

1135-C1-2432 **Mile Krajcevski*** (mile@mail.usf.edu), Department of Mathematics & Statistics, University of South Florida, CMC342, 4202 East Fowler Av., Tampa, FL 33620-5700. *Investigating drawing as a cognitive strategy in undergraduate linear algebra course*. Preliminary report.

Gradual changes in the undergraduate curriculum in the last decade have brought linear algebra courses to the forefront of undergraduate curriculum. For the first time in their undergraduate mathematical education, students encounter a notion of an algebraic structure on a set of objects, mappings that preserve this structure, and multiple ways of representing the elements of this structure. Each of the approaches in the teaching of linear algebra carries its own challenges, and different pedagogical models have been developed to support students' learning processes. We propose a model that will continue with the practice of using manipulatives in learning of mathematical concepts, utilizing drawing as activity that will produce objects that can be manipulated. Illustrations of mathematical objects help students concretize variety of concepts like vectors, eigenvectors, or linear transformations. Students will have an opportunity to draw vectors, subspaces or represent linear transformations in a synthetic environment, that is, without a preferred coordinate system. We will present some of the pedagogical materials we've used with this approach, together with the results and respond from students. (Received September 26, 2017)