



## Different approaches of interplay between experimentation and theoretical consideration in dynamic geometry exploration: An example from exploring Simson line

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*Abstract.* Dynamic geometry environment (DGE) is a powerful tool for exploration and discovering geometric properties because it allows users to (virtually) manipulate geometric objects. There are two possible components in the process of exploration in DGE, viz. experimentation and theoretical consideration. In most cases, there is interplay between these two components. Different people may use DGE differently. Depending on the specific mathematical tasks and the background of individual users, some approaches of interplay are more experimental whereas some other approaches of interplay are more theoretical. In this paper, different approaches of exploring a geometric task using Sketchpad (a DGE) by three individual participants will be discussed. They represent three different approaches of interplay between experimentation and theoretical consideration. An understanding of these approaches may contribute to an understanding on the mechanism of exploration in DGE.

*Key words and phrases:* dynamic geometry environment, computer-aided exploration, experimentation, theoretical consideration.

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