2017-2018 WCSD AP Statistics Program Evaluation Rubric

Evaluator Number

3

Program Number

Name of Text

The Practice of Statistics

Publisher

Bfw

Rate This Text Overall

- [x] **High**
- [ ] **Mid**
- [ ] **Low**

Focus: Evaluate the table of contents and any pacing guides. Do not stop there; also evaluate units, chapters, and lessons. (Both student and teacher materials)

Exploring Data

Defining variables
Constructing and interpreting graphical displays of distributions of univariate data (dotplot, stemplot, histogram, cumulative frequency plot)!Summarizing distributions of univariate data Comparing distribution of univariate data (dotplots, back-to-back stemplots, parallel boxplots) Exploring bivariate data
Exploring categorical data

Sampling and Experimentation: Planning and conducting a study

Overview of methods of data collection
Planning and conducting surveys
Planning and conducting experiments
Generalizability of results and types of conclusions that can be drawn from observational studies, experiments and surveys
Simulation modeling

Anticipating Patterns: Exploring random phenomena using probability and simulation

Probability
Random variables
Binomial distributions/geometric
Normal distribution
Sampling distributions

Statistical inference: Estimating population parameters and testing hypotheses

Estimation
Confidence intervals
Hypothesis tests including chi-square and regression slope

At least 90% of the topics are in the textbook.
Comments?

Yes, all 4 major units contained: Explore data, Plan studies, Anticipate pattern, Inference are contained in book. Book includes many older data sets. New material seems sports related. Frappe material readily available on Internet sites. New authors not totally in agreement as to whether Plan studies should be taught first or second. Older authors's thought second. Extra material included on supplemental materials. Math XL not an option. Book already 3 years old.

- ○ **Less than 25%**
- ○ **Less than 60% but greater than 25%**
- ○ **Less than 90% but greater than 60%**
- ◉ **At least 90%**

Student work involves significant work with applications/modeling and problems that use algebra skills
Comments?

This is a newer addition to Yates and Moore. By necessity material requires modeling and application of algebra skills.

- ○ **Does not occur**
- ○ **Sometimes occurs**
- ○ **Frequently occurs**
- ◉ **Consistently occurs**

There are problems at a level of sophistication appropriate to the course (beyond mere review of previous course topics) that involve the application of knowledge and skills from Algebra.
Comments?

Yes, includes AP level problems.

- ○ **Does not occur**
- ○ **Sometimes occurs**
- ○ **Frequently occurs**
- ◉ **Consistently occurs**

Rigor: Examine the instructional materials, student practice and assessments. Look for evidence of where the topics explicitly require students to understand concepts, do the assignments that students work on build that understanding, and do assessment tasks reveal whether students understand the mathematics in question?
Comments?

Chapters are divided into sections and problems are provided by section allowing for focus on the particular section. This is in contrast to another book where the problems are organized by chapter but do not follow pace of chapter. Teacher resources apparently not provided for review (blacked out on disk.)

- ○ **Does not occur**
- ○ **Sometimes occurs**
- ○ **Frequently occurs**
- ◉ **Consistently occurs**

Rigor: Do the materials feature high-quality conceptual problems and conceptual discussion questions? Do they provide opportunities for multiple representations?

Comments?

Yes, again stats requires reading, writing, summarizing, graphing. These elements in the problem sets.

- ○ Does not occur
- ○ Sometimes occurs
- ○ Frequently occurs
- ◉ Consistently occurs

Rigor: Are the materials designed so that students attain the fluency and procedural skills required? Evaluate the lessons, chapter/unit assessments, daily routines, and homework assignments for evidence in the development of fluency and procedural skill supported by conceptual understanding.

Comments?

Each section includes spiral review problems with reference back to previous section. This is one of the strengths of the text.

- ○ Does not occur
- ○ Sometimes occurs
- ○ Frequently occurs
- ◉ Consistently occurs

Rigor: Are the materials designed so that teachers and students spend sufficient time working with applications, without losing focus on the topics defined for the course? Are there single- and multi-step contextual problems that develop the mathematics of the course, afford opportunities for practice, and engage students in problem solving?

Comments?

An AP practice test is included in each chapter containing appropriate material for the point in time of the course. Another strength.

- ○ Does not occur
- ○ Sometimes occurs
- ○ Frequently occurs
- ◉ Consistently occurs

Coherence: Are the materials coherent in their content, do the topics build on each other in a way that is beneficial to the instruction, student practice and assessments?

Comments?

See comment on page 1 about Explore vs Plan.

- ○ Does not occur
- ○ Sometimes occurs
- ◉ Frequently occurs
- ○ Consistently occurs