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## Abstract

This article presents different types of student explanations that can be observed, and how these were initiated and responded to. The research is based on the practice of five teachers, with all interactions having been analysed and categorized to develop the concepts. First, three distinct types of student explanation were found: explaining actions, explaining reasons, and explaining concepts. Secondly, the teachers' initiations were inspected, by studying the turn before each student explanation. Strong connections were found between the initiation and each type of student explanation. Thirdly, teachers' responses to the students' explanations were inspected, with three main types of response being found to all three types of student explanation: pointing out what to notice, requesting further detail, and confirming and moving on. The main contribution of this article is the conceptualization of students' explanations and the explanation of how these are initiated and responded to.

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Ove Gunnar Drageset is a professor in mathematics education and assistant head of department for teacher education and pedagogy at UiT The Arctic University of Norway. His research interest is focused on classroom communication in general and particularly related to conceptualizing classroom interactions. Other interests include mathematical knowledge for teaching, beliefs related to mathematics teaching and learning, using drama to develop student-centered classroom communication, and developing research as an integral part of teacher education.