The authors have experience with secondary mathematics teacher candidates struggling to make
connections between the theoretical abstract algebra course they take as college students and the algebra
they will be teaching in secondary schools. As a mathematician and a mathematics educator, the authors
collaborated to create and implement a three-semester project to help secondary mathematics teacher can-
didates inform their teaching using abstract algebra.

Classification: H19

Keywords: preservice teacher education; secondary mathematics teacher candidates; collaboration; project
method; subject content knowledge; college abstract algebra; school mathematics; simultaneous linear equa-
tions; algebraic structures; lesson planning; common core state standards for mathematics

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