

ABSTRACT

The purpose of this study was to investigate how secondary school novice and expert teachers responded to learners unexpected or unplanned offers in the teaching of algebra. Three teachers; two novices and one expert participated in this study. A total of nine lessons (three from each teacher) were observed and video recorded. The lessons were coded using a modified form of Weston's (2013) coding protocol to analyse the quality of teachers' responses to unexpected learner offers. These were coded as *inappropriate* or *appropriate*. Indicators used to highlight the degree of quality of the response were *minimum*, *middle* and *maximum* if a response were coded as appropriate to a learner's offer. Moreover, Video-Stimulated Recall (VSR) interviews were conducted with each teacher to gain insights into the teachers' thoughts and decision making when they responded to these unexpected or unplanned moments in their classroom. The findings of the study revealed that there was low level press evident in the two novice teachers' responses to unexpected learner offers. Conversely, the expert teacher's responses demonstrated a high level of press that constantly interrogated learners' thinking *in-the-moment*. This suggests that the expert teacher's responses were highly supportive of emergent mathematics learning in the collective classroom space. Another key finding was how the reflection-oriented questions during the VSR interviews proved fruitful in assisting both expert and novice teachers to reflect on how they responded to unexpected learner offers. All the participants in the study were able to articulate a justification for their actions associated with *deliberate reflection*. Two of the teachers were able to envisage alternatives to how they responded to unplanned moments associated with *critical reflection*. This highlights the potential of VSR interviews as noted in other studies (Geiger, Muir & Lamb, 2016) in helping teachers reflect on aspects of their teaching not previously considered and envisage alternative approaches to potential limitations in their practice.

Keywords: Responsive teaching, contingency, secondary mathematics, in-service mathematics teachers, algebra, novice and expert teachers.