Understanding students' working processes to provide personalized feedback in the AI era

Badri Adhikari

Associate Professor
Department of Computer Science
University of Missouri-St. Louis (UMSL)

Your name, affiliation, and one/two sentence about yourself

Student

Anonymous
Hi! I am Neil from Visayas State University. I teach high school and college students.

Anonymous
Hi! I'm Merlene Alon from Alpha Angelicum Academy, a school administrator.

Anonymous
Rish (DLSU Integrated School)
Teacher

Anonymous
Hello guysssss!!!!!!!!!!!!!!!!!!!!!!!

Anonymous
Hi! I'm Pau, EdTech Director and Robotics Teacher.

Anonymous
Good morning, I am Kate Cosico. I am teaching Grade School English

Anonymous
Georgina V Kusano
De La Salle University-Dasmariñas
I teach PE and Health for Grade 11 and 12😁

Anonymous
Generie Manuel
DLSU
Teaching business classes

Anonymous
Hi, I am Anne from DLSU IS. I am teaching Grade School Math. 💚

Anonymous
Marz Pauline G. Bandalan-Salazar; I am college instructor at Visayas State University, teaching elementary and early childhood pre-service teachers.

Anonymous
I'M JOE from DepEd Quezon - Canda National High School

Anonymous
ALLEN CHRISTIAN S. BORJA
SAINT LOUIS COLLEGE
Junior High School Research Coordinator
Teaching Senior High School (Earth and Life Science and Physical Science Subjects)
Teaching Junior High School Special Science Class (Research subjects)

Anonymous
Maria Fleurdelis Guevarra, Im a Guidance Counselor and a Special ed Teacher...glad to meet you Sir

Anonymous
Hi there, fellow lifelong learners! I am Joseph from Benguet State University. I teach undergraduate and graduate school courses.

Anonymous
Hi! Becy here, Music teacher.

Anonymous
Good morning. I'm Manilyn Cacanindin from the Don Mariano Marcos Memorial State University teaching at the BA English Language Program.

Anonymous
Good morning everyone!

Anonymous
John Benedict F. San Juan
Taytay Senior High School
Student

Anonymous
Hi im Rhian Lopez from taytay senior high school

Anonymous
Mary May C. Gontiñas
Philippine Christian University

Anonymous
DLSU, JHS teacher

Anonymous
Good morning. I am Tina from DLSU, teaching SHS Math.

Anonymous
Mark, from Taytay Senior High School

Anonymous
Hi, I am Geraldine from DLSU Senior High School. I teach science for both Grade 11 to 12 students.

Anonymous
Hello! I am Teacher Zel. I'm a Preschool teacher at DLSU IS.

Anonymous
Hi from Dr. Vivencio B. Villamayor integrated school

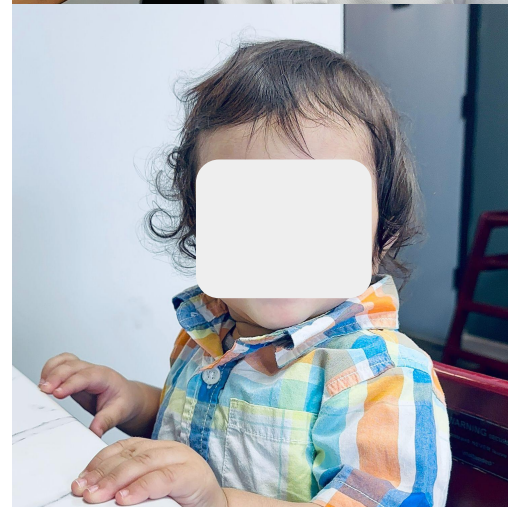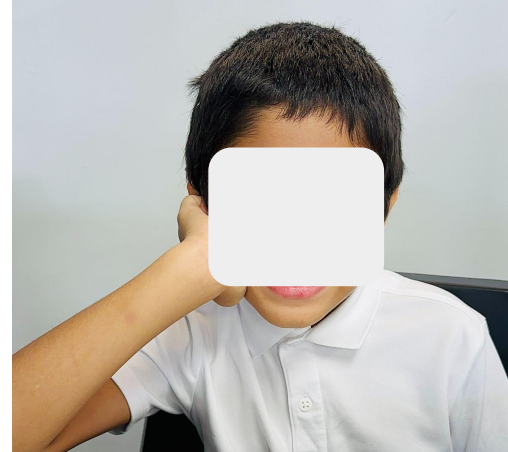**Anonymous**
Din

Grade school

About Me

Associate Professor at UMSL

My Research Interests:
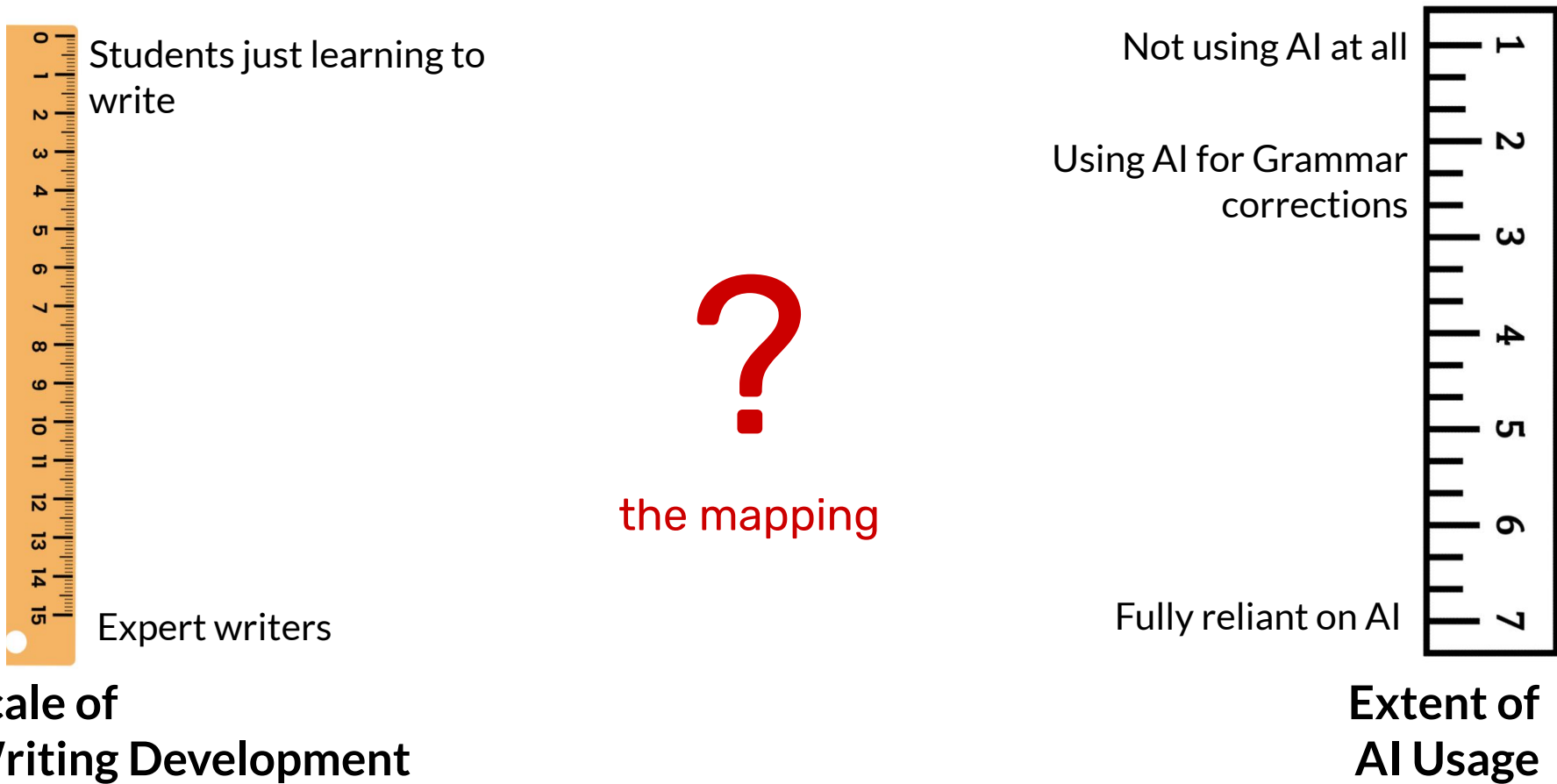
Explainable AI & Education Technologies

Courses I Teach:

- Data Visualization 🖤
- Interpretable Machine Learning
- Deep Learning
- Artificial Intelligence

Aayog & Samyog

Context: Should we let students use AI?

Students just learning to write

Not using AI at all

Using AI for Grammar corrections

?

the mapping

Expert writers

Fully reliant on AI

Scale of Writing Development

Extent of AI Usage

How can teachers facilitate reflective writing processes?

How can teachers support writerly development and creativity?

At school and beyond?

One possibility...

Demo of Process Feedback

Demo of Process Feedback

https://www.processfeedback.org/gdocs

Read about the Process Feedback tool.

Gdoc

Welcome to This Sesson on Process Feedback
By: Badri Adhikari - badri.com.np@gmail.com

Gdoc Link ↗

Writing Journey Summary

🕐 **11 minutes and 33 seconds** of active typing | **46%** of total time

📅 **25 minutes and 25 seconds** total time (includes idle durations)

📝 2 paragraph(s) | 19 sentence(s) | 213 words | 1,270 characters

Sample Report ↗

About Process Feedback

Who is using Process Feedback?

- **The Google Docs extension** (released on July 2024)
  - ~10,000 students/teachers in 100+ countries
    - ~20,000+ documents served so far

Process Feedback's Accessibility

- **It is free**
  - requires no sign up
- **It is privacy-centered**
  - data is stored locally in the browser
- **Google Docs support**
  - released in August 2024
- **Google Colab support**
  - released in January 2025
- **Approved by** UM System's IT Compliance
  - for use in all four campuses

First publication

education sciences

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Eleanor Dommett

Thinking beyond Chatbots' Threat to Education: Visualizations to Elucidate the Writing or Coding Process

by Badri Adhikari ✉ iD

Department of Computer Science, University of Missouri-St. Louis, St. Louis, MO 63121, USA

(This article belongs to the Section Technology Enhanced Education)

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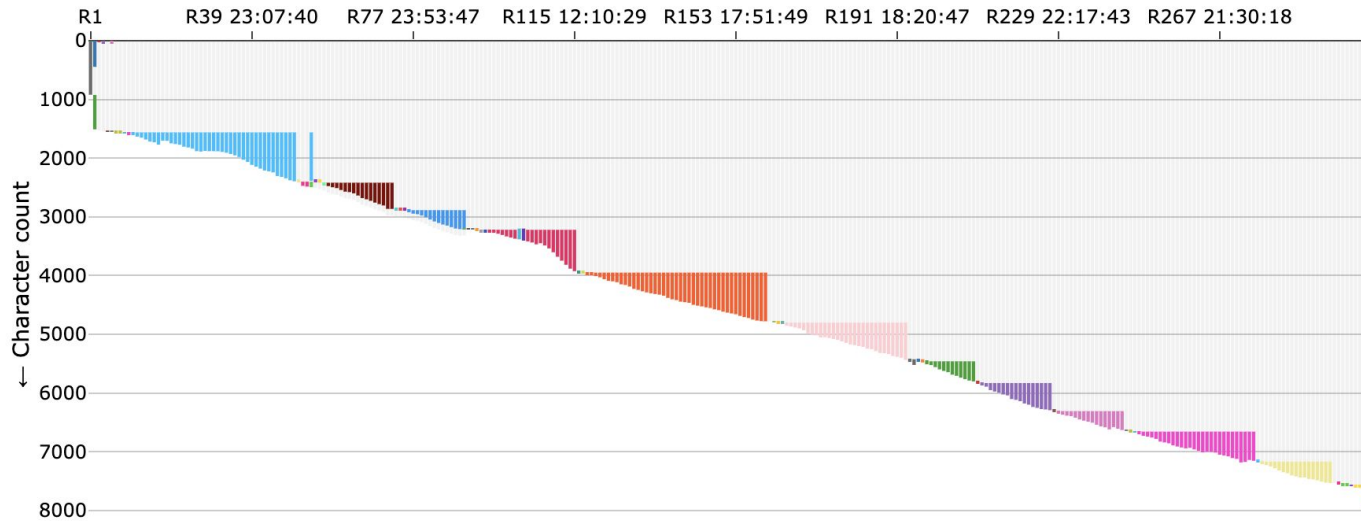
Why Does It Matter?

Edited Paragraph Location

☐ Include inactive durations in the plot

Time (Revisions) →

Character count →

Each paragraph is assigned a color; highlighted bars show the paragraphs edited at that revision; hovering over the bars shows the actual text content at that revision. Watch tutorial ▶

If you could see your students writing process, what kinds of feedback will you offer them?