.50 | .356 | .973 | .367 | .947 |
| 104.50 | .367 | .946 | - | - |
| 105.50 | - | - | .378 | .947 |
| 106.00 | .389 | .946 | - | - |
| 108.50 | - | - | .378 | .940 |
| 109.00 | .389 | .939 | - | - |
| 111.00 | - | - | .418 | .940 |
| 112.00 | .411 | .939 | - | - |
| 112.50 | - | - | .459 | .940 |
| 113.50 | .422 | .939 | - | - |
| 114.50 | .422 | .926 | .469 | .940 |

**Grade 8**
**Fall PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 115.50 | .422 | .912 | - | - |
| 116.50 | .422 | .899 | .469 | .927 |
| 117.50 | .433 | .885 | .480 | .913 |
| 118.50 | .433 | .878 | .480 | .907 |
| 119.50 | .456 | .858 | .480 | .900 |
| 120.50 | .467 | .838 | - | - |
| 121.50 | .489 | .838 | .510 | .893 |
| 122.50 | .511 | .838 | - | - |
| 123.50 | .544 | .831 | .520 | .887 |
| 124.50 | .556 | .818 | .551 | .873 |
| 125.50 | .600 | .818 | .592 | .873 |
| 126.50 | .600 | .811 | .592 | .867 |
| 127.50 | .611 | .811 | .622 | .867 |
| 128.50 | .644 | .804 | .633 | .860 |
| 129.50 | .667 | .791 | .633 | .847 |
| 130.50 | .667 | .784 | .673 | .840 |
| 131.50 | .689 | .777 | .694 | .833 |
| 133.00 | .700 | .777 | - | - |
| 134.50 | .700 | .764 | .704 | .833 |
| 135.50 | .722 | .750 | - | - |
| 136.50 | .722 | .723 | .704 | .820 |
| 137.50 | .722 | .716 | .704 | .800 |
| 138.50 | .722 | .709 | .704 | .793 |
| 139.50 | .744 | .703 | .724 | .787 |
| **140.50** | **.756** | **.703** | .755 | .787 |
| 141.50 | .756 | .689 | .755 | .760 |
| 142.50 | .778 | .669 | .755 | .753 |
| 143.50 | .789 | .669 | .765 | .740 |
| 144.50 | .822 | .669 | **.776** | **.727** |
| 146.00 | .822 | .642 | .816 | .700 |
| 147.50 | .867 | .628 | .816 | .673 |
| 148.50 | .889 | .622 | .816 | .653 |
| 149.50 | - | - | .816 | .647 |
| 151.00 | .911 | .601 | .816 | .620 |
| 153.50 | .911 | .588 | .816 | .607 |
| 155.00 | .911 | .574 | .816 | .593 |
| 156.50 | .922 | .568 | .827 | .587 |

**Grade 8**
**Fall PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 157.50 | .922 | .554 | - | - |
| 158.00 | - | - | .847 | .587 |
| 158.50 | .922 | .541 | - | - |
| 160.50 | .933 | .520 | .878 | .580 |
| 162.50 | .933 | .507 | .878 | .567 |
| 163.50 | - | - | .878 | .560 |
| 164.00 | .933 | .500 | - | - |
| 164.50 | - | - | .878 | .533 |
| 165.50 | .933 | .473 | .878 | .520 |
| 166.50 | .944 | .466 | .908 | .513 |
| 167.50 | .944 | .446 | .908 | .480 |
| 169.50 | .944 | .419 | .908 | .453 |
| 171.50 | - | - | .908 | .433 |
| 172.50 | .944 | .399 | - | - |
| 173.00 | - | - | .908 | .420 |
| 174.50 | .944 | .392 | .908 | .413 |
| 175.50 | .956 | .365 | .918 | .400 |
| 176.50 | .956 | .358 | .918 | .380 |
| 177.50 | .956 | .345 | .918 | .340 |
| 178.50 | .956 | .331 | .918 | .313 |
| 179.50 | .956 | .324 | .959 | .293 |
| 180.50 | .956 | .304 | - | - |
| 181.00 | - | - | .959 | .273 |
| 181.50 | .978 | .291 | - | - |
| 182.50 | .978 | .277 | .980 | .260 |
| 183.50 | .989 | .277 | .990 | .260 |
| 184.50 | .989 | .257 | .990 | .253 |
| 185.50 | .989 | .250 | .990 | .247 |
| 186.50 | 1.000 | .236 | 1.000 | .220 |
| 187.50 | 1.000 | .230 | 1.000 | .213 |
| 189.00 | 1.000 | .216 | 1.000 | .200 |
| 191.50 | 1.000 | .189 | 1.000 | .187 |
| 194.00 | 1.000 | .176 | 1.000 | .173 |
| 195.50 | - | - | 1.000 | .167 |
| 196.00 | 1.000 | .169 | - | - |
| 196.50 | - | - | 1.000 | .153 |
| 197.50 | 1.000 | .162 | 1.000 | .133 |

**Grade 8**
**Fall PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 199.00 | 1.000 | .155 | 1.000 | .113 |
| 201.50 | 1.000 | .135 | 1.000 | .107 |
| 204.00 | 1.000 | .128 | 1.000 | .100 |
| 205.50 | 1.000 | .122 | 1.000 | .093 |
| 207.50 | 1.000 | .115 | 1.000 | .087 |
| 209.50 | 1.000 | .088 | 1.000 | .073 |
| 210.50 | - | - | 1.000 | .067 |
| 211.50 | 1.000 | .081 | 1.000 | .053 |
| 213.50 | 1.000 | .068 | 1.000 | .040 |
| 214.50 | 1.000 | .054 | - | - |
| 215.50 | - | - | 1.000 | .033 |
| 215.50 | 1.000 | .047 | - | - |
| 219.00 | 1.000 | .041 | - | - |
| 224.00 | - | - | 1.000 | .027 |
| 228.00 | 1.000 | .027 | - | - |
| 233.00 | - | - | 1.000 | .013 |
| 236.00 | 1.000 | .020 | - | - |
| 250.50 | - | - | 1.000 | .007 |
| 252.50 | 1.000 | .007 | - | - |
| 268.00 | 1.000 | .000 | 1.000 | .000 |

**Grade 8**
**Fall MCRC Benchmark**

**Case Processing Summary**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 0 |
| | Negative | 0 |
| | Missing | 900 |
| Group 2 | Positive[a] | 0 |
| | Negative | 0 |
| | Missing | 900 |

Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.

**Grade 8**

**Fall VOC Benchmark**

**Case Processing Summary**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 0 |
| | Negative | 0 |
| | Missing | 900 |
| Group 2 | Positive[a] | 0 |
| | Negative | 0 |
| | Missing | 900 |

Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.

**Grade 8**
**Winter PRF Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 92 |
| | Negative | 155 |
| | Missing | 653 |
| Group 2 | Positive[a] | 98 |
| | Negative | 163 |
| | Missing | 639 |

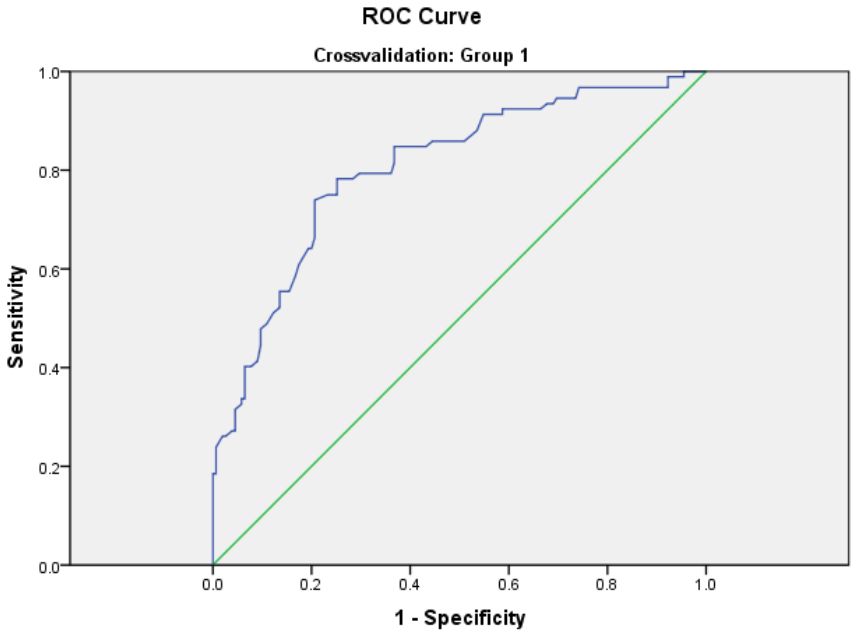
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Wint10PRF has at least one tie between the positive actual state group and the negative actual state group.

**Area Under the Curve[c,d]**

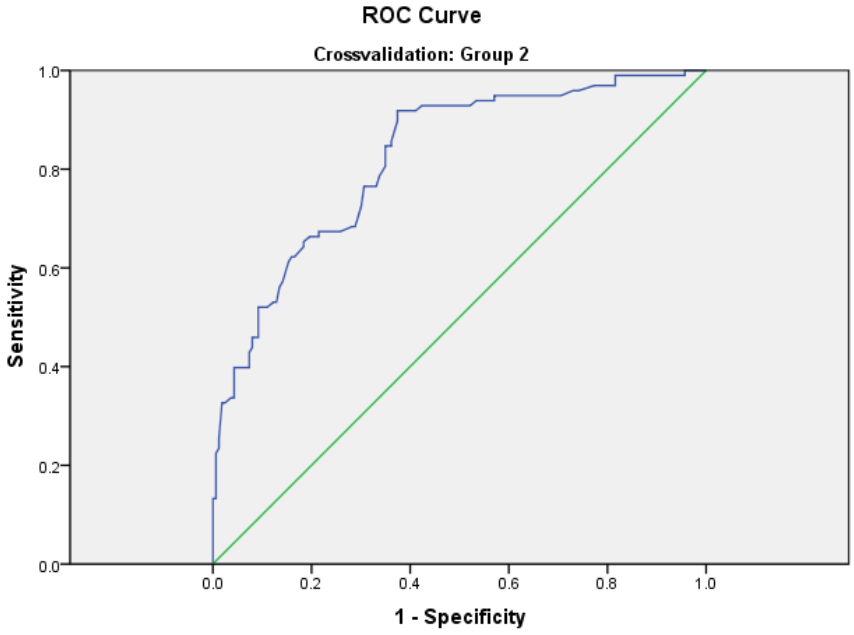
Test Result Variable(s):Wint10PRF

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .805 | .029 | .000 | .748 | .862 |
| Group 2 | .822 | .026 | .000 | .771 | .874 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Wint10PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Wint10PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.




Diagonal segments are produced by ties.




Diagonal segments are produced by ties.

**Grade 8**
**Winter PRF Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 31.00 | .000 | 1.000 | .000 | 1.000 |
| 38.50 | .011 | 1.000 | .010 | 1.000 |
| 47.50 | .022 | 1.000 | .020 | 1.000 |
| 54.50 | .033 | 1.000 | .031 | 1.000 |
| 61.00 | .043 | 1.000 | .041 | 1.000 |
| 65.50 | - | - | .051 | 1.000 |
| 66.00 | .076 | 1.000 | - | - |
| 69.50 | .098 | 1.000 | .071 | 1.000 |
| 71.00 | .109 | 1.000 | .082 | 1.000 |
| 72.50 | .141 | 1.000 | .092 | 1.000 |
| 73.50 | .152 | 1.000 | - | - |
| 74.50 | - | - | .122 | 1.000 |
| 75.00 | .174 | 1.000 | - | - |
| 78.00 | .185 | 1.000 | .133 | 1.000 |
| 82.50 | - | - | .133 | .994 |
| 88.50 | .185 | .994 | - | - |
| 91.00 | - | - | .153 | .994 |
| 97.50 | .196 | .994 | .163 | .994 |
| 98.50 | .207 | .994 | .173 | .994 |
| 99.50 | - | - | .194 | .994 |
| 101.00 | .228 | .994 | .214 | .994 |
| 103.50 | .239 | .994 | .224 | .994 |
| 104.50 | - | - | .235 | .988 |
| 105.00 | .250 | .987 | - | - |
| 105.50 | - | - | .255 | .988 |
| 107.00 | .261 | .981 | .327 | .982 |
| 108.50 | .261 | .974 | .327 | .975 |
| 109.50 | .272 | .961 | .337 | .963 |
| 111.50 | .272 | .955 | .337 | .957 |
| 113.50 | .293 | .955 | - | - |
| 114.50 | - | - | .378 | .957 |
| 115.00 | .315 | .955 | - | - |
| 116.50 | .326 | .942 | .388 | .957 |
| 117.50 | .337 | .942 | .398 | .957 |
| 118.50 | .337 | .935 | .398 | .939 |
| 119.50 | .359 | .935 | - | - |
| 120.50 | .402 | .935 | .398 | .926 |

**Grade 8**
**Winter PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 121.50 | .402 | .923 | - | - |
| 122.50 | .413 | .910 | .429 | .926 |
| 123.50 | .446 | .903 | - | - |
| 124.00 | - | - | .439 | .920 |
| 124.50 | .467 | .903 | - | - |
| 125.50 | .478 | .903 | .449 | .920 |
| 126.50 | .489 | .890 | .459 | .920 |
| 127.50 | .511 | .877 | .459 | .908 |
| 128.50 | .522 | .865 | .469 | .908 |
| 129.50 | .554 | .865 | .520 | .908 |
| 130.50 | .554 | .858 | .520 | .902 |
| 132.00 | .554 | .845 | .520 | .890 |
| 133.50 | .587 | .832 | .531 | .877 |
| 134.50 | .609 | .826 | .531 | .871 |
| 136.00 | .620 | .819 | .561 | .865 |
| 137.50 | - | - | .571 | .859 |
| 138.50 | .630 | .813 | - | - |
| 139.00 | - | - | .612 | .847 |
| 140.50 | .641 | .806 | .622 | .840 |
| 141.50 | .641 | .800 | .622 | .834 |
| 143.00 | .663 | .794 | .643 | .816 |
| 144.50 | .739 | .794 | .653 | .816 |
| 145.50 | .750 | .768 | .663 | .804 |
| 147.00 | .750 | .761 | .663 | .798 |
| 148.50 | .750 | .748 | .663 | .785 |
| 149.50 | .783 | .748 | .673 | .785 |
| 150.50 | .783 | .735 | .673 | .773 |
| 151.50 | .783 | .716 | .673 | .742 |
| **152.50** | **.793** | **.703** | .684 | .718 |
| 153.50 | .793 | .684 | .684 | .712 |
| 154.50 | .793 | .671 | **.724** | **.699** |
| 155.50 | .793 | .665 | .765 | .693 |
| 157.00 | .793 | .639 | .765 | .669 |
| 158.50 | - | - | .786 | .663 |
| 159.50 | .815 | .632 | - | - |
| 159.50 | - | - | .806 | .650 |
| 160.50 | - | - | .847 | .650 |

**Grade 8**
**Winter PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 161.50 | .837 | .632 | .847 | .638 |
| 162.50 | .848 | .632 | .857 | .638 |
| 163.50 | .848 | .594 | .898 | .626 |
| 164.50 | .848 | .581 | .918 | .626 |
| 165.50 | .848 | .568 | .918 | .589 |
| 166.50 | .859 | .555 | .929 | .577 |
| 167.50 | .859 | .542 | .929 | .552 |
| 169.00 | .859 | .510 | .929 | .546 |
| 170.50 | .859 | .503 | .929 | .528 |
| 171.50 | .859 | .490 | .929 | .503 |
| 172.50 | - | - | .929 | .491 |
| 173.00 | .880 | .465 | .929 | .479 |
| 174.50 | .913 | .452 | - | - |
| 175.00 | - | - | .939 | .466 |
| 175.50 | .913 | .426 | - | - |
| 177.00 | - | - | .939 | .454 |
| 178.00 | .913 | .413 | - | - |
| 178.50 | - | - | .939 | .442 |
| 179.50 | - | - | .939 | .429 |
| 180.50 | .924 | .413 | .949 | .429 |
| 181.50 | .924 | .400 | .949 | .393 |
| 182.50 | .924 | .387 | - | - |
| 183.00 | - | - | .949 | .368 |
| 183.50 | .924 | .374 | - | - |
| 184.50 | .924 | .355 | .949 | .362 |
| 185.50 | .924 | .348 | .949 | .344 |
| 186.50 | .924 | .335 | .949 | .294 |
| 187.50 | .935 | .323 | .959 | .270 |
| 188.50 | .935 | .310 | .959 | .258 |
| 189.50 | .946 | .303 | .969 | .227 |
| 191.00 | .946 | .290 | .969 | .202 |
| 192.50 | .946 | .265 | .969 | .190 |
| 193.50 | - | - | .969 | .184 |
| 194.00 | .967 | .258 | - | - |
| 194.50 | - | - | .990 | .184 |
| 196.50 | .967 | .206 | - | - |
| 197.50 | - | - | .990 | .160 |

**Grade 8**
**Winter PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 199.00 | .967 | .181 | - | - |
| 201.00 | .967 | .161 | - | - |
| 204.00 | - | - | .990 | .153 |
| 205.50 | .967 | .135 | - | - |
| 208.50 | - | - | .990 | .141 |
| 209.50 | .967 | .123 | .990 | .129 |
| 210.50 | .967 | .110 | .990 | .117 |
| 211.50 | .967 | .103 | .990 | .110 |
| 212.50 | .967 | .097 | .990 | .092 |
| 215.00 | .967 | .090 | - | - |
| 216.00 | - | - | .990 | .086 |
| 217.50 | .967 | .077 | - | - |
| 218.50 | .989 | .077 | - | - |
| 219.50 | - | - | .990 | .080 |
| 222.00 | .989 | .071 | - | - |
| 222.50 | - | - | .990 | .067 |
| 225.50 | .989 | .065 | .990 | .061 |
| 228.00 | - | - | .990 | .055 |
| 229.50 | .989 | .058 | - | - |
| 232.50 | - | - | .990 | .043 |
| 234.00 | .989 | .045 | - | - |
| 236.50 | - | - | 1.000 | .043 |
| 236.50 | 1.000 | .045 | - | - |
| 239.00 | 1.000 | .039 | 1.000 | .037 |
| 243.50 | 1.000 | .032 | 1.000 | .031 |
| 248.50 | 1.000 | .026 | 1.000 | .025 |
| 252.50 | - | - | 1.000 | .018 |
| 256.50 | 1.000 | .019 | - | - |
| 261.00 | - | - | 1.000 | .006 |
| 265.00 | 1.000 | .006 | - | - |
| 268.00 | 1.000 | .000 | 1.000 | .000 |

**Grade 8**
**Winter MCRC Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 103 |
| | Negative | 164 |
| | Missing | 633 |
| Group 2 | Positive[a] | 109 |
| | Negative | 166 |
| | Missing | 625 |

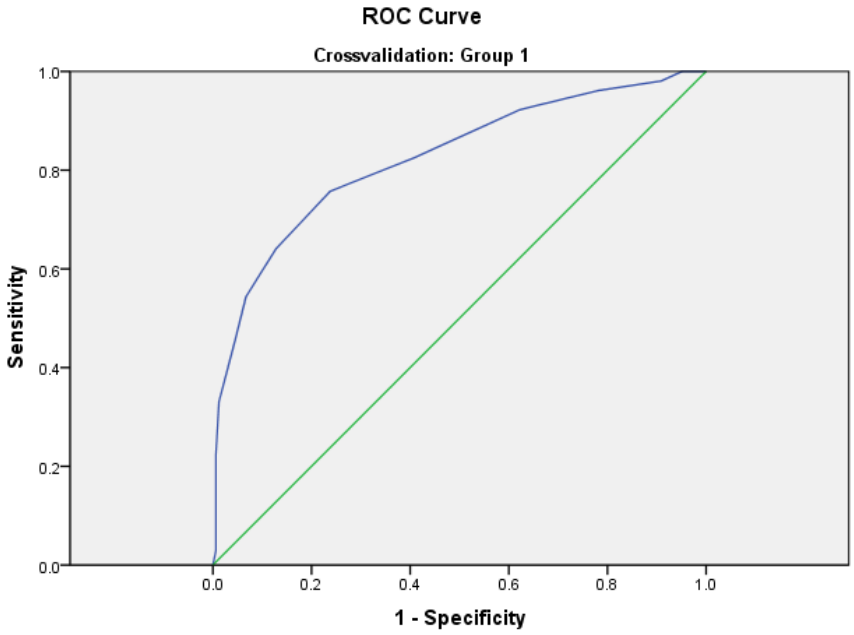
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Wint10MCRC has at least one tie between the positive actual state group and the negative actual state group.

**Area Under the Curve[c,d]**

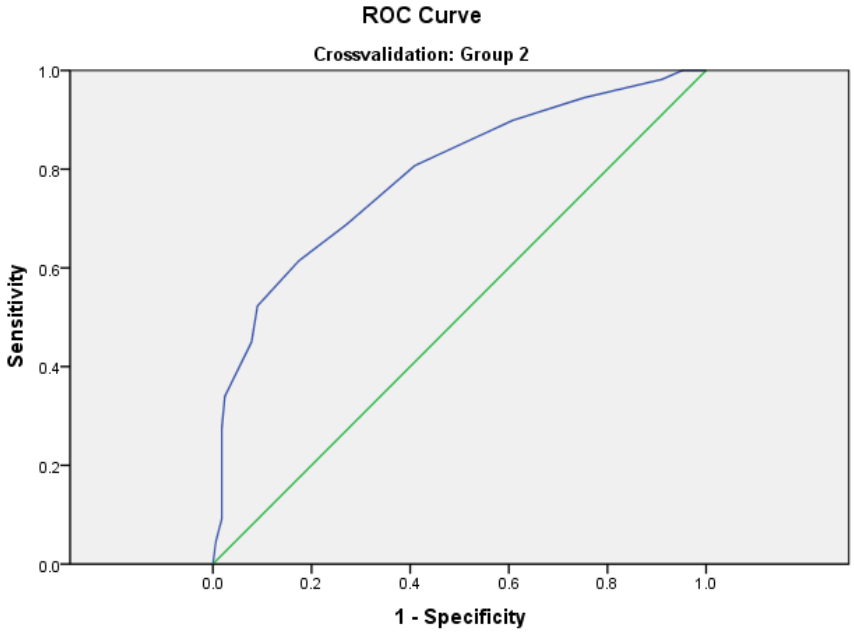
Test Result Variable(s):Wint10MCRC

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .825 | .027 | .000 | .772 | .878 |
| Group 2 | .788 | .028 | .000 | .732 | .844 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Wint10MCRC has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Wint10MCRC has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.




Diagonal segments are produced by ties.




Diagonal segments are produced by ties.

**Grade 8**
**Winter MCRC Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| -1.00 | .000 | 1.000 | .000 | 1.000 |
| 2.00 | .029 | .994 | .046 | .994 |
| 4.50 | .039 | .994 | .092 | .982 |
| 5.50 | .068 | .994 | .110 | .982 |
| 6.50 | .184 | .994 | .239 | .982 |
| 7.50 | .223 | .994 | .275 | .982 |
| 8.50 | .330 | .988 | .339 | .976 |
| 9.50 | .447 | .957 | .450 | .922 |
| 10.50 | .544 | .933 | .523 | .910 |
| 11.50 | .641 | .872 | .615 | .825 |
| **12.50** | **.757** | **.762** | .688 | .729 |
| **13.50** | .825 | .591 | **.807** | **.590** |
| 14.50 | .922 | .378 | .899 | .392 |
| 15.50 | .961 | .220 | .945 | .247 |
| 16.50 | .981 | .091 | .982 | .090 |
| 17.50 | 1.000 | .049 | 1.000 | .048 |
| 18.50 | 1.000 | .018 | 1.000 | .006 |
| 20.00 | 1.000 | .000 | 1.000 | .000 |

**Grade 8**
**Spring PRF Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 90 |
| | Negative | 163 |
| | Missing | 647 |
| Group 2 | Positive[a] | 95 |
| | Negative | 162 |
| | Missing | 643 |

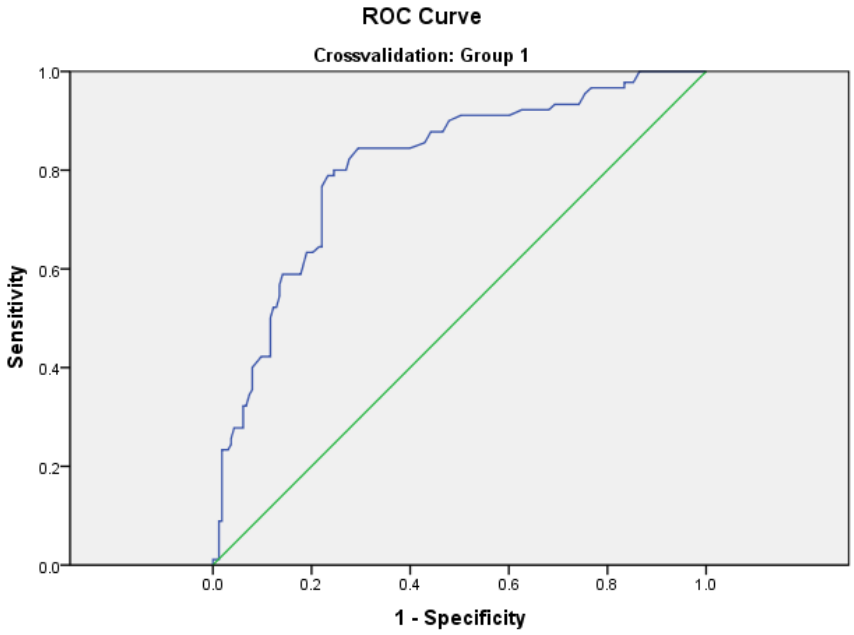
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Spr10PRF has at least one tie between the positive actual state group and the negative actual state group.

**Area Under the Curve[c,d]**

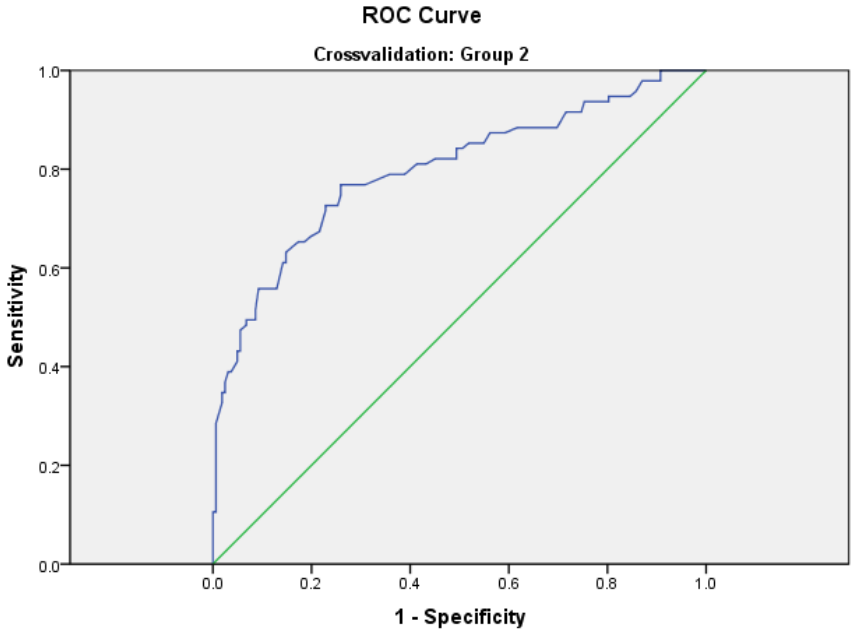
Test Result Variable(s):Spr10PRF

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .808 | .029 | .000 | .751 | .864 |
| Group 2 | .798 | .030 | .000 | .739 | .858 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Spr10PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Spr10PRF has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.




Diagonal segments are produced by ties.




Diagonal segments are produced by ties.

**Grade 8**
**Spring PRF Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 24.00 | .000 | 1.000 | .000 | 1.000 |
| 48.00 | .011 | 1.000 | - | - |
| 72.00 | - | - | .032 | 1.000 |
| 73.00 | .011 | .988 | - | - |
| 76.50 | .033 | .988 | - | - |
| 81.00 | .044 | .988 | .042 | 1.000 |
| 86.00 | .056 | .988 | .053 | 1.000 |
| 89.50 | .067 | .988 | .063 | 1.000 |
| 91.50 | .078 | .988 | .074 | 1.000 |
| 92.50 | - | - | .084 | 1.000 |
| 93.00 | .089 | .988 | - | - |
| 93.50 | - | - | .105 | 1.000 |
| 95.00 | .089 | .982 | - | - |
| 98.00 | - | - | .105 | .994 |
| 99.00 | .111 | .982 | - | - |
| 103.00 | .133 | .982 | .126 | .994 |
| 105.00 | - | - | .158 | .994 |
| 106.00 | .144 | .982 | - | - |
| 107.00 | - | - | .179 | .994 |
| 108.50 | .167 | .982 | .200 | .994 |
| 110.50 | - | - | .221 | .994 |
| 112.00 | .189 | .982 | - | - |
| 113.50 | - | - | .263 | .994 |
| 116.00 | .200 | .982 | .274 | .994 |
| 117.50 | .233 | .982 | - | - |
| 118.00 | - | - | .284 | .994 |
| 119.00 | .233 | .969 | - | - |
| 119.50 | - | - | .326 | .981 |
| 120.50 | .244 | .963 | - | - |
| 120.50 | - | - | .337 | .981 |
| 121.50 | .256 | .963 | - | - |
| 124.00 | .278 | .957 | .347 | .981 |
| 126.50 | .278 | .945 | - | - |
| 128.00 | .278 | .939 | .347 | .975 |
| 129.50 | .300 | .939 | - | - |
| 130.00 | - | - | .368 | .975 |

**Grade 8**
**Spring PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 130.50 | .322 | .939 | - | - |
| 132.50 | .322 | .933 | .389 | .969 |
| 135.00 | .344 | .926 | .389 | .963 |
| 136.50 | .356 | .920 | - | - |
| 137.50 | - | - | .400 | .957 |
| 138.00 | .400 | .920 | - | - |
| 139.50 | - | - | .411 | .951 |
| 140.00 | .422 | .902 | - | - |
| 140.50 | - | - | .432 | .951 |
| 141.50 | .422 | .883 | .432 | .944 |
| 142.50 | .433 | .883 | - | - |
| 143.00 | - | - | .442 | .944 |
| 143.50 | .478 | .883 | - | - |
| 144.50 | .489 | .883 | .474 | .944 |
| 145.50 | - | - | .484 | .932 |
| 146.00 | .500 | .883 | - | - |
| 146.50 | - | - | .495 | .932 |
| 147.50 | .522 | .877 | .495 | .926 |
| 149.00 | .522 | .871 | .495 | .920 |
| 151.00 | .544 | .865 | - | - |
| 151.50 | - | - | .495 | .914 |
| 153.00 | .567 | .865 | - | - |
| 153.50 | - | - | .516 | .914 |
| 154.50 | .589 | .859 | .558 | .907 |
| 155.50 | .589 | .822 | - | - |
| 156.00 | - | - | .558 | .895 |
| 156.50 | .633 | .810 | - | - |
| 157.50 | .633 | .798 | .558 | .870 |
| 158.50 | .644 | .785 | .611 | .858 |
| 159.50 | .644 | .779 | .611 | .852 |
| 160.50 | .656 | .779 | .632 | .852 |
| 161.50 | .667 | .779 | .642 | .840 |
| 163.00 | - | - | .653 | .827 |
| 162.50 | .700 | .779 | - | - |
| 163.50 | .722 | .779 | - | - |
| 164.50 | .744 | .779 | .653 | .815 |

**Grade 8**
**Spring PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 165.50 | .756 | .779 | .663 | .802 |
| 166.50 | .767 | .779 | .674 | .784 |
| 167.50 | .789 | .767 | - | - |
| 168.00 | - | - | .716 | .772 |
| 168.50 | .789 | .755 | - | - |
| **169.50** | **.800** | **.755** | .726 | .772 |
| 170.50 | .800 | .730 | .726 | .747 |
| 171.50 | - | - | .747 | .741 |
| 172.00 | .822 | .724 | - | - |
| **172.50** | - | - | **.768** | **.741** |
| 173.50 | .844 | .706 | .768 | .698 |
| 174.50 | .844 | .687 | .768 | .691 |
| 175.50 | .844 | .650 | .789 | .642 |
| 176.50 | - | - | .789 | .611 |
| 177.00 | .844 | .607 | - | - |
| 177.50 | - | - | .811 | .586 |
| 178.50 | .844 | .601 | .811 | .568 |
| 179.50 | - | - | .821 | .549 |
| 180.00 | .856 | .571 | - | - |
| 180.50 | - | - | .821 | .537 |
| 181.50 | .878 | .558 | .821 | .525 |
| 182.50 | .878 | .534 | .821 | .506 |
| 183.50 | - | - | .842 | .506 |
| 184.00 | .900 | .521 | - | - |
| 184.50 | - | - | .842 | .494 |
| 185.50 | .911 | .497 | .853 | .481 |
| 186.50 | .911 | .479 | .853 | .463 |
| 187.50 | .911 | .466 | .853 | .451 |
| 188.50 | .911 | .454 | .874 | .438 |
| 189.50 | .911 | .399 | .874 | .407 |
| 190.50 | .922 | .374 | .884 | .383 |
| 191.50 | - | - | .884 | .352 |
| 192.00 | .922 | .368 | - | - |
| 192.50 | - | - | .884 | .340 |
| 193.50 | .922 | .337 | .884 | .333 |
| 194.50 | .922 | .331 | .884 | .327 |

**Grade 8**
**Spring PRF Benchmark (continued)**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| 195.50 | .922 | .319 | .884 | .302 |
| 196.50 | .933 | .307 | .916 | .284 |
| 197.50 | .933 | .276 | .916 | .253 |
| 198.50 | .933 | .270 | .937 | .247 |
| 199.50 | .933 | .264 | .937 | .216 |
| 200.50 | .933 | .258 | .937 | .210 |
| 201.50 | .956 | .245 | .937 | .198 |
| 203.50 | .967 | .233 | .947 | .198 |
| 205.50 | .967 | .202 | .947 | .191 |
| 206.50 | .967 | .166 | .947 | .154 |
| 207.50 | .978 | .166 | .958 | .142 |
| 208.50 | .978 | .153 | .979 | .130 |
| 209.50 | .978 | .147 | - | - |
| 210.00 | - | - | .979 | .123 |
| 210.50 | 1.000 | .135 | - | - |
| 212.50 | 1.000 | .129 | - | - |
| 213.00 | - | - | .979 | .117 |
| 214.50 | 1.000 | .117 | - | - |
| 216.00 | 1.000 | .110 | .979 | .099 |
| 217.50 | - | - | .979 | .093 |
| 218.00 | 1.000 | .104 | - | - |
| 218.50 | - | - | 1.000 | .093 |
| 219.50 | - | - | 1.000 | .074 |
| 220.50 | 1.000 | .074 | - | - |
| 224.00 | - | - | 1.000 | .062 |
| 225.00 | 1.000 | .061 | - | - |
| 229.00 | 1.000 | .055 | 1.000 | .056 |
| 232.00 | 1.000 | .049 | - | - |
| 232.50 | - | - | 1.000 | .049 |
| 234.50 | 1.000 | .037 | - | - |
| 238.50 | - | - | 1.000 | .031 |
| 238.50 | 1.000 | .018 | - | - |
| 244.50 | 1.000 | .012 | 1.000 | .025 |
| 247.50 | 1.000 | .006 | 1.000 | .019 |
| 249.00 | 1.000 | .000 | | |
| 261.00 | - | - | 1.000 | .012 |
| 275.00 | - | - | 1.000 | .000 |

**Grade 8**
**Spring MCRC Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 126 |
| | Negative | 284 |
| | Missing | 490 |
| Group 2 | Positive[a] | 131 |
| | Negative | 319 |
| | Missing | 450 |

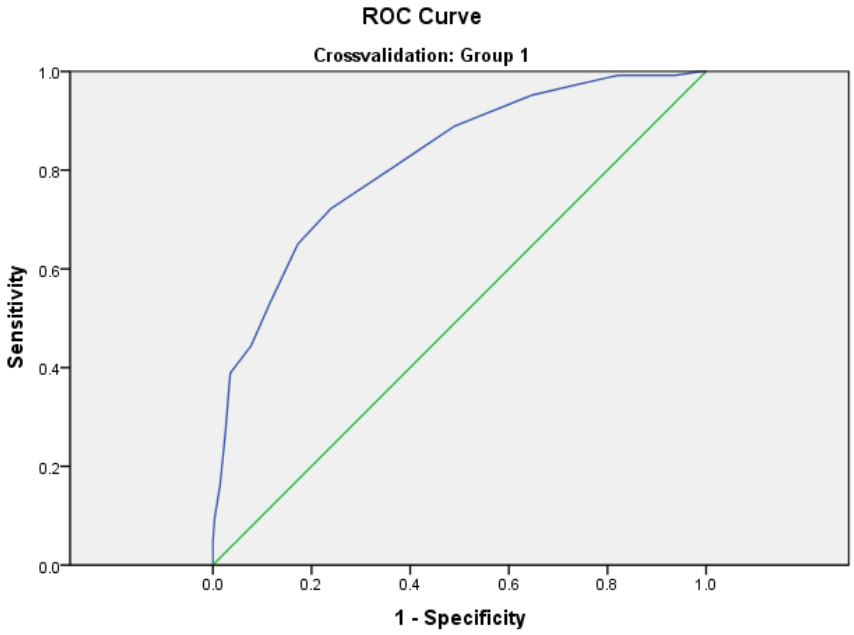
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Spr10MCRC has at least one tie between the positive actual state group and the negative actual state group.

**Area Under the Curve[c,d]**

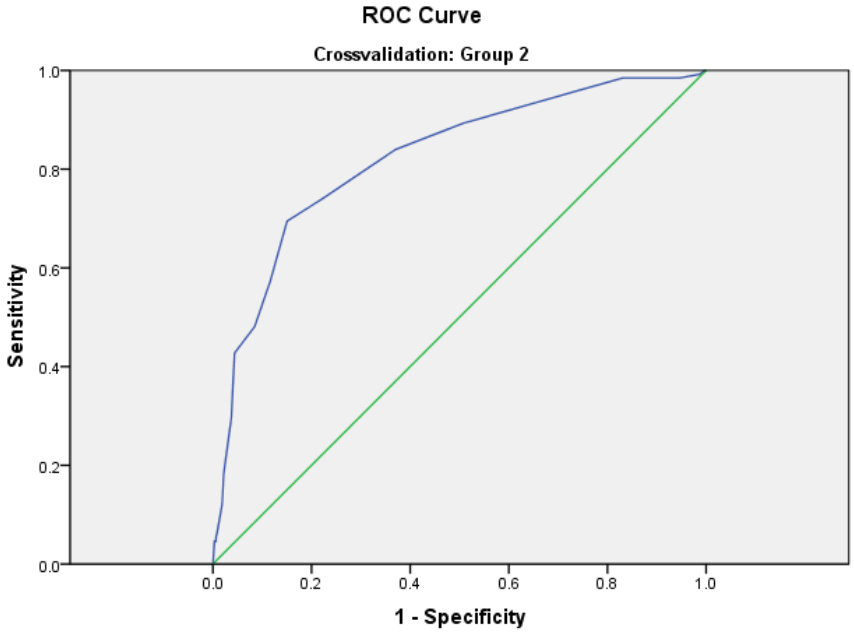
Test Result Variable(s):Spr10MCRC

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .816 | .023 | .000 | .772 | .861 |
| Group 2 | .823 | .022 | .000 | .779 | .866 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Spr10MCRC has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Spr10MCRC has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.




Diagonal segments are produced by ties.




Diagonal segments are produced by ties.

**Grade 8**
**Spring MCRC Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| -1.00 | .000 | 1.000 | .000 | 1.000 |
| 1.00 | - | - | .046 | .997 |
| 1.50 | .016 | 1.000 | - | - |
| 2.50 | - | - | .046 | .994 |
| 3.50 | .024 | 1.000 | .053 | .994 |
| 4.50 | .048 | 1.000 | .069 | .991 |
| 5.50 | .095 | .996 | .122 | .981 |
| 6.50 | .159 | .986 | .183 | .978 |
| 7.50 | .262 | .975 | .298 | .962 |
| 8.50 | .389 | .965 | .427 | .956 |
| 9.50 | .444 | .923 | .481 | .915 |
| 10.50 | .532 | .884 | .573 | .884 |
| 11.50 | .651 | .827 | .695 | .850 |
| **12.50** | **.722** | **.761** | **.740** | **.777** |
| 13.50 | .802 | .641 | .840 | .630 |
| 14.50 | .889 | .511 | .893 | .492 |
| 15.50 | .952 | .352 | .947 | .304 |
| 16.50 | .992 | .180 | .985 | .169 |
| 17.50 | .992 | .063 | .985 | .053 |
| 18.50 | 1.000 | .011 | .992 | .013 |
| 19.50 | - | - | 1.000 | .003 |
| 20.00 | 1.000 | .000 | - | - |
| 21.00 | - | - | 1.000 | .000 |

**Grade 8**
**Spring VOC Benchmark**

**Case Processing Summary[b]**

| Crossvalidation | MSPRdg_Perf | Valid N (listwise) |
|---|---|---|
| Group 1 | Positive[a] | 44 |
| | Negative | 108 |
| | Missing | 748 |
| Group 2 | Positive[a] | 37 |
| | Negative | 134 |
| | Missing | 729 |

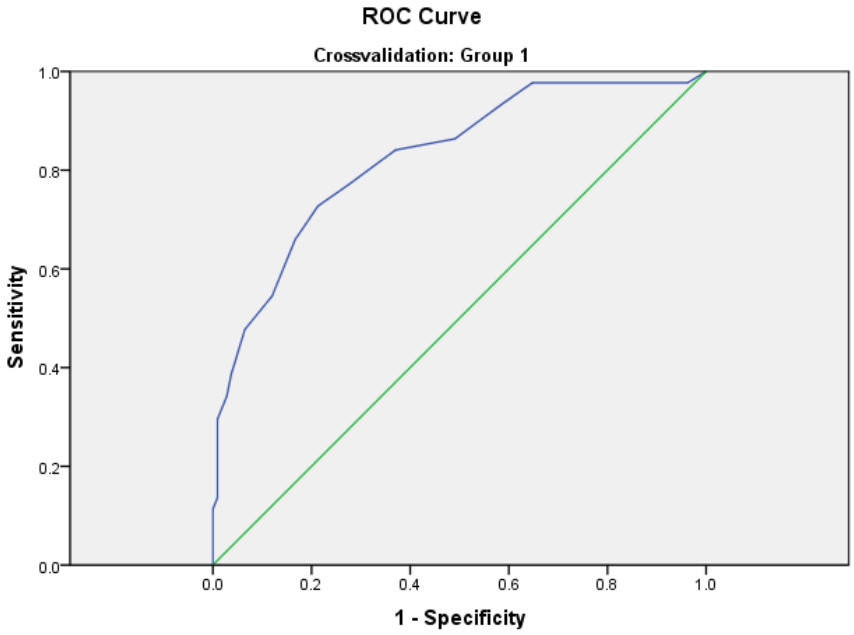
Smaller values of the test result variable(s) indicate stronger evidence for a positive actual state.
a. The positive actual state is .00.
b. For split file Crossvalidation = Group 2, the test variable(s): Spr10Voc has at least one tie between the positive actual state group and the negative actual state group.

**Area Under the Curve[c,d]**

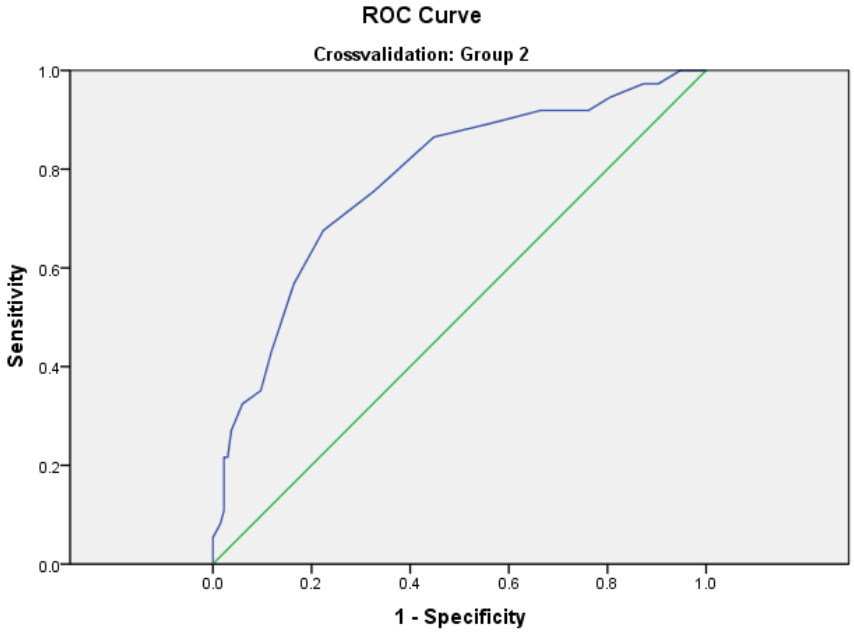
Test Result Variable(s):Spr10Voc

| | | | | Asymptotic 95% Confidence Interval | |
|---|---|---|---|---|---|
| Crossvalidation | Area | Std. Error[a] | Asymptotic Sig.[b] | Lower Bound | Upper Bound |
| Group 1 | .826 | .038 | .000 | .752 | .900 |
| Group 2 | .778 | .044 | .000 | .692 | .864 |

a. Under the nonparametric assumption
b. Null hypothesis: true area = 0.5
c. For split file Crossvalidation = Group 1, the test result variable(s): Spr10Voc has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.
d. For split file Crossvalidation = Group 2, the test result variable(s): Spr10Voc has at least one tie between the positive actual state group and the negative actual state group. Statistics may be biased.




Diagonal segments are produced by ties.




Diagonal segments are produced by ties.

**Grade 8**
**Spring VOC Benchmark**

| Cut score | Group 1 | | Group 2 | |
|---|---|---|---|---|
| | Sensitivity | Specificity | Sensitivity | Specificity |
| -1.00 | .000 | 1.000 | .000 | 1.000 |
| 1.00 | .045 | 1.000 | .027 | 1.000 |
| 2.50 | .068 | 1.000 | - | - |
| 3.00 | - | - | .054 | 1.000 |
| 4.00 | .091 | 1.000 | - | - |
| 5.00 | - | - | .081 | .985 |
| 5.50 | .114 | 1.000 | - | - |
| 6.50 | .136 | .991 | .108 | .978 |
| 7.50 | .227 | .991 | .216 | .978 |
| 8.50 | .295 | .991 | .216 | .970 |
| 9.50 | .341 | .972 | .270 | .963 |
| 10.50 | .386 | .963 | .324 | .940 |
| 11.50 | .477 | .935 | .351 | .903 |
| 12.50 | .545 | .880 | .432 | .881 |
| 13.50 | .659 | .833 | .568 | .836 |
| 14.50 | .727 | .787 | .676 | .776 |
| **15.50** | **.773** | **.722** | **.757** | **.672** |
| 16.50 | .841 | .630 | .865 | .552 |
| 17.50 | .864 | .509 | .892 | .440 |
| 18.50 | .932 | .417 | .919 | .336 |
| 19.50 | .977 | .352 | .919 | .239 |
| 20.50 | .977 | .222 | .946 | .194 |
| 21.50 | .977 | .130 | .973 | .127 |
| 22.50 | - | - | .973 | .097 |
| 23.00 | .977 | .037 | - | - |
| 23.50 | - | - | 1.000 | .052 |
| 24.50 | - | - | 1.000 | .030 |
| 25.00 | 1.000 | .000 | - | - |
| 26.00 | - | - | 1.000 | .000 |