Machine Scoring of Student Essays
Haswell, Richard, Ericsson, Patricia Freitag

Published by Utah State University Press

Haswell, Richard and Patricia Freitag Ericsson.
Project MUSE. muse.jhu.edu/book/9292.

For additional information about this book
https://muse.jhu.edu/book/9292

For content related to this chapter
https://muse.jhu.edu/related_content?type=book&id=238707
GLOSSARY OF TERMS

**ACCUPLACER.** College Board’s suite of placement tests, administered via the Internet. Includes placement tools for reading, math, and writing, the writing assessed through WritePlacer Plus based on the IntelliMetric Essay Scoring Engine.

**ACT.** Testing corporation founded in 1959, originally known as the American College Testing Program, now known only as ACT.

**AES.** Automated essay scoring, a phrase often used in the computing industry to refer to software, such as e-Write or Intelligent Essay Assessor, that renders a score or rate from a naturally written extended piece of discourse.

**Algorithm.** Sequence of commands that allows a computer to accomplish a task in a finite number of steps.

**Artificial intelligence (AI).** Construction of machines such that they can solve humanlike problems in a humanlike way.

**CAWA.** Computer-assisted writing assessment, referring to any computer program that analyzes and judges written language, from spell-checkers to essay scorers.

**College Board.** Corporation that owns the SAT and the Advanced Placement Program, originally established as the College Entrance Examination Board (CEEB) in 1900.

**COMPASS.** ACT’s essay-scoring machine, based on the IntelliMetric Essay Scoring Engine, also known as COMPASS e-Write.

**Criterion.** ETS’s essay-scoring machine, based on e-rater technology (developed by ETS).

**e-rater.** ETS’ essay-assessment program.

**ETS.** Testing corporation founded in 1947 as the Educational Testing Service, now popularly known as ETS.

**e-Write.** ACT’s scoring machine, based on the IntelliMetric Essay Scoring Engine, also known as COMPASS e-Write.

**GMAT.** Graduate Management Admissions Test, owned by the Graduate Management Admission Council, a standard entrance examination for business graduate schools. In 1999 it became the first large-scale test to have examinee essays machine scored (by ETS’s e-rater).

**Grammar- and style-checkers.** Computer programs that detect deviations from algorithms having to do with punctuation, subject-verb agreement, frequency of passive constructions, and other “rules” of standard written language.

**Intelligent Essay Assessor.** Essay-assessment machine based on latent semantic analysis, originally developed by Knowledge Analysis Technologies, now purveyed by Pearson Knowledge Technologies.

**IntelliMetric Essay Scoring Engine.** Essay-assessment machine developed by Vantage Technologies, used in COMPASS e-Write, ACCUPLACER, MY Access! and other scoring programs.

**Knowledge Analysis Technologies.** Original developer and purveyor of the Intelligent Essay Assessor, now known as Pearson Knowledge Technologies.

**Latent semantic analysis (LSA).** Computer-based language-analysis program used in the Intelligent Essay Assessor; uses mathematical and statistical techniques to extract information and make content inferences about texts.

**MY Access!** Online essay-scoring and feedback system, based on the IntelliMetric Essay Scoring Engine, a Vantage Learning product.
**Natural-language processing.** Capability of computers to decode and encode meaningfully the language normally used by humans to communicate among themselves (not language formatted into some computer code).

**Parser.** Machine capability to translate a source code into an object code. In computer language processing this might entail identifying grammatical parts in natural texts.

**Pearson Knowledge Technologies.** Purveyor of automated essay-assessment applications including the Intelligent Essay Assessor and Summary Street, formerly known as Knowledge Analysis Technologies; part of Pearson Education.

**Reliability.** Degree to which a test, repeated again under similar conditions, produces the same outcome. Different components of a test have different reliabilities. **Writer reliability** is how closely repeated performances of a student on a test match the previous performances of the student. **Rater reliability** is how consistent an examiner is on scoring or rating a test. **Interrater reliability** is the degree to which one rater matches the score or rate of another rater, or of a group of raters, on the same test performance.

**SAT.** Test of academic knowledge often used in college admissions decisions, originally standing for “Scholastic Aptitude Test,” then changed to “Scholastic Achievement Test,” then to “Scholastic Assessment Test,” and now, according to the College Board, not standing for anything.

**Spell-checker.** Computer program, often a part of word-processing software, that compares input words against an internal dictionary and flags mismatches.

**Summary Street.** Online essay-scoring and feedback system based on latent semantic analysis, purveyed by Pearson Knowledge Technologies.

**Text mining.** Capability of computers automatically to extract information from text, usually by detecting patterns—morphological, lexical, or syntactic—in large databases.

**Validity.** How well a test functions as a test. There are many kinds of validity, all expressed as a relative degree. **Concurrent validity** is the degree to which a test correlates with a different test purporting to measure the same ability. **Construct validity** is the degree to which parts of the test further the goal of the test—perhaps how well one half of the test integrates the other half, or how well one item avoids merely duplicating another item. **Criterion-related validity** judges a test by comparing its outcomes with a comparable test. **Face validity** is the functionality of a test as judged by experts. **Instructional validity** is the degree to which a test serves the curriculum in which it functions. **Predictive validity** is the degree of accuracy with which the test predicts some future performance of the test taker, perhaps course grade or teacher-judged writing ability.

**Vantage Learning.** Vantage Laboratories division that programs Web-based tools for writing assessment and feedback, developer and purveyor of the IntelliMetric Essay Scoring Engine.

**Washback.** Effects of a test or a testing system upon instruction.

**WebCT.** Computer support system for educators, including chat, e-mail, exam-marking, and grade-book features, marketed by WebCT, Inc.

**WritePlacer Plus.** Writing-assessment portion of ACCUPLACER, based on the IntelliMetric Essay Scoring Engine.