

THE APPROPRIATION OF NOTIONS OF REFLECTION BY VISUALLY IMPAIRED STUDENTS

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This poster presentation will describe a study being developed in São Paulo, Brazil with the objective of investigating the processes by which visually impaired students appropriate aspects related to the geometrical transformation reflection. We are interested in the forms by which these learners, during instructional events, incorporate into their own vocabulary the mathematical voice, as well as the conceptual changes that the appropriation of such vocabulary might provoke. To this end, we are elaborating activities and interventions seeking to create the conditions necessary for the emergence of a symbolic space (ZPD) in which face to face interactions between the participants involved in an instructional event might motivate the production of new meanings.

We opted to use Vygotsky's method of double stimulation (Vygotsky 1998), in which the subject is faced with a task which considerably exceeds her actual cognitive state. In our study the first stimulus is given in the form of a tool to explore geometrical objects (to be illustrated in the poster) and the second stimulus involves the researchers' interventions. We intend to present some of our analyses of the dialogs occurring during interviews with two visually impaired students as they worked on a series of reflection and symmetry tasks adapted for tasks previously used in studies of the conceptions of sighted learners.

References

- Vygotsky, L. S. (1998). *A formação social da mente*. Org. Michael Cole, et al. Tradução José Cipolla Neto, Luís Silveira Menna Barreto, Solange Castro Afeche. 6ª ed. São Paulo: Martins Fontes.