

ZMATH 06655659

Pournara, Craig

Talking time, seeing time: the importance of attending to time in financial mathematics.

Afr. J. Res. Math. Sci. Technol. Educ. 19, No. 1, 82-94 (2015).

Summary: Through analysing a critical incident where a small group of pre-service secondary mathematics teachers work together on an annuities problem, we gain insight into the ways in which students make use of timelines and attend to time in their talk. Drawing on Lave and Wenger's notion of transparency, I argue that it was only when time became visible for the students, that they were able to resolve the impasse they had reached in working with the timeline. I propose the notion of pre-visible to describe the ways in which a newcomer makes use of a resource in an intuitive way when s/he still lacks awareness of how the resource is typically used in the practice. I discuss five issues pertaining to the use of timelines in working with annuities: the changing role of the timeline; attending to discrete points in time vs intervals; explicit attention to time on the timeline; explicit attention to time in students' talk; and potential problems associated with the use of month-names on a timeline. I make recommendations for teaching based on these findings.

Classification: D30 M30

Keywords: financial maths; mathematical talk; timelines; transparency

doi:10.1080/10288457.2015.1014235