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Bharath Sriraman  
Argumentation in Mathematics Education

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**Argumentation in Mathematics**

Keywords: Argumentation; History of Logic; Logic; Modal Logic; Proof Theory

Definition:

Argumentation refers to the process of making an argument, that is, drawing conclusions based on a chain of reasoning. Götz Krümmhauer suggests that argumentation can be thought of as a social process in which the cooperating individuals "adjust their intentions and interpretations by verbally presenting the rationales for their actions" (Cobb & Bauersfeld, 1995, p.13). In mathematics, unlike any empirically based discipline, the validity of an argument in its final form is judged solely on whether it is logically consistent.

Characteristics of Argumentation:

The origins of logic, a key component of mathematical argumentation, can be traced back to Aristotelian logic and his use of syllogisms, with thinkers making improvements to this method over time as they were confronted with paradoxes. Argumentation was primarily the domain of theologians and medieval and post-medieval ... [read more]

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