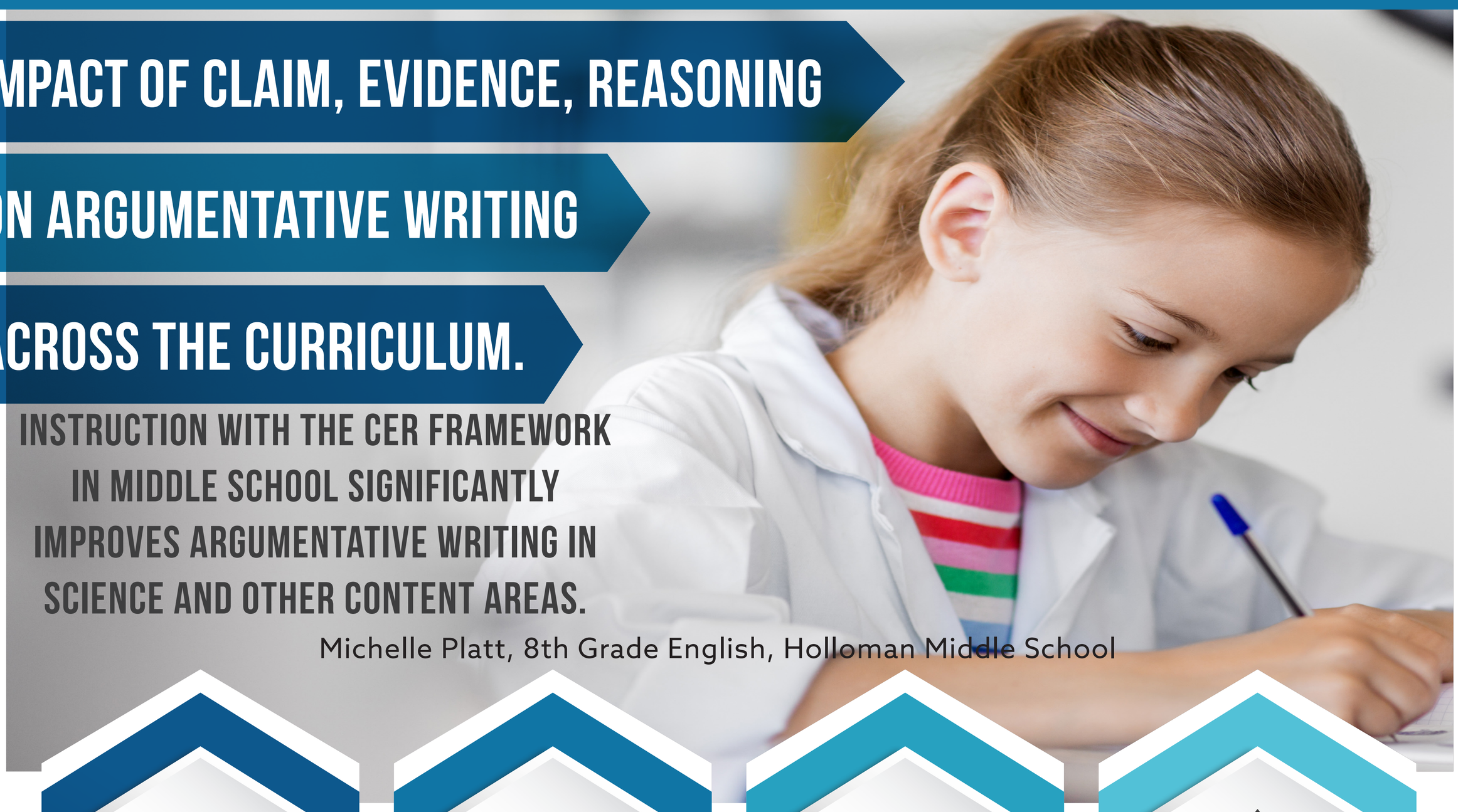
IMPACT OF CLAIM, EVIDENCE, REASONING ON ARGUMENTATIVE WRITING ACROSS THE CURRICULUM.



INSTRUCTION WITH THE CER FRAMEWORK IN MIDDLE SCHOOL SIGNIFICANTLY IMPROVES ARGUMENTATIVE WRITING IN SCIENCE AND OTHER CONTENT AREAS.

Michelle Platt, 8th Grade English, Holloman Middle School

Purpose

The purpose of this study was to determine if instruction with the CER framework in the English classroom promotes mastery of written explanations in the science classroom and other content areas. To address observed challenges in explaining reasoning in writing.

Focus

Does instruction with the CER framework impact the writing of arguments?

1.) Does CER instruction in English class impact claims in other subjects?

2.) Will the CER framework improve student confidence in writing?

Analysis

The mean writing sample rubric scores increased significantly as a whole and individually in science, history, and English. The three components of the CER framework, claim, evidence, and reasoning, improved on an almost even level post-treatment.

Value

The CER framework simplified the argumentative process making learning accessible for every student. It helped advanced students write concise, easily understandable answers and strugling learners to visually connect the evidence and reasoning to their claim.

Background

- McNeil & Krajcik (2008) developed the Claim, Evidence, Reasoning (CER) framework to help middle schoolers develop argumentation skills in science.
- CER simplifies the task of argumentation for adolescents still developing the formal operational stage of metacognition.
- Instruction of the CER framework was introduced via non-content based and core content area lessons in the English language arts classroom.
- Student writing samples were collected from traditional instruction in all core content areas to measure transference of the CER skill.
- Students and teachers were given a Self-Confidence Survey to determine if there was a change in student confidence, attitudes, and motivation in regards to writing short answer explanations.

Data

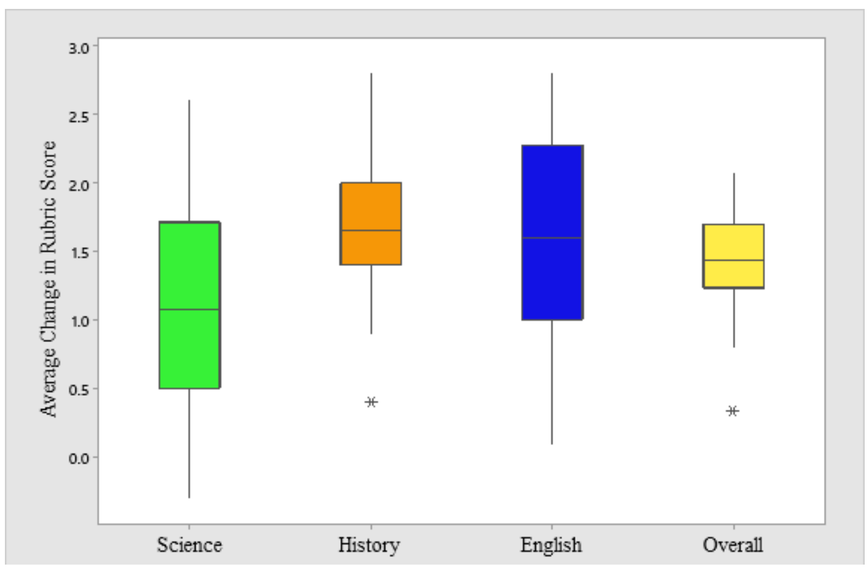


Figure 1. Average change in writing scores from the CER Explanations Rubric by subject (*N*=44).

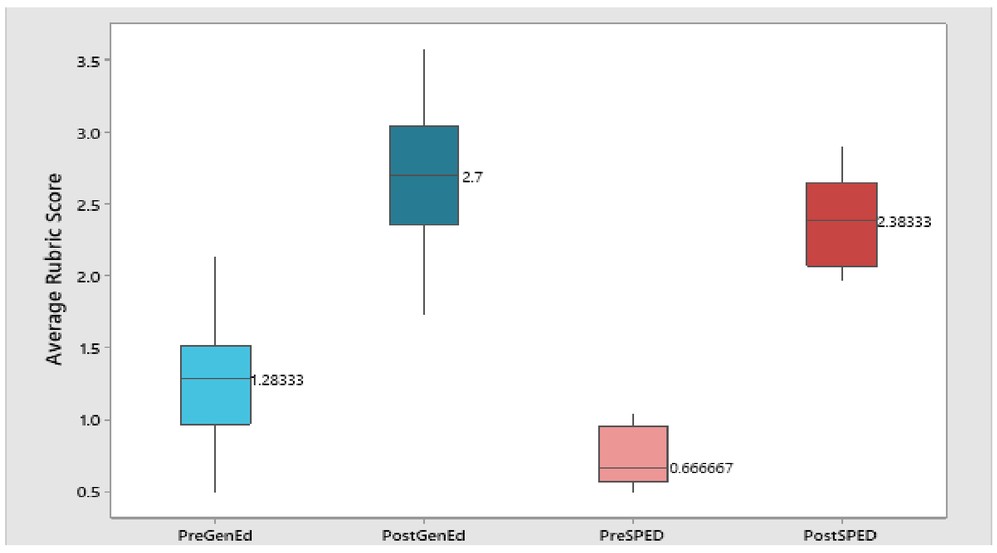


Figure 2. Pre and post average writing scores from CER Explanations Rubric for general(*N*=34) and special (N=10) education students.

MONTANA STATE UNIVERSITY MSSE

Reference: McNeill, K. L., & Krajcik, J. (2008). Scientific explanations: Characterizing and evaluating the effects of teachers' instructional practices on student learning. Journal of Research in Science Teaching, 45(1), 53-78. doi:10.1002/tea.20201

Photos and template from Adobe Stock