

## ON VISUALIZATION IN LINEAR ALGEBRA

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### ABSTRACT

The interest on the teaching and learning of Linear Algebra (LA) has increased in the last two decades. This study follows this direction from the point of view of visualization. The study group is composed of first-year students of the Mathematics Degree offered by Universidad Complutense de Madrid and their teachers. The research strategy is framed in Design- Based research methodology and is divided in two phases: an initial study and the design research. The main results expected are: to contribute to the knowledge of the specific domain on LA by the diagnostic and understanding of students' learning difficulties with LA, specially the related to visualization; to contribute in the search of *design principles* for the teaching with visualization in ME; to encapsulate these two previous results within a tangible product as new materials including the use of new technologies and proposing visualization models for the subject of LA.

### Key words

*Visualization, Didactics of Linear Algebra, Design- Based Research*