Bringing Antiquity to Life with 3D Printing: A Pedagogical Approach

This presentation focuses on 3D printing technology as a pedagogical tool, sharing resources for printing projects available to classicists, some ways to incorporate this technology into classes, observations on its value for teaching the ancient world, and feedback from students who have completed class projects using 3D printing. For this discussion, I draw primarily from my experience with two 3D printing activities in college-level Latin courses last year, for which students printed replica Roman artifacts relating to daily life and elite portraiture, researched their artifacts, and gathered their prints together for a campus "museum exhibit" at the end of each term. Although my presentation is informed by using this technology for Latin pedagogy, I intend for it to be widely applicable to courses on the ancient world at all levels.

Applied to teaching antiquity, 3D printing can enhance students' engagement with the Greco-Roman world by adding new dimensions to their learning, opening up more ways for them to interact with history and culture through hands-on, creative activity that integrates cutting-edge tools into their examination of the past. The printable artifacts render antiquity's material legacy more immediate and accessible, and provide a focus for student research into the origins and social contexts of the objects they create. In my own projects, the curation of the final artifact exhibits helped foster a sense of team spirit among the students and put them in the role of teachers as they shared their creations and research with the rest of their campus community.

There are online resources freely available for instructors to employ in designing a 3D printing activity. Provided the class has access to a 3D printer, carrying out a printing project can require little to no cost, a relatively small investment of students' time, and no advanced

technical skills. Numerous high-quality 3D models of Greek and Roman artifacts exist in online databases for students to select from, ranging from ceramic wares and military gear to busts, statues, and architectural models. Most of these digital models are reproduced from real artifacts in museums worldwide; some are scanned and released by the museums themselves. The file types of the 3D models found in these databases are compatible with most mainstream printers, and students need only to download and print their chosen model to create their replica artifact. Using these digital models for their own teaching, instructors can design projects that engage with specific areas of cultural activity, historical periods, literary works, or famous figures human and divine.

Beginning from the goals, organization, and outcomes of my own class projects as examples, this presentation identifies the tools at classicists' disposal for shaping projects of their own, and highlights strategies for integrating 3D printing into the structure of a course. Along with a list of important resources and sample assignment handouts, the presentation also includes examples of student-made Roman artifacts for the audience to examine.