

A Study Of Vertical Writing Surfaces At West Point

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ABSTRACT

This study was commissioned by the Vice Deans for Academics and Resources at West Point and led by Colonel Raymond Kimball, director of Faculty Learning, Innovation, Collaboration, and Research. The study assessed current Vertical Writing Surface (VWS) use throughout the institution. This study can inform classroom design decisions to facilitate student learning and provide faculty with the best resources to relay ideas to students. The study also compares VWS preference by academic discipline, STEM vs. non-STEM, and faculty vs. student. Finally, the study considers resource constraints with respect to cost, time, and maintenance efforts.

The study was conducted in two parts. First, cadets in the upper two classes and teaching faculty members received an anonymous online survey asking for their VWS preferences. As part of the survey, participants provided their assessment of each VWS they had used or seen used, to include strengths, weaknesses, best practices, and common mistakes. Participants then indicated the VWS that they believed to be most effective for their department and explained why. Participants also had the opportunity to participate in focus groups, where they could experiment with different VWSs in the same classroom space. 401 cadets and 235 faculty responded in some form to the survey, with 216 cadets and 189 faculty completing the entire survey by indicating a specific preference for a VWS. Less than 10 participants participated in the focus groups.

Quantitative results from the survey indicated a strong difference in VWS preference by discipline. Cadets indicated a raw preference for chalkboards and whiteboards in equal number, which makes sense given the widespread use of both surfaces. Cadets with STEM majors expressed a greater numerical preference for chalkboards; cadets with non-STEM majors expressed a greater numerical preference for whiteboards. Among cadets who had used them, glassboards were significantly more popular. Similar preferences for chalkboards and whiteboards emerged from faculty responses, including STEM and non-STEM preferences. Glassboards did not have a significantly higher preference among faculty who had used them.

Qualitative responses for the survey revealed passionate feelings about all four VWSs. Chalkboards were praised by some as simple and effective, but were panned by others as dirty and antiquated. Whiteboards and glassboards were identified as having similar strengths and weaknesses, such as use as projection surfaces and challenges with cleaning and keeping markers on hand. Interactive whiteboards were viewed as having potential, but could be difficult to use due to network issues and lack of technical training.

Finally, the study makes recommendations for planning factors with respect to VWS installation. The study recommends clearly identifying which academic departments are likely to use classrooms when making choices about VWS installation to ensure the highest possible correlation between student preference, faculty preference, and VWS. Next, the study recommends ensuring that total costs of VWS use are identified up front, including the costs of high-quality writing implements and cleaning/maintenance supplies. Finally, the study recommends that academic departments include a plan for maintenance of VWSs and purchase of ancillary supplies in their VWS requests for classrooms.