

Assessing Writing:

Using a levels of language framework

This study examines an innovative approach to formative writing assessment: Evaluating students' writing skills across **three levels of language** using automated essay scoring tools

Levels of Language Framework

Word-level writing skills

Spellings and the word choice to convey exact meaning and intended creative effects



Sentence-level writing skills

Syntactically, grammatically, and mechanically correct sentences, as well as sentence structure and length for creative impact



Discourse-level writing skills

Well organized, cohesive text with sufficient concept growth and elaboration that meets communication objectives



What is Automated Formative Writing Assessment?



Natural Language Processing (NLP) Tools
NLP uses automated and computational approaches to extract information from written text

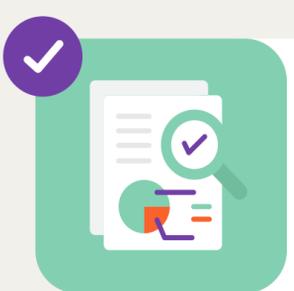
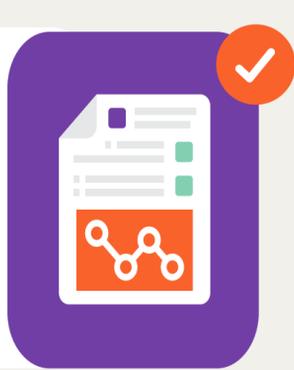


Coh-Metrix
Automatically assesses content, structure, text difficulty, and cohesion of writing using a combination of computer-generated measures related to syntax, cohesion, diction, and more

Research Questions and Methods

Research Questions

1. Can NLP (provided by Coh-Metrix) be used to assess students' writing ability across levels of language?
2. If it's possible to identify these three levels of language, are they meaningfully related to outcomes of interest such as performance on a state writing assessment?.



The Sample
The Sample consisted of students in grade 6 and 8, at the beginning and end of middle school

Findings

A subset of 9 Coh-Metrix measures successfully matched three latent levels of language at each grade level:

1. Word Level
2. Sentence Level
3. Discourse Level



Implications for the potential of automated formative writing assessment:

The goals of formative assessment are:

1. To provide educators with accurate and detailed information about specific writing skills that are meaningfully related to desired outcomes
2. To assist them in providing meaningful and effective feedback



Current AWE tools that implement levels of language approaches can enable more personalized and adaptive experiences for student users



Automated assessment, along with teacher feedback, can help students transform their writing

Reference: Wilson, J., Roscoe, R., & Ahmed, Y. (2017). Automated formative writing assessment using a levels of language framework. *Assessing Writing*, 34, 16-36.