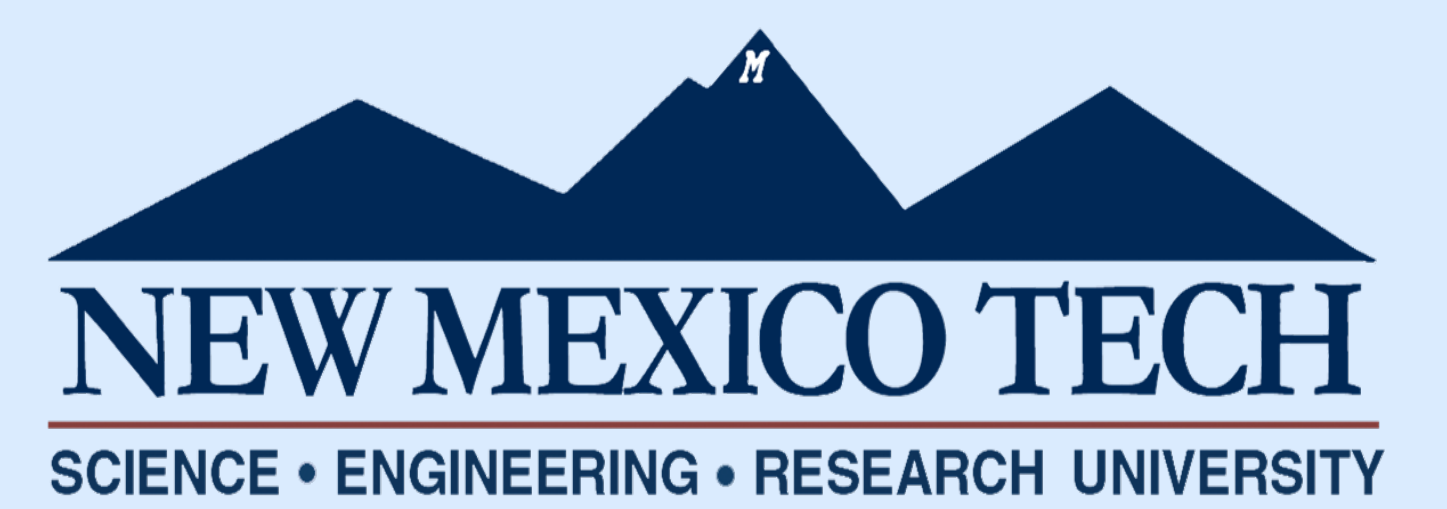


Teaching Capstone Students to Reflect and Illustrate Design Skills and Experience through ePortfolios

Julie Ford and Destiny Crawford

Contact: Julie.ford@nmt.edu



To better prepare students to communicate preparedness to potential employers, we introduced ePortfolios within multiple design courses, asking students to create and submit annotated visual artifacts demonstrating engineering skills.

Annotated visual artifact submissions from 147 students were evaluated.

Scores	Intro to MENG (n = 51)	Junior Design (n = 47)	Senior Design (n = 49)
3	54.9%	61.7%	83.7%
2	29.4%	27.7%	16.3%
1	15.7%	10.6%	0%

We surveyed students and the majority considered ePortfolios a valuable tool.

"I decided to choose my capstone project since it showcases the most engineering design work and applied learning, which should hopefully be attractive to employers"

"It is incredibly important to document and catalogue the additions that you personally have made to your team projects."

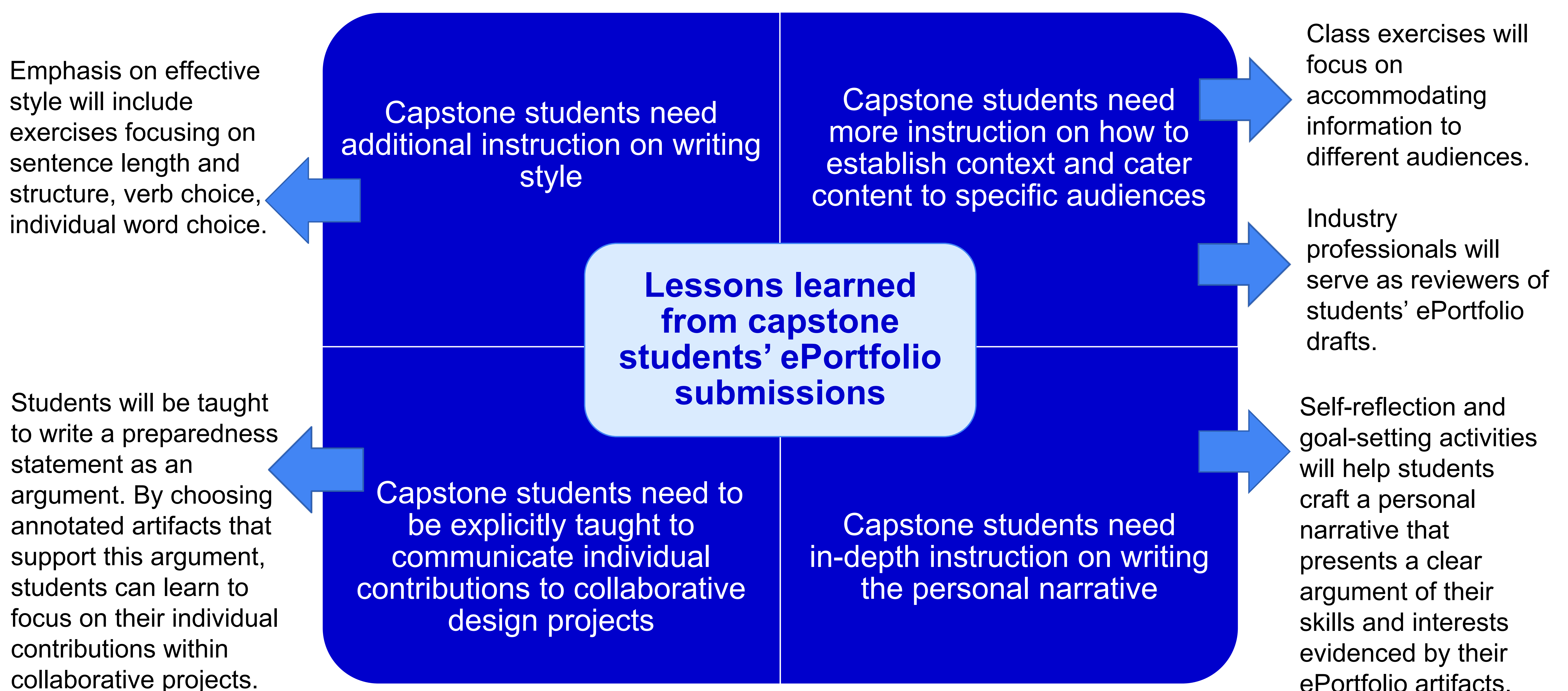
"I chose two artifacts that I felt were my most significant contributions to my design team last year. They also displayed multiple engineering skills which I thought would be best."

"This helped me put a past summer internship project into concise words, which I found was very difficult... my main takeaway was being able to concisely recollect my past work."

Submissions were reviewed/scored based on a 3-point scale:

- 3 Effectively communicates engineering concepts or skills
- 2 Shows engineering concepts or skills somewhat, but lacking in clarity, and/or professionalism, and/or relevance
- 1 Deficient (incomplete—:didn't include annotation, or severely lacking in clarity, and/or professionalism, and/or relevance)

Based on our analysis of students' annotated artifacts, next year we will pilot a portfolio studio course as an extension to Capstone Design.



Acknowledgements This material is based upon work supported by NASA's Education Enhancement Grant program awarded through the New Mexico Space Grant Consortium, grant GR0006474. Opinions, findings, conclusions or recommendations expressed in this material are the authors' and do not necessarily reflect the views of NASA or the New Mexico Space Grant Consortium.