

The Writing SySTEM: A SYSTEMIC APPROACH TO GRADUATE WRITING INSTRUCTION AND INTERVENTION

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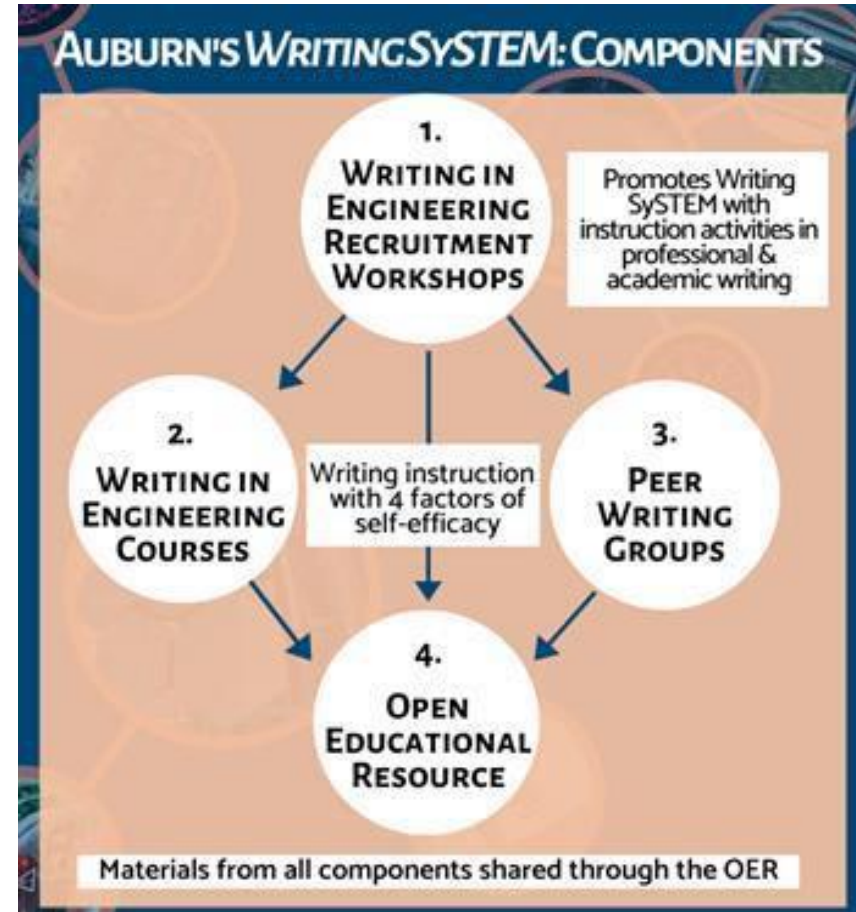
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Overview

- Goal: to improve the self-efficacy of engineering graduate students as academic and professional writers, via a sustainable *Writing SySTEM*
- Objective: to determine the relationships among self-efficacy, self-regulation of writing, and writing ability in the context of engineering graduate education that includes systemic writing instruction and intervention structures.
- Four factors proven to develop self-efficacy:
 - previous successful experiences,
 - the ability to compare others to self,
 - positive and negative feedback from the community, and
 - the ability to use healthy emotional and psychological strategies to approach new challenges.

SySTEM Components

- Workshops to teach writing skills (key recruitment activity),
- Discipline-specific graduate writing courses,
- Peer writing groups, and
- Writing resources hosted on a publicly available Open Educational Resource (OER).



Workshops

- One-off presentations focused on one aspect of technical writing
 - Abstracts
 - Introductions
 - Literature searches
 - Identifying key results and conclusions
 - Presentations
- Key strategy for recruiting students into other components
- Component recruitment strategy:
 - Offered in departmental seminars •
 - Emails to listservs

Discipline Specific Writing Courses

- Piloted in Aerospace Engineering in Spring 2019
- Offered to graduate students in participating departments:
 - Aerospace, Biosystems, and Civil Engineering
- Course intended for students actively working on major writing projects:
 - Peer reviewed journal papers, theses, and dissertations
- Longer ranging than workshops
- Component recruitment strategy:
 - Word of mouth
 - Course announcement
 - Announcement in workshops
 - Students apply for course (Civil)



Writing Groups

- Peer groups of 4 – 10 graduate students working on major writing projects:
 - Journal papers, theses, dissertation, or term papers.
- Types of writing groups:
 - Concurrent – get together to write
 - Accountability – goals and progress reports
 - Feedback – review of each other's work
- Facilitated by engineering faculty on grant
 - Moving towards a more structured approach
- Component recruitment strategy:
 - Listserv emails
 - Announcements in courses and seminars
 - Word of mouth



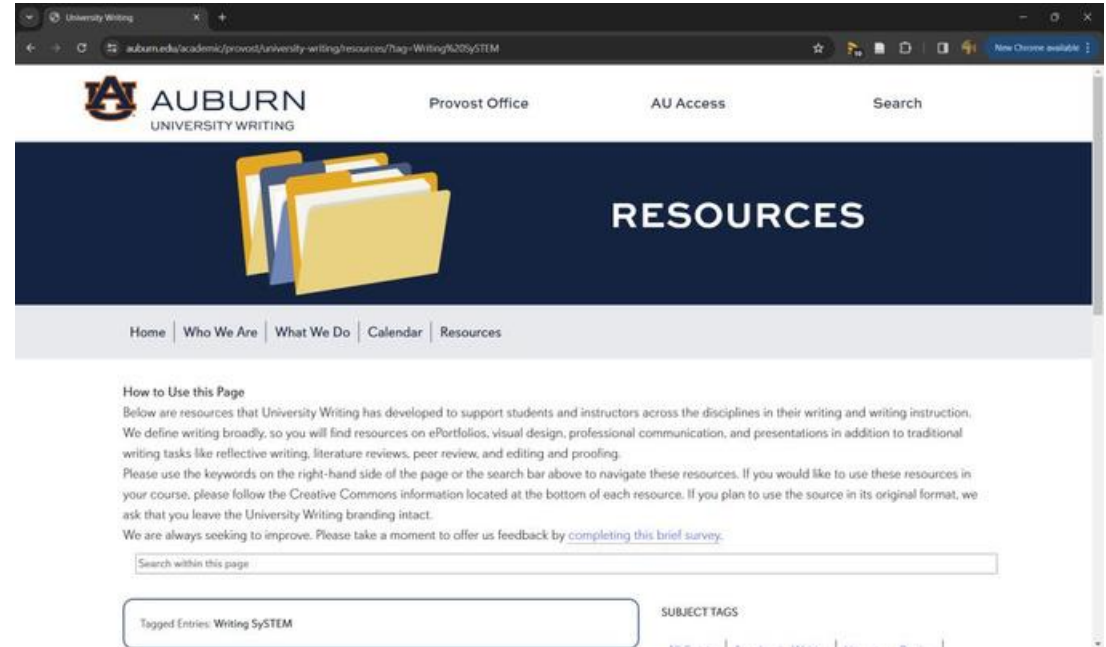
Open Educational Resource



- Handouts discussing relevant aspects of writing
- Hosted on University Writing website

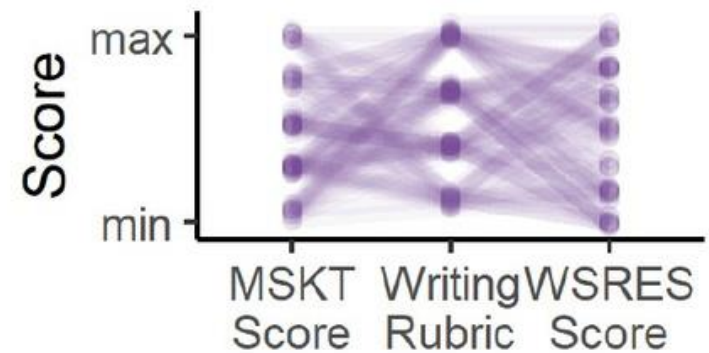
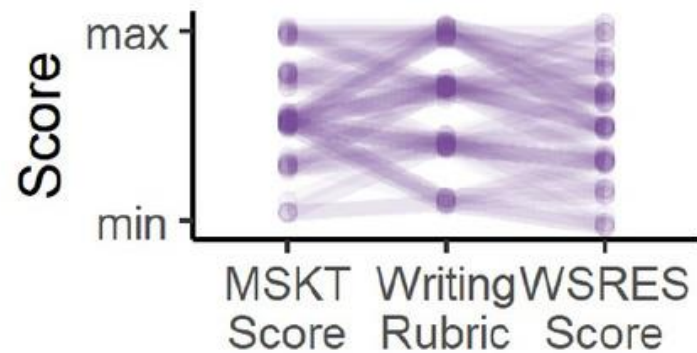
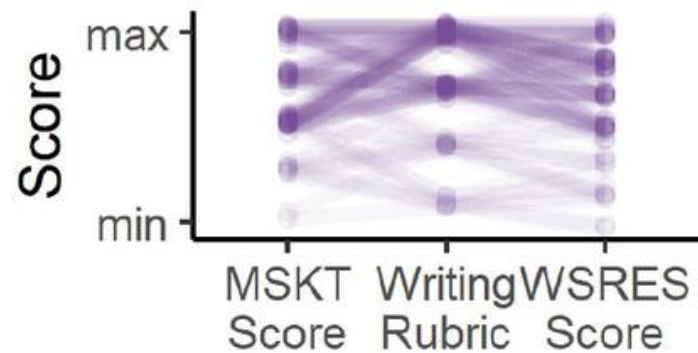
<https://aub.ie/WritingResources>

- Cross-listed with approved tags
- SySTEM OERs adapted by engineering faculty
- Component recruitment strategy:
 - Announcement in courses
 - Word of mouth



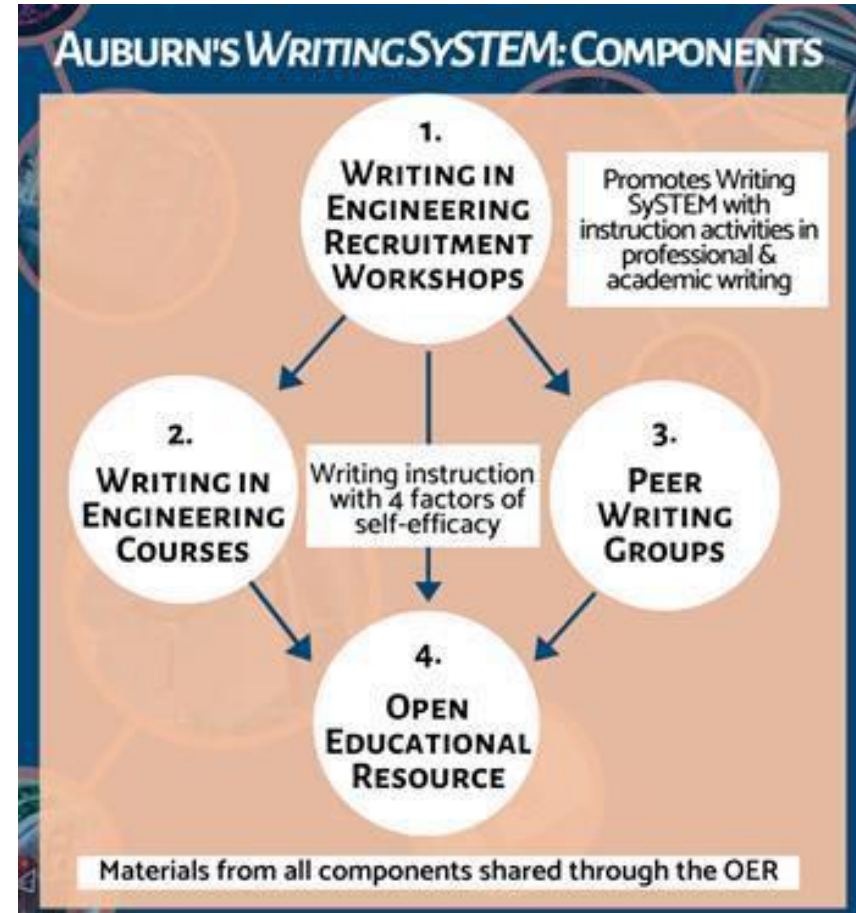
Follow-up Surveys

- Student self-efficacy in writing evaluated using validated instruments
 - Metacognitive Strategy Knowledge Test (MSKT) and
 - Writing Self-Regulatory Efficacy Scale (WSRES)
- Recruitment strategy:
 - Distributed following program components
 - Students contacted by email to participate in survey and interviews



Summary

- The Writing SySTEM: A Systemic Approach to Graduate Writing Instruction and Intervention
- Goal: to improve the self-efficacy of engineering graduate students as academic and professional writers
- Program components
 - Workshops
 - Technical Writing Course
 - Peer Writing Groups
 - Open Educational Resource





Thank

 You! WRITING
SySTEM