

1135-VG-2370      **Gangadhar Acharya\*** ([gangadhar.acharya@ttu.edu](mailto:gangadhar.acharya@ttu.edu)), 3299 Adams Street NE, Apt C70,  
Albuquerque, NM 87110. *Frameworks for different types of mathematics outreach programs: A  
proposed model.*

Various researchers have emphasized the necessity of mathematics outreach programs at the school level (K-12). Large numbers of outreach programs are being implemented at universities and colleges to improve the K-12 mathematics education in the United States. A rigorous study of over 100 such mathematics outreach programs enables us to categorize university/college level mathematics outreach programs into three categories: motivational, preparational and motivational plus preparational, according to project outcome expectations. Analysis of the structural components of these programs provides a framework for each type of mathematics outreach program and reveals a consistent set of attributes that can be associated with each of these three categories. A model mathematics preparational outreach program to address perceived issues involving the transition to algebra from arithmetic in the early grades is purposed based on the above identified framework. In general it is hoped that these frameworks can serve as guidelines for university/college faculty interested in developing their own mathematics outreach programs. (Received September 26, 2017)