Paper / Proposal Title: Portable Dovecotes—Classroom-Driven Research

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Abstract (300 words):
During the Fall 2019 semester, in my graduate-level Digital Fabrication course, I gave my students a project to design and build glazed ceramic bird feeders. The project provided key learning outcomes, introducing students, during the first semester of our interdisciplinary design program, to our production facilities, training them to effectively use our laser cutters, 3D-printers, woodshop, and kiln. Digital Fabrication is a support course, providing vital skills and capabilities students need to complete subsequent coursework. The applied learning, as a result, took the form of structured activities, with sequenced demonstrations and guided production, followed by opportunities to experiment and extrapolate. A key dynamic driving the bird feeder project was my own research interest in developing an innovative locally-produced product, informed by regional cultural traditions. I intentionally began the project with open-ended research questions. The project was a starting point, by design, showcasing a set of pedagogic beliefs. First, that students benefit from exposure to all stages of an iterative research inquiry—faculty in our program are encouraged to explore research interests with students in the studio, inviting students to participate in messy process of creative inquiry. Second, that students benefit both from structured content, and also from watching faculty wrestle in real time with open-ended design problems. By setting up a process of problem seeking, speculation, testing, reflection, response, and iterative development, students see the benefits of incremental progress (including missteps and failures). The research initiative that began as a classroom project, with quite practical pedagogic
obligations, has since grown and developed into a useful case study. A presentation of the initial project brief, documenting steps taken by students during the class, sets the stage for documenting subsequent project development, which has completed a first phase of prototyping and preparation for market research and production.

• Author(s) Biography (200 words each):
Rab McClure’s teaching and creative scholarship mine the sweet spot where design and fine arts overlap. His work, which leverages digital fabrication to amplify analog processes, investigates form, light, space, material, memory and imagination. He has been invited to present papers and exhibit his work most recently in Venice, Dubai, Miami, Vancouver, Helsinki, London, Montreal, Kyoto, and the Netherlands.
Rab is an Associate Professor and the Director of Graduate Studies at VCUarts Qatar. He is a registered architect and an NCIDQ certified interior designer. He holds a Master of Architecture degree from Yale University and a Bachelor of Science in Architecture degree from the University of Virginia.