WebQuest on Conic Sections as a Learning Tool for Undergraduate Students

A. Kurtuluş, T. Ada
Department of Primary School Mathematics Education
Eskişehir Osmangazi University, Anadolu University,
Turkey

agunaydi@ogu.edu.tr
tyuzugul@anadolu.edu.tr

Lecture Proposal for the ACDCA strand

ABSTRACT

WebQuests incorporate technology with educational concepts through integrating on-line resources with student-centered, activity-based learning. According to Sunal and Haas (2002), WebQuests are problem-solving activities for students that incorporate the Internet, computer-based materials, and other available resources. In order to effectively implement a WebQuest assignment, faculty must understand the various needs of each student involved. Many graduate students in teacher education programs are often exposed to technology in the classroom and may also develop WebQuests in these courses. Specifically, We propose a WebQquest to teach conic sections, their geometric properties, and algebraic representations to model physical situations and solve application problems. The goal of this topic is for prospective students to solve application problems involving physical representations of conics sections. They must be able to recognize the conic that will model a situation, write its equation, and solve it either algebraically or graphically for needed information. Finding and using the appropriate conic model is often a matter of recognizing the locus definition in an applied context. In some situations, the solution to the equation must them be interpreted in the context of the problem situation. The WebQuest is entitled: "Creating a carpet design using conic sections equations."

Keywords
WebQquest, conics sections, teacher education, computer-based materials.