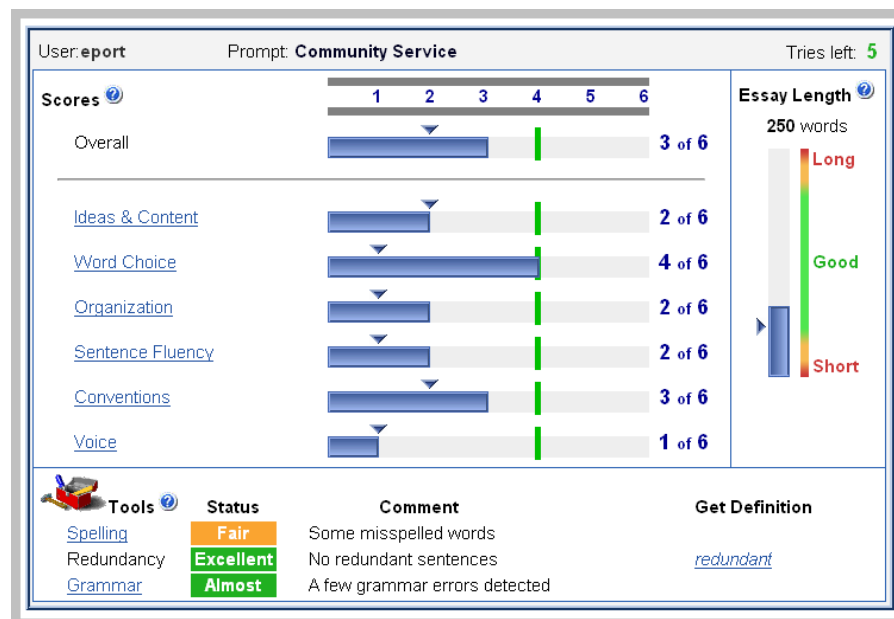## Intelligent Essay Assessor

Pearson's Intelligent Essay Assessor™ (IEA) is an Internet-based tool for automatically scoring the quality of electronically submitted essays. Essays are measured using Pearson's state-of-the-art Knowledge Analysis Technologies™ (KAT) engine, which automatically evaluates the meaning of text, not just grammar, style and mechanics. What's more IEA can also evaluate short constructed responses. In tests over thousands of constructed responses, the Intelligent Essay Assessor has proven as reliable as professional human scorers.

The KAT engine analyzes text through a combination of Latent Semantic Analysis (LSA)—a powerful matrix algebra-based approach pioneered by Pearson principals—and methods widely used in automatic speech recognition, computational linguistics and other forms of statistical Artificial Intelligence. LSA determines semantic similarity of words and passages by analyzing large bodies of relevant text. Using LSA, IEA can "understand" the meaning of text much the same as a human reader. As a result, IEA can evaluate essays, and short answers, for substantive content, in addition to the more mechanical aspects of writing.

Customized to meet each school, business or organization's essay scoring needs, IEA can be trained to score for any writing traits that humans can reliably score. For example, in WriteToLearn™, Pearson's Web-based learning tool for building writing skills and developing reading comprehension, IEA is trained to evaluate essays for each of six traits of writing: ideas, organization, conventions, sentence fluency, word choice and voice. IEA can also provide feedback on spelling, grammar and redundancy.

User: eport	Prompt: **Community Service**		Tries left: **5**
Scores	1 2 3 4 5 6		**Essay Length**
			250 words
Overall		3 of 6	Long
Ideas & Content		2 of 6	
Word Choice		4 of 6	Good
Organization		2 of 6	
Sentence Fluency		2 of 6	
Conventions		3 of 6	Short
Voice		1 of 6	

Tools	**Status**	**Comment**	**Get Definition**
Spelling	Fair	Some misspelled words	
Redundancy	Excellent	No redundant sentences	redundant
Grammar	Almost	A few grammar errors detected	

Research-Based Scoring Across Subject Areas

Research conducted by both independent researchers and Pearson supports the reliability of IEA for assessing content-based knowledge. This capability makes IEA a powerful tool for evaluating writing across subject areas including science, history, social studies and language arts. IEA distinguishes itself in its ability to accurately grade writing in subject areas beyond language arts. In addition, IEA can be tuned to understand and evaluate text in any language, not just English. It also includes built-in detectors for off-topic responses and other special situations that may need to be referred to human readers.

Scoring Millions of Essays, Thousands of Topics

IEA has been used to evaluate millions of constructed responses written by students in grades 4-12, college and university undergraduate and graduate students, as well as members of the military and corporate employees. It can be used in high-stakes testing, as a second opinion, or in formative evaluations. IEA's underlying KAT engine has proven reliability on constructed responses of many different types, including:

- Persuasive, Expository, Descriptive, Narrative
- Content-based responses (e.g., standard midterm and final exam essay questions)
- Science short answers
- 21st Century Skills: Critical Thinking, Problem Solving, Communication, Collaboration

Purchasing Information

IEA is an Internet-based service hosted at Pearson's Knowledge Technologies group in Boulder, CO, with various pricing options available. Pricing includes a set-up fee for calibrating IEA to an organization's essay evaluation criteria and integrating with client systems. Essay scoring charges are then based on volume.

Organizations interested in customizing IEA to score their essays or in offering custom online writing services may visit www.pearsonkt.com, email info@pearsonkt.com or call 303-545-9092.

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